

From: [Schneider, Mary Jo \(M\)](#)
To: [EGLE-ROP](#)
Cc: [Dole, Jamie \(J\)](#); [Alger, Jim \(J\)](#); [Schneider, Mary Jo \(M\)](#)
Subject: Electronic Submittal: DOW SILICONES CORPORATION (A4043), RENEWABLE OPERATING PERMIT RENEWAL APPLICATION, MI-ROP-A4043-2019b
Date: Monday, July 17, 2023 12:28:22 PM
Attachments: [ROP Renewal Attachment 2023-0714.pdf](#)
[DSC ROP Renewal MIOPS EH&S File Form Cover Letter.pdf](#)

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Attached is the DSC ROP Renewal MiOps Cover Letter, and the ROP Renewal Attachment both signed by Kristan Soto to serve as Dow's electronic submittal.

These documents have also been sent to Chris Hare by Certified Mail through the US Postal Service.

Kind regards,

Mary Jo

Mary Jo Schneider
Dow Michigan Operations Administration
1790 Building, Office 207.1
Ph: (989) 636-3015
mschneider@dow.com

General Business



July 17, 2023

CERTIFIED MAIL
7021 0950 0000 1139 3557

Chris Hare, District Supervisor
Air Quality Division, Saginaw Bay District Office
Michigan Department of EGLE
401 Ketchum Street, Suite B
Bay City, MI 48708
Harec@Michigan.gov

cc: Adam Shaffer; MI Dept. of EGLE, Air Quality Division; Saginaw Bay District Office; 401 Ketchum Street Suite B; Bay City, MI 48708; ShafferA1@michigan.gov (Letter Only)
EGLE-ROP@michigan.gov (electronic only)

**DOW SILICONES CORPORATION (A4043), RENEWABLE OPERATING PERMIT
RENEWAL APPLICATION, MI-ROP-A4043-2019b**

As required per the Michigan Air Pollution Control Rules R 336.1210 to R 336.1218, Dow Silicones Corporate (DSC) is submitting the attached application and supporting documentation to renew the Title V Renewable Operating Permit (ROP) for its Michigan Operations located in Midland, Michigan (SRN 4043).

An electronic copy of the application, including ROP mark-up and all attachments, is included on the enclosed flash drive to enable a 15-day administrative completeness review by the Air Quality Division.

If you have any questions regarding this submittal, please contact Jim Alger at (989) 496-7006.

A handwritten signature in black ink that reads "Kristan Soto".

Kristan Soto
Responsible Care Leader
1790 Building, Washington Street
Midland, MI 48674
(989) 633-1809

Attachments

Table of Contents

1. C-001 Certification Form
2. ROP Renewal Application Form
3. ROP Mark-up
4. Permit to Install 24-23
5. Permit to Install 26-14B
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7. EURULE290 List
8. Michigan Operations – Preventative Maintenance and Malfunction Abatement Plan
9. Michigan Operations – Fugitive Dust Control Program
10. Michigan Operations – Leak Detection and Repair Program
11. Michigan Operations – Benzene Emissions Management and Monitoring Plan
12. FG432 Boilers Startup, Shutdown, and Malfunction Plan

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RENEWABLE OPERATING PERMIT APPLICATION C-001: CERTIFICATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to provide this information may result in civil and/or criminal penalties. Please type or print clearly.


This form is completed and included as part of Renewable Operating Permit (ROP) initial and renewal applications, notifications of change, amendments, modifications, and additional information.

Form Type C-001	SRN A4043
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Stationary Source Name Dow Silicones Corporation	
City Midland	County Midland

SUBMITTAL CERTIFICATION INFORMATION	
1. Type of Submittal <i>Check only one box.</i>	
<input type="checkbox"/> Initial Application (Rule 210)	<input type="checkbox"/> Notification / Administrative Amendment / Modification (Rules 215/216)
<input checked="" type="checkbox"/> Renewal (Rule 210)	<input checked="" type="checkbox"/> Other, describe on AI-001
2. If this ROP has more than one Section, list the Section(s) that this Certification applies to _____	
3. Submittal Media <input checked="" type="checkbox"/> E-mail <input type="checkbox"/> FTP <input checked="" type="checkbox"/> Disk <input checked="" type="checkbox"/> Paper	
4. Operator's Additional Information ID - Create an Additional Information (AI) ID that is used to provide supplemental information on AI-001 regarding a submittal.	
AI B, C4&5, C8, C9, G1, H1, H4	

CONTACT INFORMATION	
Contact Name Jim Alger	Title Environmental Air Regulatory Specialist
Phone number 989.496.7006	E-mail address james.s.alger@dow.com

This form must be signed and dated by a Responsible Official.				
Responsible Official Name Kristan Soto			Title EH&S Responsible Care Leader	
Mailing address The Dow Chemical Company, 1790 Building, Washington Street				
City Midland	State MI	ZIP Code 48674	County Midland	Country United States
As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this submittal are true, accurate and complete.				
 Signature of Responsible Official			07/07/2023 Date	



RENEWABLE OPERATING PERMIT RENEWAL APPLICATION FORM

This information is required by Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Refer to instructions for additional information to complete the Renewable Operating Permit Renewal Application Form.

GENERAL INSTRUCTIONS

This application form should be submitted as part of an administratively complete application package for renewal of a Renewable Operating Permit (ROP). This application form consists of nine parts. Parts A – H must be completed for all applications and must also be completed for each section of a sectioned ROP. Answer all questions in all parts of the form unless directed otherwise. Detailed instructions for this application form can be found at <http://michigan.gov/air> (select the Permits Tab, “Renewable Operating Permits (ROP)/Title V”, then “ROP Forms & Templates”).

PART A: GENERAL INFORMATION

Enter information about the source, owner, contact person and the responsible official.

SOURCE INFORMATION

SRN A4043	SIC Code 2869	NAICS Code 325998	Existing ROP Number MI-ROP-A4043-2019b	Section Number (if applicable)
Source Name Dow Silicones Corporation				
Street Address 3901 South Saginaw Road				
City Midland	State MI	ZIP Code 48640	County Midland	
Section/Town/Range (if address not available)				
Source Description Dow Silicones Corporation manufactures a variety of silicone chemicals.				
<input type="checkbox"/> Check here if any of the above information is different than what appears in the existing ROP. Identify any changes on the marked-up copy of your existing ROP.				

OWNER INFORMATION

Owner Name Dow Silicones Corporation	Section Number (if applicable)			
Mailing address (<input checked="" type="checkbox"/> check if same as source address)				
City	State	ZIP Code	County	Country

Check here if any information in this ROP renewal application is confidential. Confidential information should be identified on an Additional Information (AI-001) Form.

PART A: GENERAL INFORMATION (continued)

At least one contact and responsible official must be identified. Additional contacts and responsible officials may be included if necessary.

CONTACT INFORMATION

Contact 1 Name Jim Alger		Title Environmental Air Regulatory Specialist		
Company Name & Mailing address (<input type="checkbox"/> check if same as source address) The Dow Chemical Company, 2007 Building, Austin Street				
City Midland	State MI	ZIP Code 48667	County Midland	Country United States
Phone number 989.496.7006		E-mail address james.s.alger@dow.com		

Contact 2 Name (optional) Vanessa Smith		Title Environmental Air Regulatory Specialist		
Company Name & Mailing address (<input type="checkbox"/> check if same as source address) The Dow Chemical Company, 2007 Building, Austin Street				
City Midland	State MI	ZIP Code 48667	County Midland	Country United States
Phone number 989.638.7510		E-mail address VNowak3@dow.com		

RESPONSIBLE OFFICIAL INFORMATION

Responsible Official 1 Name Kristan Soto		Title EH&S Responsible Care Leader		
Company Name & Mailing address (<input type="checkbox"/> check if same as source address) The Dow Chemical Company, 1790 Building, Washington Street				
City Midland	State MI	ZIP Code 48674	County Midland	Country United States
Phone number 989.633.1809		E-mail address KASoto@dow.com		

Responsible Official 2 Name (optional)		Title		
Company Name & Mailing address (<input type="checkbox"/> check if same as source address)				
City	State	ZIP Code	County	Country
Phone number		E-mail address		

<input type="checkbox"/> Check here if an AI-001 Form is attached to provide more information for Part A. Enter AI-001 Form ID:

PART B: APPLICATION SUBMITTAL and CERTIFICATION by Responsible Official

Identify the items that are included as part of your administratively complete application in the checklist below. For your application to be complete, it must include information necessary to evaluate the source and to determine all applicable requirements. Answer the compliance statements as they pertain to all the applicable requirements to which the source is subject. The source's Responsible Official must sign and date this form.

Listing of ROP Application Contents. Check the box for the items included with your application.

<input checked="" type="checkbox"/> Completed ROP Renewal Application Form (and any AI-001 Forms) (required)	<input type="checkbox"/> Compliance Plan/Schedule of Compliance
<input checked="" type="checkbox"/> Mark-up copy of existing ROP using official version from the AQD website (required)	<input type="checkbox"/> Stack information
<input checked="" type="checkbox"/> Copies of all Permit(s) to Install (PTIs) that have not been incorporated into existing ROP (required)	<input type="checkbox"/> Acid Rain Permit Initial/Renewal Application
<input checked="" type="checkbox"/> Criteria Pollutant/Hazardous Air Pollutant (HAP) Potential to Emit Calculations	<input type="checkbox"/> Cross-State Air Pollution Rule (CSAPR) Information
<input type="checkbox"/> MAERS Forms (to report emissions not previously submitted)	<input type="checkbox"/> Confidential Information
<input type="checkbox"/> Copies of all Consent Order/Consent Judgments that have not been incorporated into existing ROP	<input checked="" type="checkbox"/> Paper copy of all documentation provided (required)
<input checked="" type="checkbox"/> Compliance Assurance Monitoring (CAM) Plan	<input checked="" type="checkbox"/> Electronic documents provided (optional)
<input checked="" type="checkbox"/> Other Plans (e.g., Malfunction Abatement, Fugitive Dust, Operation and Maintenance, etc.)	<input type="checkbox"/> Other, explain:

Compliance Statement

This source is in compliance with **all** of its applicable requirements, including those contained in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and other applicable requirements not currently contained in the existing ROP. Yes No

This source will continue to be in compliance with all of its applicable requirements, including those contained in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and other applicable requirements not currently contained in the existing ROP. Yes No

This source will meet in a timely manner applicable requirements that become effective during the permit term. Yes No

The method(s) used to determine compliance for each applicable requirement is/are the method(s) specified in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and all other applicable requirements not currently contained in the existing ROP.

If any of the above are checked No, identify the emission unit(s) or flexible group(s) affected and the specific condition number(s) or applicable requirement for which the source is or will be out of compliance at the time of issuance of the ROP renewal on an AI-001 Form. Provide a compliance plan and schedule of compliance on an AI-001 Form.

Name and Title of the Responsible Official (Print or Type)

Kristan Soto, EH&S Responsible Care Leader

As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this application are true, accurate, and complete.



Signature of Responsible Official

Date

07/17/2023

PART C: SOURCE REQUIREMENT INFORMATION

Answer the questions below for specific requirements or programs to which the source may be subject.

C1.	Actual emissions and associated data from all emission units with applicable requirements (including those identified in the existing ROP, Permits to Install and other equipment that have not yet been incorporated into the ROP) are required to be reported in MAERS. Are there any emissions and associated data that have not been reported in MAERS for the most recent emissions reporting year? If Yes , identify the emission unit(s) that was/were not reported in MAERS on an AI-001 Form. Applicable MAERS form(s) for unreported emission units must be included with this application.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C2.	Is this source subject to the federal regulations on ozone-depleting substances? (40 CFR Part 82)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
C3.	Is this source subject to the federal Chemical Accident Prevention Provisions? (Section 112(r) of the Clean Air Act Amendments, 40 CFR Part 68) If Yes , a Risk Management Plan (RMP) and periodic updates must be submitted to the USEPA. Has an updated RMP been submitted to the USEPA?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
C4.	Has this stationary source added or modified equipment since the last ROP renewal that changes the potential to emit (PTE) for criteria pollutant (CO, NOx, PM10, PM2.5, SO2, VOC, lead) emissions? If Yes , include potential emission calculations (or the PTI and/or ROP revision application numbers, or other references for the PTE demonstration) for the added or modified equipment on an AI-001 Form. If No , criteria pollutant potential emission calculations do not need to be included.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
C5.	Has this stationary source added or modified equipment since the last ROP renewal that changes the PTE for hazardous air pollutants (HAPs) regulated by Section 112 of the federal Clean Air Act? If Yes , include potential emission calculations (or the PTI and/or ROP revision application numbers or other references for the PTE demonstration) for the added or modified equipment on an AI-001 Form. Fugitive emissions must be included in HAP emission calculations. If No , HAP potential emission calculations do not need to be included.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
C6.	Are any emission units subject to the Cross-State Air Pollution Rule (CSAPR)? If Yes , identify the specific emission unit(s) subject to CSAPR on an AI-001 Form.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C7.	Are any emission units subject to the federal Acid Rain Program? If Yes , identify the specific emission unit(s) subject to the federal Acid Rain Program on an AI-001 Form. Is an Acid Rain Permit Renewal Application included with this application?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C8.	Are any emission units identified in the existing ROP subject to compliance assurance monitoring (CAM)? If Yes , identify the specific emission unit(s) subject to CAM on an AI-001 Form. If a CAM plan has not been previously submitted to EGLE, one must be included with the ROP renewal application on an AI-001 Form. If the CAM Plan has been updated, include an updated copy. Is a CAM plan included with this application? If a CAM Plan is included, check the type of proposed monitoring included in the Plan: 1. Monitoring proposed by the source based on performance of the control device, or 2. Presumptively Acceptable Monitoring, if eligible	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <input type="checkbox"/>
C9.	Does the source have any plans such as a malfunction abatement plan, fugitive dust plan, operation/maintenance plan, or any other monitoring plan that is referenced in an existing ROP, Permit to Install requirement, or any other applicable requirement? If Yes , then a copy must be submitted as part of the ROP renewal application.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
C10.	Are there any specific requirements that the source proposes to be identified in the ROP as non-applicable? If Yes , then a description of the requirement and justification must be submitted as part of the ROP renewal application on an AI-001 Form.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input checked="" type="checkbox"/>	Check here if an AI-001 Form is attached to provide more information for Part C. Enter AI-001 Form ID: AI-AI-C4&C5, AI-C8, AI-C9	

PART D: PERMIT TO INSTALL (PTI) EXEMPT EMISSION UNIT INFORMATION

Review all emission units at the source and answer the question below.

D1. Does the source have any emission units that do not appear in the existing ROP but are required to be listed in the ROP application under R 336.1212(4) (Rule 212(4)) of the Michigan Air Pollution Control Rules? If Yes, identify the emission units in the table below. Yes No

If No, go to Part E.

Note: Emission units that are subject to process specific emission limitations or standards, even if identified in Rule 212, must be captured in either Part G or H of this application form. Identical emission units may be grouped (e.g. PTI exempt Storage Tanks).

Emission Unit ID	Emission Unit Description	Rule 212(4) Citation [e.g. Rule 212(4)(c)]	Rule 201 Exemption Rule Citation [e.g. Rule 282(2)(b)(i)]
EUCOLDCLEANER	Any existing cold cleaner (placed into operation prior to 7/1/79) or new cold cleaner (placed into operation) after 7/1/79) that is exempt from NSR permitting by R 336.1281(h) or R 336.1285(r)(iv).	Rule 212(4)(b)	Rule 281(2)(h)
EURULE282b	Fuel-burning equipment which is used for space heating, service water heating, electric power generation, oil and gas production or processing, or indirect heating and which only burns the fuels specified in R 336.1282(b).	Rule 212(4)(c)	Rule 282(2)(b)
EURULE284i	Storage or transfer operations of volatile organic compounds or noncarcinogenic liquids in a vessel that has a capacity of not more than 40,000 gallons where the contents have a true vapor pressure of nor more than 1.5 psia at the at the actual storage conditions.	Rule 212(4)(d)	Rule 284(2)(i)
EURULE285g	Internal combustion engines that have less than 10,000,000 Btu/hour maximum heat input.	Rule 212(4)(e)	Rule 285(2)(g)
EURULE285vi	Equipment for carving, cutting, routing, turning, drilling, machining, sawing, surface grinding, sanding, planing, buffing, sand blast cleaning, shot blasting, shot peening, or polishing ceramic arwork, leather, metals, graphite, plastics, concrete, rubber, paper stock, wood, or wood products which meets the subsequent requirements of 285(vi).	Rule 212(4)(e)	Rule 285(2)(l)(vi)
EURULE290	Permit to install exemptions; emission units with limited emissions.	Rule 212(4)(h)	Rule 290
EURULE291	Permit to install exemptions; emission units with "de minimis" emissions.	Rule 212(4)(i)	Rule 291

Comments:

Check here if an AI-001 Form is attached to provide more information for Part D. Enter AI-001 Form ID: **AI-**

PART E: EXISTING ROP INFORMATION

Review all emission units and applicable requirements (including any source wide requirements) in the existing ROP and answer the questions below as they pertain to all emission units and all applicable requirements in the existing ROP.

<p>E1. Does the source propose to make any additions, changes or deletions to terms, conditions and underlying applicable requirements as they appear in the existing ROP? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If <u>Yes</u>, identify changes and additions on Part F, Part G and/or Part H.</p>
<p>E2. For each emission unit(s) identified in the existing ROP, <u>all</u> stacks with applicable requirements are to be reported in MAERS. Are there any stacks with applicable requirements for emission unit(s) identified in the existing ROP that were <u>not</u> reported in the most recent MAERS reporting year? If <u>Yes</u>, identify the stack(s) that was/were not reported on applicable MAERS form(s). <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>E3. Have any emission units identified in the existing ROP been modified or reconstructed that required a PTI? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If <u>Yes</u>, complete Part F with the appropriate information.</p>
<p>E4. Have any emission units identified in the existing ROP been dismantled? If <u>Yes</u>, identify the emission unit(s) and the dismantle date in the comment area below or on an AI-001 Form. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>Comments: The equipment associated with EUBOILER2515, EU2515-01 and FGPEM&BLR have been air gapped at the facility and are no longer in operation. DSC is requesting that the associated EUs and FG listed above be removed from the permit as identified in the ROP redline.</p>
<p><input type="checkbox"/> Check here if an AI-001 Form is attached to provide more information for Part E. Enter AI-001 Form ID: AI-</p>

PART F: PERMIT TO INSTALL (PTI) INFORMATION

Review all emission units and applicable requirements at the source and answer the following questions as they pertain to all emission units with PTIs. Any PTI(s) identified below must be attached to the application.

<p>F1. Has the source obtained any PTIs where the applicable requirements from the PTI have not been incorporated into the existing ROP? If <u>Yes</u>, complete the following table. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If <u>No</u>, go to Part G.</p>			
Permit to Install Number	Emission Units/Flexible Group ID(s)	Description (Include Process Equipment, Control Devices and Monitoring Devices)	Date Emission Unit was Installed/ Modified/ Reconstructed
91-70F	FG432BOILERS FGSITESCRUBBERS FGTHROX	Permit includes FG432BOILERS, FGTHROX, and FGSITESCRUBBERS. The permit was issued for the construction of EUTOX.	TBD
622-92E	EU108-01	Platinum catalyst manufacturing process. Emissions are controlled by FGTHROX, carbon drums, and an HCl absorption tank. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF.	TBD
24-23	EU501-05	Crosslinkers manufacturing process consisting of jacketed reactors, condensers, mixers, pumps and vacuum equipment, and product packaging. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.	3/2/2023
534-77I	EU601-01	Alkoxylation process including kettle, condensers, storage tanks, distillation columns, bulk container filling equipment, scrubbers, and other related equipment. This emission unit is subject to 40 CFR Part 63, Subparts FFFF and UU.	TBD
26-14B	EU2703-17	9025C dedicated waste tank in 2703 Building. This emission unit vents to FGTHROX and, when FGTHROX is not operating, scrubbers 9390A and B. Emissions from transfers from the tank to tank trucks will be controlled by vapor balance back to the tank.	5/8/2023
<p>F2. Do any of the PTIs listed above change, add, or delete terms/conditions to established emission units in the existing ROP? If <u>Yes</u>, identify the emission unit(s) or flexible group(s) affected in the comments area below or on an AI-001 Form and identify all changes, additions, and deletions in a mark-up of the existing ROP. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			
<p>F3. Do any of the PTIs listed above identify new emission units that need to be incorporated into the ROP? If <u>Yes</u>, submit the PTIs as part of the ROP renewal application on an AI-001 Form, and include the new emission unit(s) or flexible group(s) in the mark-up of the existing ROP. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			
<p>F4. Are there any stacks with applicable requirements for emission unit(s) identified in the PTIs listed above that were <u>not</u> reported in MAERS for the most recent emissions reporting year? If <u>Yes</u>, identify the stack(s) that were not reported on the applicable MAERS form(s). <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>			
<p>F5. Are there any proposed administrative changes to any of the emission unit names, descriptions or control devices in the PTIs listed above for any emission units not already incorporated into the ROP? If <u>Yes</u>, describe the changes on an AI-001 Form. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>			
<p>Comments: See attached ROP markup for permit change details.</p> <p>Note that EUTOX has not been installed yet, so PTI No. 91-07F has not been included in the ROP redline. ROP modification paperwork will be submitted for 91-07F at a later date.</p> <p>PTI No. 622-92E is not ready to roll into the ROP as it is waiting on a connection to THROX before it can be rolled in.</p> <p>Additionally, PTI No. 534-77I is not ready to roll into the ROP yet as construction of equipment associated with the production of the new product permitted under 534-77I has not yet been completed.</p>			
<p><input type="checkbox"/> Check here if an AI-001 Form is attached to provide more information for Part F. Enter AI-001 Form ID: AI-</p>			

PART G: EMISSION UNITS MEETING THE CRITERIA OF RULES 281(2)(h), 285(2)(r)(iv), 287(2)(c), OR 290

Review all emission units and applicable requirements at the source and answer the following questions.

G1. Does the source have any new and/or existing emission units which do not already appear in the existing ROP and which meet the criteria of Rules 281(2)(h), 285(2)(r)(iv), 287(2)(c), or 290.
 If Yes, identify the emission units in the table below. If No, go to Part H. Yes No
Note: If several emission units were installed under the same rule above, provide a description of each and an installation/modification/reconstruction date for each.

Origin of Applicable Requirements	Emission Unit Description – Provide Emission Unit ID and a description of Process Equipment, Control Devices and Monitoring Devices	Date Emission Unit was Installed/ Modified/ Reconstructed
<input type="checkbox"/> Rule 281(2)(h) or 285(2)(r)(iv) cleaning operation		
<input type="checkbox"/> Rule 287(2)(c) surface coating line		
<input checked="" type="checkbox"/> Rule 290 process with limited emissions	Refer to AI-G1 for table of Rule 290 exempt equipment.	

Comments:

Check here if an AI-001 Form is attached to provide more information for Part G. Enter AI-001 Form ID: **AI- G1**

PART H: REQUIREMENTS FOR ADDITION OR CHANGE

Complete this part of the application form for all proposed additions, changes or deletions to the existing ROP. This includes state or federal regulations that the source is subject to and that must be incorporated into the ROP or other proposed changes to the existing ROP. **Do not include additions or changes that have already been identified in Parts F or G of this application form.** If additional space is needed copy and complete an additional Part H.

Complete a separate Part H for each emission unit with proposed additions and/or changes.

H1. Are there changes that need to be incorporated into the ROP that have not been identified in Parts F and G? If <u>Yes</u> , answer the questions below.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
H2. Are there any proposed administrative changes to any of the existing emission unit names, descriptions or control devices in the ROP? If <u>Yes</u> , describe the changes in questions H8 – H16 below and in the affected Emission Unit Table(s) in the mark-up of the ROP.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
H3. Does the source propose to add a new emission unit or flexible group to the ROP not previously identified in Parts F or G? If <u>Yes</u> , identify and describe the emission unit name, process description, control device(s), monitoring device(s) and applicable requirements in questions H8 – H16 below and in a new Emission Unit Table in the mark-up of the ROP. See instructions on how to incorporate a new emission unit/flexible group into the ROP.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
H4. Does the source propose to add new state or federal regulations to the existing ROP? If <u>Yes</u> , on an AI-001 Form, identify each emission unit/flexible group that the new regulation applies to and identify <u>each</u> state or federal regulation that should be added. Also, describe the new requirements in questions H8 – H16 below and add the specific requirements to existing emission units/flexible groups in the mark-up of the ROP, create a new Emission Unit/Flexible Group Table, or add an AQD template table for the specific state or federal requirement.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
H5. Has a Consent Order/Consent Judgment (CO/CJ) been issued where the requirements were not incorporated into the existing ROP? If <u>Yes</u> , list the CO/CJ number(s) below and add or change the conditions and underlying applicable requirements in the appropriate Emission Unit/Flexible Group Tables in the mark-up of the ROP.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
H6. Does the source propose to add, change and/or delete source-wide requirements? If <u>Yes</u> , identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
H7. Are you proposing to streamline any requirements? If <u>Yes</u> , identify the streamlined and subsumed requirements and the EU ID, and provide a justification for streamlining the applicable requirement below.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

<p>H8. Does the source propose to add, change and/or delete emission limit requirements? If <u>Yes</u>, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>H9. Does the source propose to add, change and/or delete material limit requirements? If <u>Yes</u>, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>H10. Does the source propose to add, change and/or delete process/operational restriction requirements? If <u>Yes</u>, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.</p> <p>Added conditions to EU2504-13 through -20 related to the addition of FGTHROX and FGSITESCRUBBERS.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>H11. Does the source propose to add, change and/or delete design/equipment parameter requirements? If <u>Yes</u>, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.</p> <p>Added conditions to EU2504-13 through -20 related to the addition of FGTHROX and FGSITESCRUBBERS.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>H12. Does the source propose to add, change and/or delete testing/sampling requirements? If <u>Yes</u>, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>H13. Does the source propose to add, change and/or delete monitoring/recordkeeping requirements? If <u>Yes</u>, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.</p> <p>Emission units EU207-13 through -19 are subject to CAM (40 CFR Part 64) as their pre-control PTE Particulate are each greater than 100 tons per year. See attached ROP markup for more detail. A CAM plan for these emission units have been submitted under AI-C8.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>H14. Does the source propose to add, change and/or delete reporting requirements? If <u>Yes</u>, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H15. Does the source propose to add, change and/or delete **stack/vent restrictions**? If Yes, identify Yes No the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.

FGTHROX and FGSITESCRUBBER vents have been added to EU2504-13 through -20.

H16. Does the source propose to add, change and/or delete any **other** requirements? If Yes, identify Yes No the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.

Removal of FGHAP2012A2A as this was only effective until November 19, 2022.

DSC has also updated the language for various conditions in FGMONMACT to match similar language in FGMONMACT being prepared for the Dow Chemical ROP (SRN A4033).

DSC has removed references from Appendix 3 and 6 related to Consent Decree 19-11880 that are unnecessary and should be included in the Staff Report if needed.

H17. Does the source propose to add terms and conditions for an alternative operating scenario or intra-facility trading of emissions? If Yes, identify the proposed conditions in a mark-up of the corresponding section of the ROP and provide a justification below. Yes No

Check here if an AI-001 Form is attached to provide more information for Part H. Enter AI-001 Form ID: **AI-** H1 & H4



RENEWABLE OPERATING PERMIT APPLICATION

AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

SRN: A4043	Section Number (if applicable):
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1. Additional Information ID AI- B
--

Additional Information

2. Is This Information Confidential?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Dow Silicones Corporation has an internal auditing program and a ROP reasonable inquiry program, each of which has the potential to identify issues subejct to periodic deviation reporting. We anticipate that there will be deviations, or potential deviations, in the report that will be due September 15, 2023, covering the period between January 1 through June 30, 2023. We do not anticipate that any of the deviations would have any impact on worker or community health or the external environment. Typically, by the time deviations are due to be reported they have already been corrected or the corrective measures are in progress.

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RENEWABLE OPERATING PERMIT APPLICATION

AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

SRN: A4043	Section Number (if applicable):
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1. Additional Information ID AI- C4 & C5
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Additional Information

2. Is This Information Confidential?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Dow Silicones Corporate Potential to Emit (PTE) is estimated below for all criteria pollutants as well as hazardous air pollutants (HAPs). Given the complexity of the site, PTE estimates include all permitted, Rule 290, and Rule 291 emission units as well as all combustion equipment. Emission estimates for fugitives and other miscellaneous exempt equipment have been included below based on their 2022 actual reported emissions. The sites PTE is above the major source thresholds such that the site is still subject to the ROP program:

PTE Estimates:

- PM10 = ~70 tpy (2022 MAERS Actual = 18.98 tpy)
- PM2.5 = ~70 tpy (2022 MAERS Actual = 1.76 tpy)
- VOC = ~950 tpy (2022 MAERS Actual = 270.9 tpy)
- CO = ~230 tpy (2022 MAERS Actual = 3.74 tpy)
- NOx = ~315 tpy (2022 MAERS Actual = 26.68 tpy)
- SO2 = ~15 tpy (2022 MAERS Actual = 0.16 tpy)
- Lead <100 tpy
- Individual HAP >10 tpy
- Total HAP = ~310 tpy



RENEWABLE OPERATING PERMIT APPLICATION AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

SRN: A4043	Section Number (if applicable):
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1. Additional Information ID AI- C8

Additional Information

2. Is This Information Confidential? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Emission units EU207-13 through -19 are subject to CAM (40 CFR 64) as their pre-control PTE PM is greater than 100 tpy. CAM plans for these emission units are attached as separate documents to the application.

Emission unit EU304-02 is subject to CAM as its pre-control PTE VOCs is greater than 100 tpy. A CAM plan for EU304-02 is attached as a separate document to the application.

Emission unit EU340-01 is subject to CAM as its pre-control PTE VOCs is greater than 100 tpy and PTE Methyl Chloride is greater than 10 tpy. A CAM plan for EU340-01 is attached as a separate document to the application.

Emission unit EU501-02 is subject to CAM as its pre-control PTE VOC is greater than 100 tpy. A CAM plan for EU501-02 is attached as a separate document to the application.

Emission unit EU515-01 is subject to CAM as its pre-control PTE VOC is greater than 100 tpy. A CAM plan for EU515-01 is attached as a separate document to the application.

Emission unit EU604-08 is subject to CAM as its pre-control PTE VOC is greater than 100 tpy. A CAM plan for EU604-08 is attached as a separate document to the application.

Flexible Group FGTHROX is subject to CAM as its pre-control PTE for VOC and PM is greater than 100 tpy. A CAM plan for FGTHROX is attached as a separate document to the application.

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RENEWABLE OPERATING PERMIT APPLICATION AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

SRN: **A4043**

Section Number (if applicable):

1. Additional Information ID

AI- C9

Additional Information

2. Is This Information Confidential?

Yes No

The following plans are referenced in the ROP and are attached to this renewal:

- Michigan Operations - Preventative Maintenance and Malfunction Abatement Plan
- Michigan Operations - Fugitive Dust Control Program
- Michigan Operations - Leak Detection and Repair Program
- Michigan Operations - Benzene Emissions Management and Monitoring Plan
- FG432 Boilers Startup, Shutdown, and Malfunction Plan

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RENEWABLE OPERATING PERMIT APPLICATION AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

SRN: **A4043**

Section Number (if applicable):

1. Additional Information ID

AI- G1

Additional Information

2. Is This Information Confidential?

Yes No

Dow Silicones Corporation has attached a list of the Rule 290 process units as requested under G1 of the ROP renewal application form.

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RENEWABLE OPERATING PERMIT APPLICATION

AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

SRN: A4043	Section Number (if applicable):
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1. Additional Information ID AI- H1

Additional Information

2. Is This Information Confidential?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Dow Silicones completed a Rule 285(2)(d) exemption for EUs 2504-13 through -20 to route the emission units to existing control devices FGTHROX and FGSITESCUBBERS. As part of the ROP renewal application, DSC has added FGTHROX and FGSITESCUBBERS, and corresponding process/operational and design/equipment parameters for these units to EUs 2504-13 through -20. The corresponding stack parameters have also been included in EUs 2504-13 through -20.



RENEWABLE OPERATING PERMIT APPLICATION AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

SRN: **A4043**

Section Number (if applicable):

1. Additional Information ID

AI- H4

Additional Information

2. Is This Information Confidential?

Yes No

Dow Silicones requests that the requirements of the Compliance Assurance Monitoring rule (40 CFR Part 64) be added to emission units EU207-13 through -19 as part of the ROP renewal process. CAM Plans for these emission units have been submitted under AI-C8 and are attached to the application. Language has also been added to the markup ROP to indicate these emission units are subject to CAM.

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ROP Redline

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION**

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EFFECTIVE DATE: February 20, 2019
REVISION DATES: June 13, 2022, April 21, 2023

ISSUED TO

Dow Silicones Corporation

State Registration Number (SRN): A4043

LOCATED AT

3901 South Saginaw Road, Midland, Michigan 48640

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-A4043-2019b

Expiration Date: February 20, 2024

Administratively Complete ROP Renewal Application
Due Between August 20, 2022 and August 20, 2023

This Renewable Operating Permit (ROP) is issued in accordance with and subject to Section 5506(3) of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Pursuant to Michigan Air Pollution Control Rule 210(1), this ROP constitutes the permittee's authority to operate the stationary source identified above in accordance with the general conditions, special conditions and attachments contained herein. Operation of the stationary source and all emission units listed in the permit are subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

SOURCE-WIDE PERMIT TO INSTALL

Permit Number: MI-PTI-A4043-2019b

This Permit to Install (PTI) is issued in accordance with and subject to Section 5505(5) of Act 451. Pursuant to Michigan Air Pollution Control Rule 214a, the terms and conditions herein, identified by the underlying applicable requirement citation of Rule 201(1)(a), constitute a federally enforceable PTI. The PTI terms and conditions do not expire and remain in effect unless the criteria of Rule 201(6) are met. Operation of all emission units identified in the PTI is subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

Michigan Department of Environment, Great Lakes, and Energy

Chris Hare, Saginaw Bay District Supervisor

General Business

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Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

AUTHORITY AND ENFORCEABILITY

For the purpose of this permit, the **permittee** is defined as any person who owns or operates an emission unit at a stationary source for which this permit has been issued. The **department** is defined in Rule 104(d) as the Director of the Michigan Department of Environment, Great Lakes, and Energy (EGLE) or his or her designee.

The permittee shall comply with all specific details in the permit terms and conditions and the cited underlying applicable requirements. All terms and conditions in this ROP are both federally enforceable and state enforceable unless otherwise footnoted. Certain terms and conditions are applicable to most stationary sources for which an ROP has been issued. These general conditions are included in Part A of this ROP. Other terms and conditions may apply to a specific emission unit, several emission units which are represented as a flexible group, or the entire stationary source which is represented as a source-wide group. Special conditions are identified in Parts B, C, D and/or the appendices.

In accordance with Rule 213(2)(a), all underlying applicable requirements will be identified for each ROP term or condition. All terms and conditions that are included in a PTI, are streamlined or subsumed, or is state only enforceable will be noted as such.

In accordance with Section 5507 of Act 451, the permittee has included in the ROP application a compliance certification, a schedule of compliance, and a compliance plan. For applicable requirements with which the source is in compliance, the source will continue to comply with these requirements. For applicable requirements with which the source is not in compliance, the source will comply with the detailed schedule of compliance requirements that are incorporated as an appendix in this ROP. Furthermore, for any applicable requirements effective after the date of issuance of this ROP, the stationary source will meet the requirements on a timely basis, unless the underlying applicable requirement requires a more detailed schedule of compliance.

Issuance of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

A. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**
- Those conditions that are hereby incorporated in a state-only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. **(R 336.1213(5)(a), R 336.1214a(5))**
- Those conditions that are hereby incorporated in a federally enforceable Source-Wide PTI pursuant to Rule 201(2)(c) are designated by footnote two. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state-only" are not enforceable by the USEPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**
2. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this ROP. **(R 336.1213(1)(b))**
3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. **(R 336.1213(1)(c))**
4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities: **(R 336.1213(1)(d))**
 - a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
 - c. Inspect, at reasonable times, any of the following:
 - i. Any stationary source.
 - ii. Any emission unit.
 - iii. Any equipment, including monitoring and air pollution control equipment.
 - iv. Any work practices or operations regulated or required under the ROP.
 - d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.
5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL 40 CFR 15.231 et seq., and known as the Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

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6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**
7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**
8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2).² **(R 336.1370)**
10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

11. Unless otherwise specified in this ROP, the permittee shall comply with Rule 301, which states, in part, "Except as provided in subrules 2, 3, and 4 of this rule, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of the following:"² **(R 336.1301(1))**
 - a. A 6-minute average of 20% opacity, except for one 6-minute average per hour of not more than 27% opacity.
 - b. A limit specified by an applicable federal new source performance standard.

The grading of visible emissions shall be determined in accordance with Rule 303.
12. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
 - a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property.¹ **(R 336.1901(a))**
 - b. Unreasonable interference with the comfortable enjoyment of life and property.¹ **(R 336.1901(b))**

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1).² **(R 336.2001)**
14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**
15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(5))**

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate. **(R 336.1213(3)(b))**
 - a. The date, location, time, and method of sampling or measurements.
 - b. The dates the analyses of the samples were performed.
 - c. The company or entity that performed the analyses of the samples.
 - d. The analytical techniques or methods used.
 - e. The results of the analyses.
 - f. The related process operating conditions or parameters that existed at the time of sampling or measurement.
17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a Responsible Official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**
19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604-3507. **(R 336.1213(4)(c))**
20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**
21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP. **(R 336.1213(3)(c))**
 - a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
 - b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
 - c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

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22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following: **(R 336.1213(3)(c))**
- Submitting a certification by a Responsible Official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
 - Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a Responsible Official which states that; "based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete." The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.
23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate AQD District Office. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**
24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**
25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a Responsible Official in a manner consistent with the CAA.² **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance, if either of the following provisions is satisfied. **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
- The applicable requirements are included and are specifically identified in the ROP.
 - The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.
- Any requirements identified in Part E of this ROP have been identified as non-applicable to this ROP and are included in the permit shield.
27. Nothing in this ROP shall alter or affect any of the following:
- The provisions of Section 303 of the CAA, emergency orders, including the authority of the USEPA under Section 303 of the CAA. **(R 336.1213(6)(b)(i))**
 - The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this ROP issuance. **(R 336.1213(6)(b)(ii))**
 - The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**

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- d. The ability of the USEPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**
- 28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
 - a. Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
 - b. Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
 - c. Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
 - d. Minor Permit Modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
 - e. State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**
- 29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

Revisions

- 30. For changes to any process or process equipment covered by this ROP that do not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**
- 31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(2))**
- 32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(10))**
- 33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(iii), R 336.1216(2)(d), R 336.1216(4)(d))**

Reopenings

- 34. A ROP shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
 - a. If additional requirements become applicable to this stationary source with three or more years remaining in the term of the ROP, but not if the effective date of the new applicable requirement is later than the ROP expiration date. **(R 336.1217(2)(a)(i))**
 - b. If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. **(R 336.1217(2)(a)(ii))**
 - c. If the department determines that the ROP contains a material mistake, information required by any applicable requirement was omitted, or inaccurate statements were made in establishing emission limits or the terms or conditions of the ROP. **(R 336.1217(2)(a)(iii))**
 - d. If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

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Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(9))**

Stratospheric Ozone Protection

36. If the permittee is subject to Title 40 of the Code of Federal Regulations (CFR), Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.
37. If the permittee is subject to 40 CFR Part 82, and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).
39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of 40 CFR Part 68, no later than the latest of the following dates as provided in 40 CFR 68.10(a):
- June 21, 1999,
 - Three years after the date on which a regulated substance is first listed under 40 CFR 68.130, or
 - The date on which a regulated substance is first present above a threshold quantity in a process.
40. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.
41. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c). **(40 CFR Part 68)**

Emission Trading

42. Emission averaging and emission reduction credit trading are allowed pursuant to any applicable interstate or regional emission trading program that has been approved by the Administrator of the USEPA as a part of Michigan's State Implementation Plan. Such activities must comply with Rule 215 and Rule 216. **(R 336.1213(12))**

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Permit to Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.² **(R 336.1201(1))**
44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.² **(R 336.1201(8), Section 5510 of Act 451)**
45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, EGLE.² **(R 336.1219)**
46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months of the original PTI issuance date, or has been interrupted for 18 months, the applicable terms and conditions from that PTI, as incorporated into the ROP, shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, EGLE, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.² **(R 336.1201(4))**

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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B. SOURCE-WIDE CONDITIONS

Part B outlines the Source-Wide Terms and Conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the general conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, NA (not applicable) has been used in the table. If there are no Source-Wide Conditions, this section will be left blank.

General Business

SOURCE-WIDE CONDITIONS

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any emission units having emission vents tied into FGSITEBLOWER, FGTHROX, and FGSITESCUBBERS unless malfunction abatement plan (MAP) as described in Rule 911(2), for FGTHROX and FGSITESCUBBERS has been submitted to the AQD District Supervisor. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits.² (R 336.1205(2), R 336.1224, R 336.1225, R 336.1910, R 336.1911, R 336.1912)

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Unless otherwise specified in this permit, monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event. (R 336.1213(3))
2. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart Kb, Section 60.116b(a) and (b) for those storage vessels which are exempt from the General Provisions (Subpart A) of 40 CFR Part 60 and from the provisions of Subpart Kb except for Section 60.116b(a) and (b) of Subpart Kb. (40 CFR Part 60, Subpart Kb)

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3. The permittee shall maintain an up-to-date list of all storage vessels exempt from the General Provisions (Subpart A) of 40 CFR Part 60 and from the provisions of Subpart Kb except for Section 60.116b(a) and (b) of Subpart Kb. **(R 336.1213(3))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the malfunction abatement plan (MAP) for the chlorosilane transfer highline systems. Applicant shall not operate the process until the MAP is reviewed and approved by the AQD District Supervisor. This information shall be kept on file and be made available to the Air Quality Division upon request. **(R 336.1911)**
2. The permittee shall comply with the applicable provisions of 1994 PA 451, Section 324.5524 (Fugitive dust sources or emissions) and with the provisions of the operating program received by the AQD, Saginaw Bay District Office on March 16, 2001. The operating program shall be amended by the permittee so that the operating program is current and reflects any significant change in the fugitive dust source or fugitive dust emissions. An amendment to an operating program shall be consistent with the requirements of Section 324.5524 and shall be submitted to the department for its review and approval. **(1994 PA 451, Section 324.5524)**
3. The permittee shall comply with the applicable requirements of 40 CFR Part 61, Subparts A (General Provisions) and M (National Emission Standard for Asbestos). The applicable sections of Subpart M include, but are not necessarily limited to: **(40 CFR Part 61, Subparts A and M)**
 - a. 61.145 (Standard for demolition and renovation)
 - b. 61.150 (Standard for waste disposal for manufacturing, fabricating, demolition, renovation, and spraying operations)
4. The permittee shall comply with the applicable requirements of 40 CFR Part 63, Subpart GGGGG (National Emission Standards for Hazardous Air Pollutants (NESHAP): Site Remediation). **(40 CFR Part 63, Subpart GGGGG)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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C. EMISSION UNIT CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU108-01	Platinum catalyst manufacturing process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. The most recent PTI for this emission unit is PTI No. 622-92D.	1992, 2000, 2014, 2016	FGMONMACT, FGHAP2012A2A
EU109-02	Mixing process in 2207 Kettle with product. Emissions are vented through scrubber 2214 and condenser 24472 as well as other vents. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. The most recent PTI for this emission unit is PTI No. 174-20.	08-16-2021	FGMONMACT, FGHAP2012A2A
EU109-04	2262 process producing silane products. Emissions are controlled by scrubber 2267 and condenser 24472 as well as other vents. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. The most recent PTI for this emission unit is PTI No. 156-20.	03-07-2022	FGMONMACT, FGHAP2012A2A
EU207-03	Liquid silicone rubber (LSR) rubber manufacturing batch mixer process. Emissions are controlled by venturi scrubber 22426 and water scrubbers 22412 and 23828. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.	1994, 1996, 1999, 2001, 2008, 2011, 2012, 2021	FGMONMACT

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
	The most recent PTI for this emission unit is PTI No. 156-06E.		
EU207-13	<p>Batch mixer/reactor process. Emissions are controlled by condenser 19251 and dust collector 12912. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU207-13 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 169-20.</p>	1994, 1998, 2008, 05-19-2021	FGMONMACT, FGHAP2012A2A
EU207-14	<p>Mixer 4 process producing silicone rubber products. Emissions are controlled by dust collector 12912 and condenser 19251. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU207-14 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 177-20.</p>	1994, 1998, 2008 05-21-2021	FGMONMACT, FGHAP2012A2A
EU207-15	<p>Silicone rubber manufacturing process conducted in Mixer 5. Emissions are controlled by condenser 19251 and dust collector 12912. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU207-15 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 172-20.</p>	1994, 1998, 2008, 05-19-2021	FGMONMACT, FGHAP2012A2A
EU207-16	<p>Silicone rubber manufacturing process conducted in Mixer 6. Emissions are controlled by condenser 19251 and dust collector 12912. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU207-16 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p>	1994, 1998, 2008, 05-19-2021	FGMONMACT, FGHAP2012A2A

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
	The most recent PTI for this emission unit is PTI No. 171-20.		
EU207-17	<p>Silicone rubber manufacturing process conducted in Mixer 7. Emissions are controlled by dust collector 12912 and condenser 19251. When manufacturing methoxy-treated products, emissions are routed through the IPA scrubber 19298 and condenser 19296 during stripping and cool down. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF, HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU207-17 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 173-20.</p>	1998, 1994, 1998, 1999, 2008, 05-19-2021	FGMONMACT, FGHAP2012A2A
EU207-18	<p>Mixer 8 process producing silicone rubber products. Emissions are controlled by dust collector 12912 and condenser 19251. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU207-18 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 170-20.</p>	1994, 1998, 2008, 05-21-2021	FGMONMACT, FGHAP2012A2A
EU207-19	<p>Silicone rubber manufacturing process conducted in Mixer 9. Emissions are controlled by dust collector 12912 and condenser 19251. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF, HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU207-19 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 180-20.</p>	1994, 1998, 2008, 05-19-2021	FGMONMACT, FGHAP2012A2A
EU212-01	Batch reaction process consisting of the 6054 batch kettle (an agitated, jacketed kettle), a heater, a receiver, and a service water cooled heat exchanger located in 212 building. Emissions are controlled by chilled condenser 6060. This emission unit is	2014, 9-16-2021	FGMONMACT, FGHAP2012A2A

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
	<p>subject to the requirements of 40 CFR Part 63, Subpart FFFF.</p> <p>The most recent PTI for this emission unit is PTI No. 63-14B.</p>		
EU212-02	<p>20500 Polymer Process, with process emissions controlled by condenser 20539. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 144-20.</p>	9-16-2021	FGMONMACT, FGHAP2012A2A
EU212-03	<p>Cold blend mixing process in 6019 Kettle with a man-way loading vent and a product drum-off vent. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 145-20.</p>	2014, 9-17-2021	FGMONMACT, FGHAP2012A2A
EU212-05	<p>Cold blend mixing process in 6009 Gum Kettle with a man-way loading vent and a product drum-off. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 108-18A.</p>	1962, 1996, 06-03-2021	FGMONMACT, FGHAP2012A2A
EU212-12	<p>Batch reaction process consisting of the 20400 batch kettle (an agitated, jacketed kettle), a trap, a receiver, and two heat exchangers located in 212 building. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, UU, and HHHHH.</p> <p>The most recent PTI for this emission unit is PTI No. 48-14C.</p>	2012 05-25-2021	FGMONMACT, FGHAP2012A2A
EU2504-13	<p>Siloxane Kettles process consisting of three jacketed batch kettles and ancillary equipment. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611.</p> <p>The most recent PTI for this emission unit is PTI No. 153-20.</p>	1987, 1989, 1997, 2008, 2009, 2015, 06-28-2021	NAFGSITEBLOWER FGTHROX FGSITESCRUBBERS

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EU2504-14	<p>Batch reaction process consisting of jacketed batch kettle DV19840, a receiver, and vacuum system. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 137-20.</p>	1987, 1989, 1997, 2008, 2009, 2015, 05-27-2021	FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EU2504-15	<p>Batch reaction process consisting of jacketed batch kettle DV19860, a receiver, and vacuum system. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 138-20.</p>	1987, 1989, 1997, 2008, 2009, 2015, 05-27-2021	FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EU2504-16	<p>Mixing process in 8200 Kettle with product. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.</p> <p>The most recent PTI for this emission unit is PTI No. 139-20.</p>	1987, 1989, 1997, 2008, 2009, 2015, 05-24-2021	FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EU2504-17	<p>Mixing process in 8210 Kettle with product. Emissions are vented through condensers DV24609 and/or DV 24611 as well as other vents. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.</p> <p>The most recent PTI for this emission unit is PTI No. 140-20.</p>	1987, 1989, 1997, 2008, 2009, 2015, 05-24-2021	FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EU2504-18	<p>Mixing process in 8220 Kettle with product. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and UU.</p> <p>The most recent PTI for this emission unit is PTI No. 141-20.</p>	1987, 1989, 1997, 2008, 2009, 2015, 06-04-2021	FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS

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EU2504-19	Mixing process in 8240 Kettle with product. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and UU. The most recent PTI for this emission unit is PTI No. 142-20.	1987, 1989, 1997, 2008, 2009, 2015, 06-04-2021	FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EU2504-20	The Bis H process consisting of reaction followed by two-pass distillation to remove impurities. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. The most recent PTI for this emission unit is PTI No. 143-20.	1987, 1989, 1997, 2008, 2009, 2015, 6-25-2021	NA FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EU2505-06	200 gallon Myers change can mixer used to produce emulsion and silicone blends. Emissions are controlled by baghouse FL2-25703 and condenser DV25714. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart UU. The most recent PTI for this emission unit is PTI No. 161-20.	2017, 09-29-2021	FGMONMACT
EU2505-07	Myers change can mixer (200 gallons) producing emulsion and silicone blends. Emissions are controlled by condenser 25714 and baghouse FL2-25703. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. The most recent PTI for this emission unit is PTI No. 159-20.	8-2018, 9-29-2021	FGMONMACT
EU2703-01	Hydrosilylation and alkoxylation process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. The most recent PTI for this emission unit is PTI No. 155-80H.	2001, 1999, 2003, 06-25-2021	FGTHROX, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
EU2703-03	Chloropropyl trichlorosilane process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart EEEE. EU2703-03 is a CAM-subject emission unit subject to the requirements of 40 CFR Part 64.	1985, 1992, 2000, 11-16-2021	FGTHROX, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A

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	The most recent PTI for this emission unit is PTI No. 920-84C.		
EU2703-08	9140 Batch Kettle and associated equipment. This kettle is used for batch production of several materials and also used as a neutralization kettle for highly acidic products and alkoxylation startup material. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, and the equipment leak provisions of 40 CFR Part 63, Subpart UU. The most recent PTI for this emission unit is PTI No. 155-20.	1997, 11-16-2021	FGMONMACT, FGTHROX, FGSITEBLOWER, FGHAP2012A2A
EU2703-09	9250 Batch Kettle. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart MMM and FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. The most recent PTI for this emission unit is PTI No. 157-20.	1989, 12-07-2021	FGMONMACT, FGHAP2012A2A , FGTHROX
EU2703-13	22270 Batch Kettle Process. Emissions are controlled by Scrubbers 9254 and 9255, Condenser 22274, and FGTHROX. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. The most recent PTI for this emission unit is PTI No. 190-20.	Pre-2010, 11-30-2021	FGMONMACT, FGTHROX, FGHAP2012A2A
EU2703-17	9025C dedicated waste tank in 2703 building. This emission unit vents to FGTHROX and, when FGTHROX is not operating, scrubbers 9390 A and B. Emissions from transfers from the tank to tank trucks will be controlled by vapor balance back to the tank. The most recent PTI for this emission unit is PTI No. 26- 14A 14B .	03-24-2014, 03-14-2022	FGTHROX, FGSITEBLOWER FGMONMACT
EU2901-12	Distillation pilot process consisting of distillation column and ancillary equipment. Control consists of a cryogenic condenser. The most recent PTI for this emission unit is PTI No. 125-10A.	2000, 2010	NA
EU2901-16	2901 B Module Twin Screw Extruder located in the 2901 building. The extruder operates under vacuum. This emission unit is subject	2015	FGMONMACT, FGHAP2012A2A

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	<p>to the requirements of 40 CFR Part 63, Subpart FFFF.</p> <p>The most recent PTI for this emission unit is PTI No. 180-15A.</p>		
EU303-01	<p>Phenyl methyl fluids and resin hydrolysis and polymerization. This emission unit vents to either the condenser 3475, carbon beds, FGTHROX, or FGSITESCUBBERS. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 158-20.</p>	1999, 12-22-2021	FGTHROX, FGSITESCUBBERS, FGMONMACT, FGHAP2012A2A
EU303-02	<p>Polymer and resin surge, mixing, filtration, and blending. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 15-22.</p>	1999, 02-10-2022	FGTHROX, FGSITESCUBBERS, FGMONMACT, FGHAP2012A2A
EU303-06	<p>Batch and semi continuous polymer and resin processing including reactors, distillation columns, strippers, receivers, storage tanks, accumulators, separators, vacuum pumps, condensers, adsorbers, filters, and related equipment. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU303-06 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 160-20A.</p>	1996, 09-23-2021, 11-10-2022	FGTHROX, FGSITESCUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
EU303-09	<p>Flake resin hydrolysis process. Emissions are vented through FGTHROX, solids hopper 3460, FGSITESCUBBERS, cyclone 3446, as well as other vents. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU303-09 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 726-78C.</p>	1979, 1983, 2001, 11-08-2021	FGTHROX, FGSITESCUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A

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EU303-11	T57 waste tank. This emission unit is exempt from air permit to install requirements (R 336.1201) pursuant to Rule 284. This emission unit is subject to the requirements of 40 CFR Part 61, Subparts A, J, and V.	NA	FGLEAKDETECTION, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGHAP2012A2A
EU303-15	1600 Batch Kettle batch manufacturing process consisting of an agitated, jacketed kettle, water trap, receiver, blending and filtration, and product packaging. Emissions are controlled by FGTHROX (as well as FGSITESCRUBBERS, condenser 1637, or condenser 1602 during periods where FGTHROX is out of operation or when total or partial diversion is necessary for any safety-related or operational scenarios). This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU303-15 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 146-16A.	1996, 2002, 2016, 10-03-2022	FGSITESCRUBBERS, FGTHROX, FGMONMACT
EU303-16	1650 Batch Kettle batch manufacturing process consisting of an agitated, jacketed kettle, water trap, receiver, blending and filtration, and product packaging. Emissions are controlled by FGTHROX (as well as FGSITESCRUBBERS, condenser 1637, or condenser 3420 during periods where FGTHROX is out of operation or when total or partial diversion is necessary for any safety-related or operational scenarios). This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU303-16 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 147-16A.	1996, 2002, 2016, 10-03-2022	FGSITESCRUBBERS, FGTHROX, FGMONMACT
EU303-19	Phenyl methyl polymerization semi-continuous process consisting of an agitated kettle, water trap, storage tanks, distillation column, receivers, filters, vacuum pumps, and related equipment. Some equipment vents through condenser 3469 or FGTHROX; other equipment vents through condenser 3475 to either carbon beds or FGTHROX. The site scrubbers are used as control equipment if the THROX is not in operation.	1975, 08-20-2021, 11-14-2022	FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A

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	<p>This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.</p> <p>The most recent PTI for this emission unit is PTI No. 166-20A.</p>		
EU304-02	<p>Alkylsilane process including reactors, distillation columns, condensers, scrubber, storage tanks, tanker station, and related equipment. Tanks that do not vent include 259. This emission unit vents to FGTHROX and FGSITESCUBBERS. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU304-02 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 616-92B.</p>	05-31-1996, 03-05-2020	FGTHROX, FGSITESCUBBERS, FGSITEBLOWER, FGMONMACT
EU311-01	<p>HCl/MeCl recovery process including scrubbers, tanks, columns, vaporizer, absorber, compressor and related equipment. Several processes on-site vent to this recovery process. Emissions are controlled by two sets of control device trains, each operating in series, that vent through an absorber (2810/24101) and then a vent scrubber (2812/24102). This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU311-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 01-08A.</p>	05-01-1996, 2008, 03-09-2022	FGMONMACT, FGHAP2012A2A
EU321-01	<p>40x Resin process including a reaction loop, capping reactor, 3 separators, 2 columns, and ancillary equipment. Emissions from neutralization activities can vent to FGTHROX or FGSITESCUBBERS. During FGTHROX downtime, Scrubbers 7170, 4776, and 11472 will continue to achieve Group 1 control for HCl. An activated carbon bed is also used for emission control. The process does not release emissions through SV321-001, SV321-019, SV321-021, or SV321-069 during normal operations. This emission unit is subject to the miscellaneous chemical manufacturing NESHAP in 40 CFR Part 63, Subparts A and FFFF.</p>	11-22-1995, 2013, 06-28-2021	FGTHROX, FGSITESCUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A

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	The most recent PTI for this emission unit is PTI No. 174-12B.		
EU321-02	<p>Capped resin manufacturing process including jacketed reactors, process condensers, a receiver, and auxiliary equipment. During FGTHROX downtime, Group 1 MON processes are shut down. Non-Group 1 processes may continue to operate and vent locally or to FGSITESCUBBERS. This EU is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.</p> <p>The most recent PTI for this emission unit is PTI No. 176-20.</p>	1988, 06-28-2021	FGTHROX, FGSITESCUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
EU321-07	<p>Mixing process in 5132 Kettle producing organo-compatible silicones products. Emissions are vented through FGTHROX, FGSITESCUBBERS, as well as other vents. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 179-20.</p>	12-21-2021	FGMONMACT, FGTHROX, FGSITESCUBBERS, FGHAP2012A2A
EU321-11	<p>Capped resin manufacturing process including jacketed reactors, process condensers, a receiver, and auxiliary equipment. During FGTHROX downtime, Group 1 MON processes are shut down. Non-Group 1 processes may continue to operate and either vent locally or to FGSITESCUBBERS. This EU is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.</p> <p>The most recent PTI for this emission unit is PTI No. 175-20.</p>	2009, 06-28-2021	FGTHROX, FGSITESCUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
EU321-12	<p>Cosmetic wax manufacturing process consisting of a reactor, process condenser, receiver, and auxiliary equipment. The process vents through one of two scrubbers operating in parallel. Exhaust then goes through two polishing scrubbers before going to FGTHROX, FGSITESCUBBERS, or 321 Carbon Beds.</p> <p>The most recent PTI for this emission unit is PTI No. 38-22.</p>	1992, 04-06-2022	FGTHROX, FGSITESCUBBERS, FGMONMACT

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EU322-01	LP-1 process (vinylchlorosilane) including reactors, distillation equipment, storage tanks, condensers, and related equipment. Emissions are controlled by Scrubber 22452. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF as well as the equipment leak provisions in 40 CFR 63, Subpart UU. The most recent PTI for this emission unit is PTI No. 134-20.	1999, 06-28-2021	FGHAP2012A2A FGMONMACT
EU322-02	HP-7 process producing silane products. Emissions are controlled by FGTHROX (as well as scrubber 22452 during periods where FGTHROX is out of operation or when total or partial diversion is necessary for any safety-related or operational scenarios). This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. The most recent PTI for this emission unit is PTI No. 132-20A.	1996, 08-20-2021, 02-11-2022	FGMONMACT, FGHAP2012A2A FGTHROX
EU322-03	Silizane manufacturing process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. The most recent PTI for this emission unit is PTI No. 296-07.	1999, 1994, 1992, 1991, 1984	FGMONMACT, FGHAP2012A2A
EU322-04	HP-6 process producing silane products. Emissions are controlled by FGTHROX (as well as scrubber 22452 during periods where FGTHROX is out of operation or when total or partial diversion is necessary for any safety-related or operational scenarios). This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. The most recent PTI for this emission unit is PTI No. 133-20A.	08-31-2000, 08-20-2021, 02-11-2022	FGMONMACT, FGHAP2012A2A , FGTHROX
EU322-06	Siloxane catalyst process. EU322-06 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 308-94B.	1994 7-10-2019 7-27-2021	NA
EU322-11	Methylvinylchlorosilane crude distillation process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart UU.	2000, 2004, 06-25-2021	FGMONMACT, FGHAP2012A2A

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	The most recent PTI for this emission unit is PTI No. 146-20.		
EU324-01	4820 batch kettle process producing silane and siloxane products. Emissions are controlled by service water condenser 4818 and chilled condensers 4804 and 4807. The chilled condensers alternate in operation. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU324-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 15-13A.	1996, 2008, 2013, 06-29-2021	FGMONMACT, FGHAP2012A2A
EU324-08	5617 batch kettle process producing silane and siloxane products, controlled by condenser 5618 and, if pulling vacuum, chilled condensers 4804 and 4807, which alternate in operation. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU. The chilled condensers alternate in operation. EU324-08 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 14-13A.	2012, 10-18-2021	FGMONMACT
EU324-11	Batch distillation kettle 4895 including 4896 distillation column and 24924/24925/4898 overhead receivers. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU. The most recent PTI for this emission unit is PTI No. 152-20.	05-01-1981, 08-11-2021	FGMONMACT
EU324-18	25156 batch kettle in 324 building, consisting of a reactor, heat exchanger, and a receiver. Emissions are controlled by a service water cooled condenser and two parallel chilled condensers. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU. The most recent PTI for this emission unit is PTI No. 19-14C.	2014, 06-25-2021	FGMONMACT
EU325-01	TCS (trichlorosilane) vent recovery system. EU325-01 receives vents from different processes to recover TCS. EU325-01 is	1997, 2009	FG325-01, FG337SCRUBBER, FGTHROX,

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	<p>located in 317 building. This emission unit typically vents to the carbon bed and venturi scrubber system described in FG325-01; however, the emission unit may vent to the 337 wet scrubber in the event the venturi scrubber system is down.</p> <p>The most recent PTI for this emission unit is PTI No. 44-06B.</p>		FGSITESCRUBBERS, FGSITEBLOWER,
EU325-03	<p>Solids recovery system. EU325-03 receives vents from different processes to recover silicon. EU325-03 is located in 348 building.</p> <p>The most recent PTI for this emission unit is PTI No. 44-06.</p>	1997	NA
EU340-01	<p>Calcium chloride process including condensers, scrubbers, columns, vaporizers, storage tanks, compressor, and related equipment. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU340-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 34-04B.</p>	1999, 2004	FGMONMACT, FGHAP2012A2A , FGLEAKDETECTION
EU340-03	<p>T53 Methanol storage tank, AQD Rule 290 emission unit. This emission unit is subject to the requirements of 40 CFR Part 60, Subparts A and Kb and 40 CFR Part 63, Subpart EEEE.</p>	NA	FGRULE290, FGOLDFACILITY, FGHAP2012A2A , FGMONMACT
EU356-01	<p>Hydrochloric Acid (HCl) production plant with a packed bed scrubber (24388) and venturi scrubber (24386), capable of producing both anhydrous HCl and aqueous HCl. Production and storage of liquid HCl product at a concentration of 30 weight percent or greater during normal operations is subject to the requirements of the Hydrochloric Acid Production NESHAP, 40 CFR Part 63, Subpart NNNNN. Columns 24350 and 24370 and vessels 24358, 24360, and 24362 are only used to produce anhydrous HCl. Absorbers 24387 and 26018 are only used to produce aqueous HCl. Tanks 24345 and 24346 and the packed bed and venturi scrubbers are used during production of both anhydrous and aqueous HCl.</p> <p>The most recent PTI for this emission unit is PTI No. 29-07D.</p>	2008, 2013, 2020	FGHCLMACT

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EU356-02	Rail car transfer station No. 9E with packed bed scrubber (24401), capable of either loading rail cars with aqueous HCl or unloading aqueous HCl from rail cars. Loading rail cars with liquid HCl product at a concentration of 30 weight percent or greater during normal operations is subject to the requirements of the Hydrochloric Acid Production NESHAP, 40 CFR Part 63, Subpart NNNNN. The most recent PTI for this emission unit is PTI No. 29-07C.	2008, 2013	FGHCLMACT
EU356-03	Rail car unloading station No. 10E with packed bed scrubber (24344), capable of unloading aqueous HCl from rail cars. The most recent PTI for this emission unit is PTI No. 29-07C.	2008, 2013	NA
EU501-01	Intermediate viscosity (IV) and very low viscosity (VLV) silicone fluid manufacturing process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. The most recent PTI for this emission unit is PTI No. 158-87B.	1997	FGMONMACT, FGHAP2012A2A
EU501-02	1107 hydrolysis process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU501-02 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 126-03A.	1978, 1986, 1988, 1989, 1991, 2003	FGMONMACT, FGHAP2012A2A
EU501-05	Crosslinkers manufacturing process consisting of jacketed reactors, condensers, mixers, pumps, and vacuum equipment, and product packaging. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. The most recent PTI for this emission unit is PTI No. 24-23	1953, 02-06-2023	FGMONMACT
EU501-12	Small Emulsion Polymer (EP) process. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. The most recent PTI for this emission unit is PTI No. 154-20.	05-14-2021	FGMONMACT, FGHAP2012A2A

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU501-49	<p>Low viscosity fluids and 3-component fluids process including reactors, tanks, condensers and a vacuum system. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, and the equipment leak provisions of 40 CFR part 63, Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 437-90C.</p>	<p>1998, 10-03-2014, 06-29-2021</p>	<p>FGMONMACT, FGHAP2012A2A</p>
EU502-01	<p>Methyl vent system consisting of emissions from tanks T-100, T-102, T-150, T-151, T-208, T-20841, and T-25-100, emissions from maintenance procedures involving portable storage containing methyltrichlorosilane, methylchlorosilane, dimethyldichlorosilane, dimethylchlorosilane, trimethylchlorosilane, phenyltrichlorosilane, and ethyltrichlorosilane, and the vent from the Cabot Mix Tank operation. This emission unit is subject to the requirements of 40 CFR Part 60, Subparts A and Kb and 40 CFR Part 61, Subparts A, J, and V. This emission unit vents to the 337 Spray Scrubber System or to the dry vent tank of the THROX System. The dry vent tank is either sent to the THROX System burner or diverted to the Site Scrubber System. Emissions from loading stations 9G, 10G, DVST-28, and DVST 56 also have the option to vent directly to the Site Scrubber System via the "Bulk Move Vent" described in EU502-07.</p> <p>The most recent PTI for this emission unit is PTI No. 131-15.</p>	<p>1999, 2008</p>	<p>FG304VENTRECOVERY, FG337SCRUBBER, FG325-01, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGHAP2012A2A</p>
EU502-04	<p>Container Maintenance and Wash area for the High Volume Silanes production facility. Includes nitrogen purge for some containers. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and the equipment leak provisions of 40 CFR Part 63, Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 18-18A.</p>	<p>5-14-2018, 05-28-2021</p>	<p>FGSITEBLOWER, FGTHROX, FGMONMACT</p>
EU502-07	<p>Trichlorosilane (TCS) distillation and associated equipment for distillation of TCS into various grades (electronic-, chemical- and plant-grade). This emission unit is subject to the requirements of 40 CFR Part 60, Subparts A and Kb. This emission unit vents to both the 304 vent recovery system</p>	<p>1999, 2007</p>	<p>FG304VENTRECOVERY, FG337SCRUBBER, FG325-01, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER,</p>

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
	<p>and the 337 wet scrubber in series. In the event 304 vent recovery goes down, the emission unit vents to the air pollution control (APC) train described in FG325-01. This APC train is comprised of a carbon bed and scrubber system which operate in series to control emissions.</p> <p>The most recent PTI for this emission unit is PTI No. 185-07B.</p>		
EU502-09	<p>Chlorosilane waste tank 25403 for phenyl supply chain located in the 502 tank farm. This emission unit vents to the site THROX and, when the THROX is not operating, the site scrubbers. Emissions from transfers from the tank to tank trucks and rail cars will be controlled by THROX or vapor balance back to the tank.</p> <p>The most recent PTI for this emission unit is PTI No. 91-14.</p>	<p>NA (not installed as of 2-5-2015).</p>	<p>FGTHROX, FGSITESCUBBERS, FGSITEBLOWER</p>
EU502-11	<p>Chlorosilane waste tank 256 in the 2502 tank farm, with nominal capacity of 20,000 gallons. The tank receives liquid waste from various emission units at the facility and can be unloaded to either tank trucks or railcars. The tank typically vents to the site thermal oxidizer (THROX). In the event the THROX is offline, the tank vents to one of the parallel site scrubbers. If both the THROX and the site scrubbers are unavailable, the tank vents to one of the 337 tower scrubbers.</p> <p>The most recent PTI for this emission unit is PTI No. 132-15.</p>	<p>2015</p>	<p>FGTHROX, FGSITESCUBBERS, FG337SCRUBBER</p>
EU505-01	<p>Resin and coating manufacturing including reactors, kettles, condensers, scrubber, drum off, vacuum system, and related equipment. This emission unit is subject to the requirements of 40 CFR Part 61, Subparts A, J, and V, and 40 CFR Part 63, Subpart-FFFF. Tanks 508 and 509 are subject to Subpart FFFF.</p> <p>The most recent PTI for this emission unit is PTI No. 169-12B.</p>	<p>01-19-2000, 2007, 2013, 05-07-2021</p>	<p>FGLEAKDETECTION, FGTHROX, FGSITESCUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A</p>
EU505-04	<p>23390 batch reactor and manufacturing process containing a receiver, filters, carbon beds, vacuum pump, condensers, storage tanks, and other associated equipment.</p>	<p>2016, 04-07-2022</p>	<p>FGMONMACT, FGHAP2012A2A, FGLEAKDETECTION</p>

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
	<p>Emissions are controlled by condensers DV5-510 and DV23414 and scrubber DV23401. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF.</p> <p>The most recent PTI for this emission unit is PTI No. 200-15A.</p>		
EU505-11	<p>Batch resin process with emissions controlled by condenser 6553 and either the site scrubbers or FGTHROX. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts A and FFFF, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU, as well as to the requirements of 40 CFR Part 61, Subparts A, J, and V.</p> <p>The most recent PTI for this emission unit is PTI No. 162-20.</p>	01-19-2000, 2007, 2013, 05-12-2021	FGLEAKDETECTION, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
EU508-01	<p>Phenyltrichlorosilane (PhSiCl₃) and diphenyldichloro-silane (Ph₂SiCl₂) processes, which include production, storage, and transfer activities. Emissions are controlled by FGTHROX (as well as FGSITESCRUBBERS or FG337SCRUBBER during periods where FGTHROX is out of operation or when total or partial diversion is necessary for any safety-related or operational scenarios). This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 84-08D.</p>	1996, 2008, 2012, 04-11-2022	FG337SCRUBBER, FGTHROX, FGSITESCRUBBERS, FGMONMACT, FGHAP2012A2A
EU515-01	<p>The emission unit involves all activities associated with production, storage and transfer of Phenylmethylchlorosilane (PhMeSiCl₂) and Diphenylmethylchlorosilane (Ph₂MeSiCl). The unit can vent as follows:</p> <p><i>456 MgCl₂ Bin:</i> This unit vents through a baghouse via SV515-002 as MgCl₂ powder is transferred to the bin from the 515 MgCl₂ Drying unit.</p> <p><i>515 Toluene Scrubber:</i> Multiple units vent to the 515 Toluene Scrubber (10530). These vents are pre-treated by glycol condenser HX-10541. The Reactors, 513 Tank Farm, 516 Distillation, 515 MgCl₂ Filtration and 515 MgCl₂ Drying units all vent to the 515</p>	1997,2004, 2008, 2012, 04-07-2022	FGLEAKDETECTION, FGTHROX, FGSITESCRUBBERS, FGMONMACT, FGHAP2012A2A , FGOLDFACILITY

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
	<p>Toluene Scrubber. 655 column within 516 Distillation utilizes HX-10657 if FGTHROX burner is unavailable. The Toluene Scrubber vent is normally sent to FGTHROX and vented via SV2512-001, SV2512-002 or SV2514-006. If FGTHROX is unavailable emissions will vent through the 515 Toluene Scrubber and out SV515-003 while the process is shutting down.</p> <p><i>515 MgCl₂ Quenching:</i> MgCl₂ powder from 456 bin can be sent to the 515 MgCl₂ Quenching unit and vented via SV515-006.</p> <p><i>515 MgCl₂ Trailer Loading:</i> MgCl₂ powder from 456 bin can be sent to the 515 MgCl₂ Trailer Loading unit and vented via SV515-004.</p> <p><i>Reactors:</i> The reactors can vent N₂ from Mg chip transfer operations via SV515-007 and SV515-008.</p> <p>EU515-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 812-91D.</p>		
EU601-01	<p>Alkoxylation process including kettle, condensers, storage tanks, distillation columns, bulk container filling equipment, scrubbers, and other related equipment. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU. EU601-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 534-77H.</p>	1977, 2000, 2009, 11-15-2021	FGTHROX, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
EU602-07	<p>The 63 Unit is a continuous process making silicone gum. Condensers 6186 and 6168 control emissions from the reactor and from product stripping. This emission unit is subject to the miscellaneous organic chemical manufacturing NESHAP in 40 CFR Part 63, Subparts A and FFFF, and to the equipment leak provisions of Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 151-20.</p>	2000, 05-14-2021	FGMONMACT

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU604-08	Fluoro cyclics process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU604-08 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 466-73E.	2000	FGMONMACT
EU800-01	800 block tank farm consisting of storage and transfer operations for on-site waste liquids. Emissions are controlled by a nitrogen blanket. The most recent PTI for this emission unit is PTI No. 334-88E.	1999	FGLEAKDETECTION
EURULE290	Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278, 278a, and 290. Emission units installed/modified before December 20, 2016, may show compliance with Rule 290 in effect at the time of installation/modification. Some emission units are subject to the requirements of 40 CFR Part 63, Subparts FFFF and EEEE, and 40 CFR Part 61, Subparts J and V.	NA	FGRULE290, FG304VENTRECOVERY, FGTHROX, FGSITEBLOWER, FGSITECRUBBERS, FGMONMACT, FGOLDFACILITY, FGLEAKDETECTION
EUCOLDCLEANER	Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, 278a and Rule 281(2)(h) or Rule 285(2)(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.	NA	FGCOLDCLEANER
EURULE604	Any existing or future storage vessels subject to the requirements of R 336.1604 (Rule 604). Storage vessels subject to AQD Rule 604 are those which store any organic compound having a true vapor pressure of more than 1.5 psia, but less than 11 psia, at actual storage conditions in any fixed roof stationary vessel of more than 40,000 gallon capacity.	NA	FGRULE604
EURULE605	Any existing or future storage vessels subject to the requirements of R 336.1605 (Rule 605). Storage vessels subject to AQD Rule 605 are those which store any organic compound having a true vapor pressure of 11 or more psia at actual storage conditions in any stationary vessel of more than 40,000 gallon capacity.	NA	FGRULE605
EURULE703	Any new or future storage vessels subject to the requirements of R 336.1703 (Rule 703). Storage vessels subject to AQD Rule 703 are	NA	FGRULE703

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
	those which receive gasoline from a delivery vessel into any new stationary vessel of more than 2,000 gallon capacity located at any gasoline dispensing facility.		
EUBOILER12	103 MMBTU/hr natural gas fired boiler with low-NOx burners.	2006	FG432BOILERS
EUBOILER13	103 MMBTU/hr natural gas fired boiler with low-NOx burners.	2006	FG432BOILERS
EUBOILER14	103 MMBTU/hr natural gas fired boiler with low-NOx burners.	2006	FG432BOILERS
EUBOILER2515	25.1 MMBTU/hr boiler capable of burning natural gas, synthetic gas, or a blended mixture of both. This boiler is located in 2515 building and decommissioned but not dismantled. 40 CFR Part 63, Subpart DDDDD may be applicable to EUBOILER2515 if EUBOILER2515 is operated.	2009	FGPEM&BLR
EUEMERGENCIRICE <500	Each existing or new compression ignition emergency stationary reciprocating internal combustion engines (RICE) located at a major source of HAP emissions as identified within 40 CFR Part 63, Subpart ZZZZ, 63.6590(a)(1), less than or equal to 500 brake hp, and is exempt from the requirements of Rule 201 pursuant to Rules 282(2)(b) or 285(2)(g).	NA	FGEMERGENCIRICE<500HP
EU2515-01	An electrically powered plasma arc gasifier known as a "plasma enhanced melter (PEM)" with ancillary equipment. The most recent PTI for this emission unit is PTI No. 175-09A.	2008	FGTHROX, FGPEM&BLR

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**EU108-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

Platinum catalyst manufacturing process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF.

The most recent PTI for this emission unit is PTI No. 622-92D.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Carbon adsorption system consisting of two carbon drums in series
- Hydrogen chloride (HCl) scrubber (tank 20734)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	11.6 pph ²	Hourly	EU108-01	SC IV.1, VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1225
2. VOC	0.7 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month.	EU108-01	SC IV.1, IV.3, VI.1, VI.2, VI.3, & VI.4	R 336.1702(a), R 336.1225, R 336.1201

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU108-01 unless the carbon adsorption system is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the carbon adsorption system includes exhausting emissions directed to the system through two carbon drums connected in series and replacing activated carbon in the system based on the weight gain of the second of the two drums. The permittee shall put a fresh drum in the second drum position before the weight gain of the second drum exceeds 30 pounds over the "as received" weight of the drum.² **(R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall not produce Platinum II unless the HCl scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the HCl scrubber includes replacing the scrubbing solution before beginning each batch of Platinum II production.² **(R 336.1224, R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

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VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall keep records as required to demonstrate compliance with the emission limits specified in SC I.1 and I.2. Emission totals shall be calculated using the method described in Appendix 7, Section 7.1. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission totals specified in SC I.2.² (R 336.1225, R 336.1702(a))
2. The permittee shall maintain records, in a satisfactory manner, of carbon replacement for the carbon adsorption system.² (R 336.1910)
3. The permittee shall maintain batch production records in sufficient detail to demonstrate compliance with SC IV.1 and IV.2.² (R 336.1910)
4. The permittee shall monitor and record, in a satisfactory manner, the weight gain of the second carbon drum over its "as received" weight on a continuous basis. For this condition, monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. With the exception of calibration, quality assurance, and maintenance activities, this record shall also include actions taken to correct and prevent a reoccurrence of each event.² (R 336.1910)

See Appendix 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV108-001	2 ²	39 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV108-002	10 ²	35 ²	R 336.1225, 40 CFR 52.21(c) & (d)

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IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU109-02
EMISSION UNIT CONDITIONS**

DESCRIPTION

Mixing process in 2207 Kettle with product. Emissions are vented through scrubber 2214 and condenser 24472 as well as other vents. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 174-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Scrubber (2214)
- Condenser (24472)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	1.47 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU109-02	SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1702(a)
2. Hydrocarbons C7-C9 (CAS No. 68920-06-9)	0.70 tpy ¹	12-month rolling time period as determined at the end of each calendar month	EU109-02	SC VI.6	R 336.1225

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU109-02 unless the exit coolant temperature of condenser 24472 is at a maximum of 10°C or less.² **(R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall not operate EU109-02 unless the liquid flow rate of condenser 24472 is at a minimum of 3 gallons per minute.² **(R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall not operate EU109-02 when vents are directed to scrubber 2214 unless the liquid flow rate of scrubber 2214 is at a minimum of 2.75 gallons per minute.² **(R 336.1225, R 336.1702(a), R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU109-02 unless scrubber 2214 and condenser 24472 are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through SC III.3 that apply to the scrubber and condenser.² **(R 336.1225, R 336.1702(a), R 336.1910)**

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2. The permittee shall equip and maintain condenser 24472 with an exit coolant temperature indicating device. The permittee shall calibrate the exit coolant temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall equip and maintain scrubber 2214 and condenser 24472 with liquid flow indicating devices. The permittee shall calibrate each liquid flow indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall monitor and record, on a continuous basis, the exit coolant temperature of condenser 24472 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of condenser 24472 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a), R 336.1910)**
4. When venting to scrubber 2214, the permittee shall monitor and record, on a continuous basis, the scrubber 2214 liquid flow rate with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
5. The permittee shall calculate the VOC emission rate from EU109-02 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
6. The permittee shall calculate the Hydrocarbons C7-C9 (CAS No. 68920-06-9) emission rate from EU109-02 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.¹ **(R 336.1225)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV109-010 ^a (Kettle 2207 Vent)	2 ²	40 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV109-021 (Vacuum Pump 4474 Vent)	2 ²	41 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV109-022 (Process Vent)	24 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV109-029 (Waste Tank 5967 Vent)	2 ²	28 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV109-009 (Scrubber 2214 Vent)	2 ²	39 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU109-04
EMISSION UNIT CONDITIONS**

DESCRIPTION

2262 process producing silane products. Emissions are controlled by scrubber 2267 and condenser 24472 as well as other vents. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 156-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Scrubber (2267)
- Condenser (24472)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	2.35 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU109-04	SC VI.2, SC VI.3, SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU109-04 unless the exit coolant temperature of condenser 24472 is at a maximum of 10°C or less.² **(R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall not operate EU109-04 unless the liquid flow rate of condenser 24472 is at a minimum of 3 gallons per minute.² **(R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall not operate EU109-04 when vents are directed to scrubber 2267 unless the liquid flow rate of scrubber 2267 is at a minimum of 2.75 gallons per minute.² **(R 336.1225, R 336.1702(a), R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU109-04 unless scrubber 2267 and condenser 24472 are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through SC III.3 that apply to the scrubber and condenser.² **(R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall equip and maintain condenser 24472 with an exit coolant temperature indicating device. The permittee shall calibrate the exit coolant temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1225, R 336.1702(a), R 336.1910)**

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3. The permittee shall equip and maintain scrubber 2267 and condenser 24472 with liquid flow indicating devices. The permittee shall calibrate each liquid flow indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1702(a))**
2. The permittee shall monitor and record, on a continuous basis, the exit coolant temperature of condenser 24472 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of scrubber 2267 and condenser 24472 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall calculate the VOC emission rate from EU109-04 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

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VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-106-029 (Waste Tank 5967 Vent)	2 2	28 2	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV-109-019 (Kettle 2262 Vent)	2 2	41 2	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV-109-021 (Condenser 24472 Vent)	2 2	41 2	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV-109-022 (Process Vent)	24 2	56 2	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV-109-018a (Scrubber 2267 Vent)	2 2	39 2	R 336.1225, 40 CFR 52.21(c) & (d)

^a This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU207-03
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Liquid silicone rubber (LSR) rubber manufacturing batch mixer process. Emissions are controlled by venturi scrubber 22426 and water scrubbers 22412 and 23828. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 156-06E.

Flexible Group ID: FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Venturi scrubber (22426).
- Water scrubbers (22412 and 23828).

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	23.6 pph ^{2,**}	Hourly	EU207-03	SC V.1, VI.2	R 336.1702(a)
2. VOC	26.3 tpy ^{2,**}	12-month rolling time period as determined at the end of each calendar month	EU207-03	SC VI.2 & VI.3	R 336.1702(a)
3. Non-VOC completely methylated siloxanes *	54.3 tpy ¹	12-month rolling time period as determined at the end of each calendar month	EU207-03	SC VI.2 & VI.4	R 336.1224
4. Ammonia	3.6 pph ^{1,**}	Hourly	EU207-03	SC V.1, VI.2	R 336.1224, R 336.1225
5. PM	0.10 lbs/1,000 lbs exhaust gas ^{2,+}	Hourly	Equipment venting from SV 207-018	SC V.1, VI.2	R 336.1331
6. PM	0.10 lbs/1,000 lbs exhaust gas ^{2,+}	Hourly	Equipment venting from SV 207-035	SC V.1, VI.2	R 336.1331

* "Non-VOC completely methylated siloxanes" refers to the combined emissions of all compounds falling into the category of "cyclic, branched, or linear completely methylated siloxanes" excluded from being VOC by the definition of "volatile organic compounds" in Rule 122 (R 336.1122), such as hexamethyldisiloxane.

** This emission limit includes emissions from all vents listed in SC VIII.1-2 and does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

+ Dry gas basis

II. MATERIAL LIMIT(S)

NA

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III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The water makeup rate of water scrubber 22412 shall be at least 0.2 gallons per minute, or a different rate demonstrated during testing, when EU207-03 is venting through this scrubber.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)
2. The recycle liquid flow rate of the venturi scrubber (22426) shall be at least 15 gallons per minute, or a different rate demonstrated during testing, when EU207-03 is venting through this scrubber.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)
3. The water makeup rate of water scrubber 23828 shall be at least 0.7 gallons per minute, or a different rate demonstrated during testing, when EU207-03 is venting through this scrubber.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)
4. The recycle liquid flow rate of water scrubber 23828 shall be at least 20 gallons per minute, or a different rate demonstrated during testing, when EU207-03 is venting through this scrubber.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)
5. The temperature of the recycle liquid entering water scrubber 23828 shall not exceed 68°F, or a different temperature demonstrated during testing, when EU207-03 is venting through this scrubber.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU207-03 unless the vent is routed through scrubber system No. 1 (comprised of scrubber 22426 and scrubber 22412) and/or scrubber system No. 2 (comprised of water scrubber 23828) and all the scrubbers in use are installed, maintained, and operated in a satisfactory manner. Satisfactory operation of each scrubber includes meeting the requirements of SC III.1 through III.5 that apply to the scrubber.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)
2. The permittee shall equip and maintain packed column scrubber 22412 with a water makeup flow indication device.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)
3. The permittee shall equip and maintain venturi scrubber 22426 with a recycle liquid flow indication device.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)
4. The permittee shall equip and maintain packed-bed scrubber 23828 with a water makeup and recycle liquid flow indication devices.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)
5. The permittee shall equip and maintain water scrubber 23828 with a temperature indication device capable of monitoring the temperature of the recycle liquid entering the scrubber.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request from the AQD District Supervisor, the permittee may be required to verify the VOC, PM, and/or ammonia emission rates from EU207-03 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
Ammonia	40 CFR Part 63, Appendix A

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An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702, R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the following parameters with instrumentation acceptable to the AQD:
 - a. water makeup rate for water scrubbers 22412 and 23828
 - b. recycle liquid temperature of water scrubber 23828
 - c. recycle liquid flow rate for water scrubber 23828
 - d. recycle liquid flow rate of venturi scrubber 22426

For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)

3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU207-03 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period non-VOC completely methylated siloxanes emissions for EU207-03 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.¹ (R 336.1224)

See Appendix 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

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4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. (R 336.1213(3)(c), R 336.2001(5))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV207-018 (Scrubber 1: DV22426/22412)	2 ²	60 ²	R 336.1225, 40 CFR 52.21(c)&(d)
2. SV207-035 (Scrubber 2: DV23828)	2 ²	62 ²	R 336.1225, 40 CFR 52.21(c)&(d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and HHHHH, as they apply to EU207-03.² (40 CFR Part 63, Subparts A & HHHHH)

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU207-13
EMISSION UNIT CONDITIONS**

DESCRIPTION

Batch mixer/reactor process. Emissions are controlled by condenser 19251 and dust collector 12912. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. [EU207-13 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.](#)

The most recent PTI for this emission unit is PTI No. 169-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser (19251)
- Dust collector (12912). [This device is a CAM subject unit for Particulate.](#)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	1.7 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU207-13	SC VI.2, VI.4	R 336.1702(a)
2. PM	0.68 pph ²	Hourly	EU207-13	SC V.1, SC VI.3	R 336.1331
3. PM10	0.68 pph ²	Hourly	EU207-13	SC V.1, SC VI.3	40 CFR 52.21 (c)&(d)
4. PM2.5	0.68 pph ²	Hourly	EU207-13	SC V.1, SC VI.3	40 CFR 52.21 (c)&(d)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU207-13 unless the exit gas temperature of the glycol condenser (19251) is 40°F or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall not operate EU207-13 unless the pressure drop across the dust collector (12912) is 0.5 inches water or more but not more than 10 inches of water.² (**R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c)&(d)**)
3. [Proper operation for the dust collector \(12912\) means that the pressure drop is maintained within a range of 0.5 to 10 inches water. An excursion is a pressure drop reading outside the range defined in this condition or demonstrated during testing. Upon detecting an excursion of the pressure drop limit, the permittee shall restore operation of the dust collector \(12912\) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. \(40 CFR 64.2\(c\)\(2\), 40 CFR 64.7\(d\)\)](#)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU207-13 unless the glycol condenser (19251) and dust collector (12912) are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 and III.2 that apply to the condenser and dust collector.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c)&(d))**
2. The permittee shall equip and maintain the glycol condenser (19251) with an exit gas temperature indicator. The permittee shall calibrate the exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall equip and maintain the dust collector (12912) with a continuous pressure drop indicator. The permittee shall calibrate the pressure drop indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c)&(d))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Upon request from the AQD District Supervisor, the permittee may be required to verify the PM, PM10, and/or PM2.5 emission rates from EU207-13 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² **(R 336.1331, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c)&(d))**

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. **(R 336.1213(3))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c)&(d))**
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of the glycol condenser (19251) with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall record, on a per shift basis, the pressure drop across the dust collector (12912) with instrumentation acceptable to the AQD. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c)&(d))**

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4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU207-13 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
5. For the dust collector (12912), upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))
6. For the dust collector (12912), except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and require zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.3(c)(3), 40 CFR 64.7(c))
7. For the dust collector (12912), the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))
8. The permittee shall equip and maintain the dust collector (12912) with a pressure drop indicator. (40 CFR 64.6(c)(1)(i)(ii))
9. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**
5. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedance and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))
6. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))
7. Each semiannual report of monitoring deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV207-001 (Dust Collector & Condenser Vent)	30 ²	87 ²	R 336.1225, 40 CFR 52.21(c)&(d)

IX. OTHER REQUIREMENT(S)

1. ~~4~~—The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and HHHHH, as they apply to EU207-13.² **(40 CFR Part 63, Subparts A & HHHHH)**
2. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))

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[3. The permittee shall comply with all requirements of 40 CFR Part 64. \(40 CFR Part 64\)](#)

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

EU207-14
EMISSION UNIT CONDITIONS

DESCRIPTION

Mixer 4 process producing silicone rubber products. Emissions are controlled by dust collector 12912 and condenser 19251. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. [EU207-14 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.](#)

The most recent PTI for this emission unit is PTI No. 177-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser (19251)
- Dust Collector (12912). [This device is a CAM subject unit for Particulate.](#)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	8.34 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU207-14	SC VI.2, SC VI.4	R 336.1702(a)
2. PM	0.68 pph ²	Hourly	EU207-14	SC V.1, SC VI.3	R 336.1331
3. PM10	0.68 pph ²	Hourly	EU207-14	SC V.1, SC VI.3	40 CFR 52.21(c) & (d)
4. PM2.5	0.68 pph ²	Hourly	EU207-14	SC V.1, SC VI.3	40 CFR 52.21(c) & (d)

* This emission limit includes emissions from all vents listed in SC VIII.1 and does not include fugitive emissions (i.e. emissions from leaking valves, flanges etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU207-14 unless the exit gas temperature of the glycol condenser (19251) is 40°F or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall not operate EU207-14 unless the pressure drop across the dust collector (12912) is 0.5 inches water or more but not more than 10 inches of water.² (**R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d)**)

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3. Proper operation for the dust collector (12912) means that the pressure drop is maintained within a range of 0.5 to 10 inches water. An excursion is a pressure drop reading outside the range defined in this condition or demonstrated during testing. Upon detecting an excursion of the pressure drop limit, the permittee shall restore operation of the dust collector (12912) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.2(c)(2), 40 CFR 64.7(d))

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU207-14 unless the glycol condenser (19251) and dust collector (12912) are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through SC III.2 that apply to the condenser and dust collector.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))
2. The permittee shall equip and maintain the glycol condenser (19251) with an exit gas temperature indicator. The permittee shall calibrate the exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall equip and maintain the dust collector (12912) with a continuous pressure drop indicator. The permittee shall calibrate the pressure drop indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify PM, PM10, and PM2.5 emission rates from EU207-14 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 60, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))

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2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of the glycol condenser (19251) with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall record, on a per shift basis, the pressure drop across the dust collector (12912) with instrumentation acceptable to the AQD. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**
4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU207-14 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a))**
5. For the dust collector (12912), upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))
6. For the dust collector (12912), except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and require zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.3(c)(3), 40 CFR 64.7(c))
7. For the dust collector (12912), the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))
8. The permittee shall equip and maintain the dust collector (12912) with a pressure drop indicator. (40 CFR 64.6(c)(1)(i)(ii))
9. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

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3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**
5. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedance and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))
6. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))
7. Each semiannual report of monitoring deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)²

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-207-001 (Dust Collector & Condenser Vent)	30 ²	87 ²	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and HHHHH, as they apply to EU207-18.² **(40 CFR Part 63, Subparts A & HHHHH)**
2. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))
3. The permittee shall comply with all requirements of 40 CFR Part 64. (40 CFR Part 64)

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU207-15
EMISSION UNIT CONDITIONS**

DESCRIPTION

Silicone rubber manufacturing process conducted in Mixer 5. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. [EU207-15 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.](#)

The most recent PTI for this emission unit is PTI No. 172-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser (19251)
- Dust Collector (12912). [This device is a CAM subject unit for Particulate.](#)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	8.3 tpy ² *	12-month rolling time period as determined at the end of each calendar month.	EU207-15	SC VI.2, VI.4	R 336.1702(a)
2. PM	0.68 pph ²	Hourly	EU207-15	SC V.1, VI.3	R 336.1331
3. PM10	0.68 pph ²	Hourly	EU207-15	SC V.1, VI.3	40 CFR 52.21 (c) & (d)
4. PM2.5	0.68 pph ²	Hourly	EU207-15	SC V.1, VI.3	40 CFR 52.21 (c) & (d)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU207-15 unless the exit gas temperature of the glycol condenser (19251) is 40°F or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall not operate EU207-15 unless the pressure drop across the dust collector (12912) is 0.5 inches water or more but not more than 10 inches of water.² (**R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d)**)
3. [Proper operation for the dust collector \(12912\) means that the pressure drop is maintained within a range of 0.5 to 10 inches water. An excursion is a pressure drop reading outside the range defined in this condition or demonstrated during testing. Upon detecting an excursion of the pressure drop limit, the permittee shall restore operation of the dust collector \(12912\) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. \(40 CFR 64.2\(c\)\(2\), 40 CFR 64.7\(d\)\)](#)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU207-15 unless the glycol condenser (19251) and dust collector (12912) are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through III.2 that apply to the condenser and dust collector.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**
2. The permittee shall equip and maintain the glycol condenser (19251) with an exit gas temperature indicator. The permittee shall calibrate the exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall equip and maintain the dust collector (12912) with a continuous pressure drop indicator. The permittee shall calibrate the pressure drop indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Upon request from the AQD District Supervisor, the permittee shall verify the PM, PM10, and/or PM2.5 emission rates from EU207-15 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² **(R 336.1331, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. **(R 336.1213(3))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of the glycol condenser (19251) with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall record, on a per shift basis, the pressure drop across the dust collector (12912) with instrumentation acceptable to the AQD. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

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4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU207-15 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
5. For the dust collector (12912), upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))
6. For the dust collector (12912), except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and require zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.3(c)(3), 40 CFR 64.7(c))
7. For the dust collector (12912), the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))
8. The permittee shall equip and maintain the dust collector (12912) with a pressure drop indicator. (40 CFR 64.6(c)(1)(i)(ii))
9. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))

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Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**
5. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedance and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))
6. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))
7. Each semiannual report of monitoring deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV207-001 (Dust Collector and Condenser Vent)	30 ²	87 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and HHHHH, as they apply to EU207-15.² **(40 CFR Part 63, Subparts A & HHHHH)**
2. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))

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[3. The permittee shall comply with all requirements of 40 CFR Part 64. \(40 CFR Part 64\)](#)

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU207-16
EMISSION UNIT CONDITIONS**

DESCRIPTION

Silicone rubber manufacturing process conducted in Mixer 6. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. [EU207-16 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.](#)

The most recent PTI for this emission unit is PTI No. 171-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser (19251)
- Dust Collector (12912). [This device is a CAM subject unit for Particulate.](#)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	4.8 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month.	EU207-16	SC VI.2, VI.4	R 336.1702(a)
2. PM	0.68 pph ²	Hourly	EU207-16	SC V.1, VI.3	R 336.1331
3. PM10	0.68 pph ²	Hourly	EU207-16	SC V.1, VI.3	40 CFR 52.21 (c) & (d)
4. PM2.5	0.68 pph ²	Hourly	EU207-16	SC V.1, VI.3	40 CFR 52.21 (c) & (d)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU207-16 unless the exit gas temperature of the glycol condenser (19251) is 40°F or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall not operate EU207-16 unless the pressure drop across the dust collector (12912) is 0.5 inches water or more but not more than 10 inches of water.² (**R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d)**)
3. [Proper operation for the dust collector \(12912\) means that the pressure drop is maintained within a range of 0.5 to 10 inches water. An excursion is a pressure drop reading outside the range defined in this condition or demonstrated during testing. Upon detecting an excursion of the pressure drop limit, the permittee shall restore operation of the dust collector \(12912\) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. \(40 CFR 64.2\(c\)\(2\), 40 CFR 64.7\(d\)\)](#)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU207-16 unless the glycol condenser (19251) and dust collector (12912) are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through III.2 that apply to the condenser and dust collector.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))
2. The permittee shall equip and maintain the glycol condenser (19251) with an exit gas temperature indicator. The permittee shall calibrate the exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall equip and maintain the dust collector (12912) with a continuous pressure drop indicator. The permittee shall calibrate the pressure drop indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request from the AQD District Supervisor, the permittee shall verify the PM, PM10, and/or PM2.5 emission rates from EU207-16, by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. (R 336.1331, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of the glycol condenser (19251) with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall record, on a per shift basis, the pressure drop across the dust collector (12912) with instrumentation acceptable to the AQD. The permittee shall keep all records on file at the facility and make them

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available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))

4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU207-16 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
5. For the dust collector (12912), upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))
6. For the dust collector (12912), except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and require zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.3(c)(3), 40 CFR 64.7(c))
7. For the dust collector (12912), the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))
8. The permittee shall equip and maintain the dust collector (12912) with a pressure drop indicator. (40 CFR 64.6(c)(1)(i)(ii))
9. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. (R 336.1213(3)(c), R 336.2001(5))
5. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedance and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))
6. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))
7. Each semiannual report of monitoring deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV207-001 (Dust Collector and Condenser Vent)	30 ²	87 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and HHHHH, as they apply to EU207-16.² (40 CFR Part 63, Subparts A & HHHHH)
2. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))

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3. [The permittee shall comply with all requirements of 40 CFR Part 64. \(40 CFR Part 64\)](#)

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU207-17
EMISSION UNIT CONDITIONS**

DESCRIPTION

Silicone rubber manufacturing process conducted in Mixer 7. Emissions are controlled by dust collector 12912 and condenser 19251. When manufacturing methoxy-treated products, emissions are routed through the IPA scrubber 19298 and condenser 19296 during stripping and cool down. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF, HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. [EU207-17 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.](#)

The most recent PTI for this emission unit is PTI No. 173-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Glycol Condenser (19251)
- Dust Collector (12912). [This device is a CAM subject unit for Particulate.](#)
- IPA Packed column scrubber (19298)
- Glycol condenser (19296)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	9.5 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU207-17	SC VI.2, SC VI.4, SC VI.5, SC VI.6	R 336.1702(a)
2. PM	0.68 pph ²	Hourly	EU207-17 (from SV207-001)	SC V.1, SC VI.3,	R 336.1331
3. PM10	0.68 pph ²	Hourly	EU207-17 (from SV207-001)	SC V.1, SC VI.3,	40 CFR 52.21 (c) & (d)
4. PM2.5	0.68 pph ²	Hourly	EU207-17 (from SV207-001)	SC V.1, SC VI.3,	40 CFR 52.21 (c) & (d)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU207-17 unless the exit gas temperature of the glycol condenser (19251) is 40°F or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall not operate EU207-17 unless the pressure drop across the dust collector (12912) is 0.5 inches of water or more but not more than 10 inches of water.² (**R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d)**)

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3. When manufacturing methoxy-treated products, the permittee shall not operate EU207-17 unless the exit gas temperature from the glycol condenser (19296) remains below 15°C.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. When manufacturing methoxy-treated products, the permittee shall maintain a minimum liquid flow rate of 20 pounds per minute in the packed column scrubber (19298).² (R 336.1224, R 336.1225, R 336.1702, R 336.1910)
5. [Proper operation for the dust collector \(12912\) means that the pressure drop is maintained within a range of 0.5 to 10 inches water. An excursion is a pressure drop reading outside the range defined in this condition or demonstrated during testing. Upon detecting an excursion of the pressure drop limit, the permittee shall restore operation of the dust collector \(12912\) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. \(40 CFR 64.2\(c\)\(2\), 40 CFR 64.7\(d\)\)](#)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU207-17 unless the glycol condenser (19251) and dust collector (12912) are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through III.2 that apply to the condenser and dust collector.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))
2. When manufacturing methoxy-treated products, the permittee shall not operate EU207-17 unless the IPA packed column scrubber (19298) and glycol condenser (19296) are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.3 through III.4 that apply to the condenser and scrubber. The packed column scrubber (19298) must use isopropanol as the scrubbing liquid.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall equip and maintain the glycol condenser (19251) with a continuous exit gas temperature indicator. The permittee shall calibrate the exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall equip and maintain the dust collector (12912) with a continuous pressure drop indicator. The permittee shall calibrate the pressure drop indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))
5. The permittee shall equip and maintain the IPA packed column scrubber (19298) with a low flow switch with a minimum flow rate alarm of 20 pounds per minute.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
6. The permittee shall equip and maintain the glycol condenser (19296) with a continuous exit gas temperature indicator. The permittee shall calibrate the temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request from the AQD District Supervisor, the permittee may be required to verify the PM, PM10, and PM2.5 emission rates from EU207-17, by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing,

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the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1331, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of the glycol condenser (19251) with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall record, on a per shift basis, the pressure drop across the dust collector (12912) with instrumentation acceptable to the AQD. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))
4. When manufacturing methoxy-treated products, the permittee shall monitor and record, on a continuous basis, the packed column scrubber (19298) liquid flow rate and the glycol condenser (19296) exit gas temperature with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
5. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU207-17 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
6. The permittee shall keep records for when methoxy-treated products are being manufactured on a monthly basis. These records shall include dates, times, and duration of batches processed; and other records necessary to demonstrate compliance with the emission limits specified in this table. The permittee shall keep all records on file at the facility and make them available to the AQD upon request.² (R 336.1702(a))
7. For the dust collector (12912), upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))

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8. For the dust collector (12912), except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and require zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.3(c)(3), 40 CFR 64.7(c))
9. For the dust collector (12912), the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))
10. The permittee shall equip and maintain the dust collector (12912) with a pressure drop indicator. (40 CFR 64.6(c)(1)(i)(ii))
11. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. (R 336.1213(3)(c), R 336.2001(5))
5. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedance and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))
6. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))
7. Each semiannual report of monitoring deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV207-001 (Dust Collector and Condenser Vent)	30 ²	87 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV207-014 ^a (Treated Condenser Vent)	1 ²	46 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV207-028 ^a (Feed Tank Vent)	1 ²	50 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

^a This stack is not required to discharge unobstructed vertically upwards

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart HHHHH, as they apply to EU207-17.² **(40 CFR Part 63, Subparts A and HHHHH)**
2. [If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. \(40 CFR 64.7\(e\)\)](#)
3. [The permittee shall comply with all requirements of 40 CFR Part 64. \(40 CFR Part 64\)](#)

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU207-18
EMISSION UNIT CONDITIONS**

DESCRIPTION

Mixer 8 process producing silicone rubber products. Emissions are controlled by dust collector 12912 and condenser 19251. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. [EU207-18 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.](#)

The most recent PTI for this emission unit is PTI No. 170-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser (19251)
- Dust Collector (12912). [This device is a CAM subject unit for Particulate.](#)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	4.79 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU207-18	SC VI.2, SC VI.4	R 336.1702(a)
2. PM	0.68 pph ²	Hourly	EU207-18	SC V.1, SC VI.3	R 336.1331
3. PM10	0.68 pph ²	Hourly	EU207-18	SC V.1, SC VI.3	40 CFR 52.21(c) & (d)
4. PM2.5	0.68 pph ²	Hourly	EU207-18	SC V.1, SC VI.3	40 CFR 52.21(c) & (d)

* This emission limit includes emissions from all vents listed in SC VIII.1 and does not include fugitive emissions (i.e. emissions from leaking valves, flanges etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU207-18 unless the exit gas temperature of the glycol condenser (19251) is 40°F or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall not operate EU207-18 unless the pressure drop across the dust collector (12912) is 0.5 inches water or more but not more than 10 inches of water.² (**R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d)**)
3. [Proper operation for the dust collector \(12912\) means that the pressure drop is maintained within a range of 0.5 to 10 inches water. An excursion is a pressure drop reading outside the range defined in this condition or demonstrated during testing. Upon detecting an excursion of the pressure drop limit, the permittee shall restore operation of the dust collector \(12912\) to its normal or usual manner of operation as expeditiously as practicable](#)

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[in accordance with good air pollution control practices for minimizing emissions. \(40 CFR 64.2\(c\)\(2\), 40 CFR 64.7\(d\)\)](#)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU207-18 unless the glycol condenser (19251) and dust collector (12912) are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through III.2 that apply to the condenser and dust collector.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**
2. The permittee shall equip and maintain the glycol condenser (19251) with an exit gas temperature indicator. The permittee shall calibrate the exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall equip and maintain the dust collector (12912) with a continuous pressure drop indicator. The permittee shall calibrate the pressure drop indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Upon request of the AQD District Supervisor, the permittee shall verify PM, PM10, and PM2.5 emission rates from EU207-18 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 60, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. **(R 336.1213(3))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of the glycol condenser (19251) with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

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3. The permittee shall record, on a per shift basis, the pressure drop across the dust collector (12912) with instrumentation acceptable to the AQD. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

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4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU207-18 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
5. For the dust collector (12912), upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))
6. For the dust collector (12912), except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and require zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.3(c)(3), 40 CFR 64.7(c))
7. For the dust collector (12912), the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))
8. The permittee shall equip and maintain the dust collector (12912) with a pressure drop indicator. (40 CFR 64.6(c)(1)(i)(ii))
9. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**
5. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedance and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))

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6. [Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. \(40 CFR 64.9\(a\)\(2\)\(ii\)\)](#)

7. [Each semiannual report of monitoring deviations shall include a description of the actions taken to implement a QIP during the reporting period \(if appropriate\). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. \(40 CFR 64.9\(a\)\(2\)\(iii\)\)](#)

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-207-001 (Dust Collector & Condenser Vent)	30 ²	87 ²	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and HHHHH, as they apply to EU207-18.² (40 CFR Part 63, Subparts A & HHHHH)

2. [If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. \(40 CFR 64.7\(e\)\)](#)

3. [The permittee shall comply with all requirements of 40 CFR Part 64. \(40 CFR Part 64\)](#)

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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EU207-19 EMISSION UNIT CONDITIONS

DESCRIPTION

Silicone rubber manufacturing process conducted in Mixer 9. Emissions are controlled by dust collector 12912 and condenser 19251. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF, HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. [EU207-19 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.](#)

The most recent PTI for this emission unit is PTI No. 180-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser (19251)
- Dust Collector (12912). [This device is a CAM subject unit for Particulate.](#)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	4.8 tpy ² *	12-month rolling time period as determined at the end of each calendar month	EU207-19	SC VI.2, SC VI.4	R 336.1702(a)
2. PM	0.68 pph ²	Hourly	EU207-19	SC V.1, SC VI.3	R 336.1331
3. PM10	0.68 pph ²	Hourly	EU207-19	SC V.1, SC VI.3	40 CFR 52.21 (c) & (d)
4. PM2.5	0.68 pph ²	Hourly	EU207-19	SC V.1, SC VI.3	40 CFR 52.21 (c) & (d)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU207-19 unless the exit gas temperature of the glycol condenser (19251) is 40°F or less.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall not operate EU207-19 unless the pressure drop across the dust collector (12912) is 0.5 inches water or more but not more than 10 inches of water.² (R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))
3. [Proper operation for the dust collector \(12912\) means that the pressure drop is maintained within a range of 0.5 to 10 inches water. An excursion is a pressure drop reading outside the range defined in this condition or demonstrated during testing. Upon detecting an excursion of the pressure drop limit, the permittee shall restore operation of the dust collector \(12912\) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. \(40 CFR 64.2\(c\)\(2\), 40 CFR 64.7\(d\)\)](#)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU207-19 unless the glycol condenser (19251) and dust collector (12912) are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through III.2 that apply to the condenser and dust collector.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**
2. The permittee shall equip and maintain the glycol condenser (19251) with an exit gas temperature indicator. The permittee shall calibrate the exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall equip and maintain the dust collector (12912) with a continuous pressure drop indicator. The permittee shall calibrate the pressure drop indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Upon request from the AQD District Supervisor, the permittee may be required to verify the PM, PM10, and PM2.5 emission rates from EU207-19, by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1331, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. **(R 336.1213(3))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of the glycol condenser (19251) with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall record, on a per shift basis, the pressure drop across the dust collector (12912) with instrumentation acceptable to the AQD. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

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4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU207-19 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
5. For the dust collector (12912), upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))
6. For the dust collector (12912), except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and require zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.3(c)(3), 40 CFR 64.7(c))
7. For the dust collector (12912), the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))
8. The permittee shall equip and maintain the dust collector (12912) with a pressure drop indicator. (40 CFR 64.6(c)(1)(i)(ii))
9. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))

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VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. (R 336.1213(3)(c), R 336.2001(5))
5. [Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedance and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. \(40 CFR 64.9\(a\)\(2\)\(i\)\)](#)
6. [Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. \(40 CFR 64.9\(a\)\(2\)\(ii\)\)](#)
7. [Each semiannual report of monitoring deviations shall include a description of the actions taken to implement a QIP during the reporting period \(if appropriate\). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. \(40 CFR 64.9\(a\)\(2\)\(iii\)\)](#)

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV207-001 (Dust Collector and Condenser Vent)	30 ²	87 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart HHHHH, as they apply to EU207-19.² (40 CFR Part 63, Subpart A and Subpart HHHHH)
2. [If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. \(40 CFR 64.7\(e\)\)](#)

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[3. The permittee shall comply with all requirements of 40 CFR Part 64. \(40 CFR Part 64\)](#)

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU212-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

Batch reaction process consisting of the 6054 batch kettle (an agitated, jacketed kettle), a heater, a receiver, and a service water cooled heat exchanger located in 212 building. Emissions are controlled by chilled condenser 6060. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF.

The most recent PTI for this emission unit is PTI No. 63-14B.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

Chilled condenser 6060

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	4.5 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU212-01	SC VI.3	R 336.1702(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU212-01, except for drum off, unless the chilled condenser 6060 exhaust gas temperature is 20°C or less.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU212-01, except for drum off, unless the condenser is installed, maintained, and operated in a satisfactory manner, which includes meeting the requirements of SC III.1.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

2. The permittee shall equip and maintain chilled condenser 6060 with an exhaust gas temperature indicator. The permittee shall calibrate the exhaust gas temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1225, R 336.1702(a), R 336.1910)
2. While EU212-01 is venting to chilled condenser 6060, the permittee shall monitor and record, in a satisfactory manner, the chilled condenser 6060 exhaust gas temperature on a continuous basis with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU212-01 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV212-007(Condenser 6060)	2 ²	38 ²	R 336.1225 40 CFR 52.21(c)&(d)
2. SV212-018 (Drum off)	24 ²	44 ²	R 336.1225 40 CFR 52.21(c)&(d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU212-02
EMISSION UNIT CONDITIONS**

DESCRIPTION

20500 Polymer Process, with process emissions controlled by condenser 20539. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 144-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser 20539

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	2.0 tpy ^{*,2}	12-month rolling time period as determined at the end of each calendar month	EU212-02	SC VI.2, VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU212-02, except for product drum off and product transfers to storage tanks, unless the condenser 20539 vapor outlet temperature is 45 degrees Celsius or less.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU212-02, except for product drum off and product transfers to storage tanks, unless condenser 20539 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the condenser 20539 vapor outlet temperature with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU212-02 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV212-001 ^a (Condenser 20539)	2 ²	51 ²	R 336.1225, 40 CFR 52.21(c)&(d)
2. SV212-018 (Drum Off)	24 ²	44 ²	R 336.1225, 40 CFR 52.21(c)&(d)
3. SV212-015 (Tank 6044)	2 ²	28 ²	R 336.1225, 40 CFR 52.21(c)&(d)
4. SV212-011 (Tank 6090/6091)	2 ²	28 ²	R 336.1225, 40 CFR 52.21(c)&(d)
5. SV212-012 ^a (Tank 6052)	2 ²	21 ²	R 336.1225, 40 CFR 52.21(c)&(d)
6. SV212-016 ^a (Tank 6053)	2 ²	34 ²	R 336.1225, 40 CFR 52.21(c)&(d)

^a This stack is not required to discharge unobstructed vertically upwards.

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PTI No: MI-PTI-A4043-2019b

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and HHHHH, as they apply to EU212-02.² **(40 CFR Part 63, Subparts A & HHHHH)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

**EU212-03
EMISSION UNIT CONDITIONS**

DESCRIPTION

Cold blend mixing process in 6019 Kettle with a man-way loading vent and a product drum-off vent. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 145-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/Testing Method	Underlying Applicable Requirements
1. VOC	1.31 tpy* ²	12-month rolling time period as determined at the end of each calendar month	EU212-03	SC VI.2	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e. emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1702(a))

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PTI No: MI-PTI-A4043-2019b

- The permittee shall calculate the VOC emission rate from EU212-03 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

- Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
- Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV212-003 (Manway Vent)	24 ²	49 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV212-006 ^A (Kettle 6019 Vent)	2 ²	22 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV212-018 (Drum Off Vent)	24 ²	44 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^A This vent may discharge downwards.

IX. OTHER REQUIREMENTS

- The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and HHHHH, as they apply to EU212-03.² **(40 CFR Part 63, Subparts A & HHHHH)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU212-05
EMISSION UNIT CONDITIONS**

DESCRIPTION

Cold blend mixing process in 6009 Gum Kettle with a man-way loading vent and a product drum-off. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 108-18A.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOCs	5.80 tpy ² *	12-month rolling time period as determined at the end of each calendar month	EU212-05	SC VI.2	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1225, R 336.1702(a))

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Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

2. The permittee shall calculate the VOC emission rate from EU212-05 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1225, R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV212-003 (Manway Loading Vent)	24 ²	49 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV212-004 ^a (Kettle 6009 Atmospheric Vent)	4 ²	24 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV212-018 (Drum Off Vent)	24 ²	44 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^aThis stack is not required to discharge unobstructed vertically upwards

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart HHHHH, as they apply to EU212-05.² (40 CFR Part 63, Subpart A and Subpart HHHHH)

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

**EU212-12
EMISSION UNIT CONDITIONS**

DESCRIPTION

Batch reaction process consisting of the 20400 batch kettle (an agitated, jacketed kettle), a trap, a receiver, and two heat exchangers located in 212 building. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, UU, and HHHHH.

The most recent PTI for this emission unit is PTI No. 48-14C.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

Chilled condenser HX20407

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	1.9 tpy ² *	12-month rolling time period as determined at the end of each calendar month	EU212-12	SC V.1, VI.2, VI.3, VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. While the EU212-12 is venting to chilled condenser HX20407, the permittee shall not operate EU212-12 unless the chilled condenser HX20407 coolant temperature is 33°C or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU212-12 unless the emissions are routed to chilled condenser HX20407 and the condenser is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1, except as allowed by SC IV.2 and SC IV.3.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee may vent EU212-12 through SV212-003, while bypassing chilled condenser HX20407, for up to three hours per day.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
3. The permittee may vent EU212-12 through SV212-018, while bypassing chilled condenser HX20407, for drum off of final products.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
4. The permittee shall equip and maintain chilled condenser HX20407 with an exit gas temperature indicator. The permittee shall calibrate the exit gas temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

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PTI No: MI-PTI-A4043-2019b

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify VOC emission rates from EU212-12 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOCs	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1205(3), R 336.1702(a))
2. While EU212-12 is venting to chilled condenser HX20407, the permittee shall monitor and record, in a satisfactory manner, the chilled condenser HX20407 coolant temperature on a continuous basis. Monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time, and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the VOC emission rate from EU212-12, using a method acceptable to the AQD District Supervisor, on file at the facility and make them available to the Department upon request.² (R 336.1205(3), R 336.1702(a))
4. The permittee shall keep, in a satisfactory manner, daily records of the time that EU212-12 vents through SV212-003 and SV212-018. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))

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PTI No: MI-PTI-A4043-2019b

- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV212-003 (Manway Vent)	24 ²	32 ²	R 336.1225 40 CFR 52.21 (c) & (d)
2. SV212-018 (Drum off Vent)	24 ²	42 ²	R 336.1225 40 CFR 52.21 (c) & (d)
3. SV212-023 ^A (Vent for Condenser HX-20407)	2.0 ²	42 ²	R 336.1225 40 CFR 52.21 (c) & (d)

^A This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

- The permittee shall comply with the applicable provisions of 40 CFR Part 63, Subpart HHHHH (Coatings MACT) as they apply to EU212-12.² **(40 CFR Part 63, Subpart HHHHH)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU2504-13
EMISSION UNIT CONDITIONS**

DESCRIPTION

Siloxane Kettles process consisting of three jacketed batch kettles and ancillary equipment. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611.

The most recent PTI for this emission unit is PTI No. 153-20.

Flexible Group ID: NAFGTHROX_FGSITESCRUBBERS_FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

- Vent recovery system consisting of two parallel condenser trains. Each condenser train includes two shell-and tube condensers, the first (24608 & 24610) using service water as coolant, and the second (24609 & 24611) using a chilled mix of water and glycol as coolant. The condenser trains (24608/24609 and 24610/24611) typically operate in parallel, but only one set of condensers is required to operate at any given time.
- FGTHROX
- FGSITESCRUBBERS

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I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	2.0 tpy ² *	12-month rolling time period as determined at the end of each calendar month	EU2504-13	SC VI.2, VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate equipment in EU2504-13 that exhausts to the vent recovery system unless the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-13 emissions are being exhausted is 40°F or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCRUBBERS unless one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
 - a. FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCRUBBERS.
 - c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCRUBBERS.

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IV. DESIGN/EQUIPMENT PARAMETER(S)

ROP No: MI-ROP-A4043-2019b
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PTI No: MI-PTI-A4043-2019b

1. The permittee shall not operate equipment in EU2504-13 that exhausts to the vent recovery system unless the vent recovery system is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes operating one service water condenser and one chilled water/glycol condenser in series and includes meeting the requirements of SC III.1.1.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

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PTI No: MI-PTI-A4043-2019b

2. The permittee shall equip and maintain each condenser (24608, 24609, 24610, and 24611) with a coolant outlet temperature indicator. The permittee shall calibrate the coolant outlet temperature indicators in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCRUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a).
 - b. FGSITESCRUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b) or (c).

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-13 exhausts with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2504-13 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

ROP No: MI-ROP-A4043-2019b
 Expiration Date: February 20, 2024
 PTI No: MI-PTI-A4043-2019b

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2504-001 (Ventilation for new press filters and NH3 cylinder)	27 ²	49 ²	R 336.1225, 40 CFR 52.21(c)&(d)
2. SV2504-002 (Filter Press Ventilation)	27 ²	47 ²	R 336.1225, 40 CFR 52.21(c)&(d)
3. SV2504-004 (FC-24 ventilation and IPA Steambox)	10 ²	43 ²	R 336.1225, 40 CFR 52.21(c)&(d)
4. SV2504-005 (New side filters, new side cat adders, both E DO, Bis H sampling ventilation)	20 ²	55 ²	R 336.1225, 40 CFR 52.21(c)&(d)
5. SV2504-007 (South Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c)&(d)
6. SV2504-014 (Old Side Nedermans, SDO, MDO, TDO)	10 ²	40 ²	R 336.1225, 40 CFR 52.21(c)&(d)
7. SV2504-015 (Old Side Precoat Tanks)	10 ²	43 ²	R 336.1225, 40 CFR 52.21(c)&(d)
8. SV2504-025 (23050 Filters, RWK Filters, W DO)	10 ²	54 ²	R 336.1225, 40 CFR 52.21(c)&(d)
9. SV2504-031 (North Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c)&(d)
10. <u>SV2514-006 (THROX)</u>	<u>54²</u>	<u>90²</u>	<u>40 CFR 336.1225, 40 CFR 52.21(c)&(d)</u>
11. <u>SV2512-001 (Site Scrubber)</u>	<u>6²</u>	<u>67²</u>	<u>40 CFR 336.1225, 40 CFR 52.21(c)&(d)</u>
12. <u>SV2512-002 (Site Scrubber)</u>	<u>6²</u>	<u>67²</u>	<u>40 CFR 336.1225, 40 CFR 52.21(c)&(d)</u>

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU2504-14
EMISSION UNIT CONDITIONS**

DESCRIPTION

Batch reaction process consisting of jacketed batch kettle DV19840, a receiver, and vacuum system. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart UU.

The most recent PTI for this emission unit is PTI No. 137-20.

Flexible Group ID: FGMONMACT, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

- Vent recovery system consisting of two parallel condenser trains. Each condenser train includes two shell-and-tube condensers, the first condenser of each train (24608 & 24610) uses service water as coolant, and the second condenser of each train (24609 & 24611) uses a chilled mix of water and glycol as coolant. The condenser trains (24608/24609 and 24610/24611) typically operate in parallel, but only one set of condensers is required to operate at any given time.

- FGTHROX
- FGSITESCRUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	0.87 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU2504-14	SC V.1, VI.2, SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2504-14, except for packaging and filtering operations, unless the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-14 emissions are being exhausted is 40°F or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

2. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCRUBBERS unless one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

- a. FGTHROX is operated in accordance with the requirements of FGTHROX.
- b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCRUBBERS.
- c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCRUBBERS.

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ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2504-14, except for packaging and filtering operations, unless the vent recovery system is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes operating one service water condenser and one chilled water/glycol condenser in series and includes meeting the requirements of SC III.1.2 (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

2. The permittee shall equip and maintain each condenser (24608, 24609, 24610, and 24611) with a coolant outlet temperature indicator. The permittee shall calibrate the coolant outlet temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCRRUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a).
 - b. FGSITESCRRUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b) or (c).

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify the VOC emission rates from EU2504-14 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-14 exhausts with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2504-14 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

ROP No: MI-ROP-A4043-2019b
 Expiration Date: February 20, 2024
 PTI No: MI-PTI-A4043-2019b

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. (R 336.1213(3)(c), R 336.2001(5))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-2504-005 (New side filters & cat adders vent)	20 ²	55 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV-2504-007 (South condenser vent)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV-2504-010 (Lab hood vent)	10 ²	31 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV-2504-012 (Catalyst hood vent)	16 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV-2504-014 (Old side nedermans)	10 ²	40 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV-2504-031 (North condenser vent)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV2514-006 (THROX)	54 ²	90 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)
8. SV2512-001 (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)
9. SV2512-002 (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)

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IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU2504-15
EMISSION UNIT CONDITIONS**

DESCRIPTION

Batch reaction process consisting of jacketed batch kettle DV19860, a receiver, and vacuum system. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart UU.

The most recent PTI for this emission unit is PTI No. 138-20.

Flexible Group ID: FGMONMACT, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

- Vent recovery system consisting of two parallel condenser trains. Each condenser train includes two shell-and tube condensers, the first condenser of each train (24608 & 24610) uses service water as coolant, and the second condenser of each train (24609 & 24611) uses a chilled mix of water and glycol as coolant. The condenser trains (24608/24609 and 24610/24611) typically operate in parallel, but only one set of condensers is required to operate at any given time.
- FGTHROX
- FGSITESCRUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	0.92 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU2504-15	SC V.1, VI.2, SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2504-15, except for packaging and filtering operations, unless the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-15 emissions are being exhausted is 40°F or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

2. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCRUBBERS unless one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

- a. FGTHROX is operated in accordance with the requirements of FGTHROX.
- b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCRUBBERS.
- c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCRUBBERS.

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ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2504-15, except for packaging and filtering operations, unless the vent recovery system is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes operating one service water condenser and one chilled water/glycol condenser in series and includes meeting the requirements of SC III.1.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

2. The permittee shall equip and maintain each condenser (24608, 24609, 24610, and 24611) with a coolant outlet temperature indicator. The permittee shall calibrate the coolant outlet temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a).
 - b. FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b) or (c).

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify the VOC emission rates from EU2504-15 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-15 exhausts with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2504-15 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

ROP No: MI-ROP-A4043-2019b
 Expiration Date: February 20, 2024
 PTI No: MI-PTI-A4043-2019b

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. (R 336.1213(3)(c), R 336.2001(5))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-2504-005 (New side filters & cat adders vent)	20 ²	55 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV-2504-007 (South condenser vent)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV-2504-010 (Lab hood vent)	10 ²	31 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV-2504-012 (Catalyst hood vent)	16 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV-2504-014 (Old side nedermans)	10 ²	40 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV-2504-031 (North condenser vent)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV2514-006 (THROX)	54 ²	90 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)
8. SV2512-001 (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)
9. SV2512-002 (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)

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IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU2504-16
EMISSION UNIT CONDITIONS**

DESCRIPTION

Mixing process in 8200 Kettle with product. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.

The most recent PTI for this emission unit is PTI No. 139-20.

Flexible Group ID: FGMONMACT, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

- Vent recovery system consisting of two parallel condenser trains. Each condenser train includes two shell-and-tube condensers, the first condenser of each train (24608 & 24610) uses service water as coolant, and the second condenser of each train (24609 & 24611) uses a chilled mix of water and glycol as coolant. The condenser trains (24608/24609 and 24610/24611) typically operate in parallel, but only one set of condensers is required to operate at any given time.

- FGTHROX
- FGSITESCRUBBERS

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I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	1.58 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU2504-16	SC V.1, SC VI.2, SC VI.3	R 336.1702

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2504-16, except for packaging and filtering operations, unless the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-16 emissions are being exhausted is 40°F or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

2. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCRUBBERS unless one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

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- a. FGTHROX is operated in accordance with the requirements of FGTHROX.
- b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCRUBBERS.
- c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCRUBBERS.

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ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2504-16, except for packaging and filtering operations, unless the vent recovery system is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes operating one service water condenser and one chilled water/glycol condenser in series and includes meeting the requirements of SC III.1.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

2. The permittee shall equip and maintain each condenser (24608, 24609, 24610, and 24611) with a coolant outlet temperature indicator. The permittee shall calibrate the coolant outlet temperature indicators in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a).
 - b. FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b) or (c).

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify the VOC emission rate from EU2504-16 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1225, R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-16 exhausts with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2504-16 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

ROP No: MI-ROP-A4043-2019b
 Expiration Date: February 20, 2024
 PTI No: MI-PTI-A4043-2019b

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. (R 336.1213(3)(c), R 336.2001(5))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2504-006 (Old Side Cat Adders)	10 ²	42 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV2504-007 (South Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV2504-010 (Lab Hood)	10 ²	31 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV2504-012 (Catalyst Prep Hood)	16 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV2504-014 (Old Side Nedermans)	10 ²	40 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV2504-031 (North Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV2514-006 (THROX)	54 ²	90 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)
8. SV2512-001 (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)
9. SV2512-002 (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)

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IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU2504-17
EMISSION UNIT CONDITIONS**

DESCRIPTION

Mixing process in 8210 Kettle with product. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.

The most recent PTI for this emission unit is PTI No. 140-20.

Flexible Group ID: FGMONMACT, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

- Vent recovery system consisting of two parallel condenser trains. Each condenser train includes two shell-and tube condensers, the first condenser of each train (24608 & 24610) uses service water as coolant, and the second condenser of each train (24609 & 24611) uses a chilled mix of water and glycol as coolant. The condenser trains (24608/24609 and 24610/24611) typically operate in parallel, but only one set of condensers is required to operate at any given time.

- FGTHROX
- FGSITESCRUBBERS

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I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	0.56 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU2504-17	SC V.1, SC VI.2, SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2504-17, except for packaging and filtering operations, unless the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-17 emissions are being exhausted is 40°F or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

2. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCRUBBERS unless one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

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- a. FGTHROX is operated in accordance with the requirements of FGTHROX.
- b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCRUBBERS.
- c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCRUBBERS.

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ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2504-17, except for packaging and filtering operations, unless the vent recovery system is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes operating one service water condenser and one chilled water/glycol condenser in series and includes meeting the requirements of SC III.1.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

2. The permittee shall equip and maintain each condenser (24608, 24609, 24610, and 24611) with a coolant outlet temperature indicator. The permittee shall calibrate the coolant outlet temperature indicators in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a).
 - b. FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b) or (c).

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify VOC emission rates from EU2504-17 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1225, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-17 exhausts with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2504-17 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. (R 336.1213(3)(c), R 336.2001(5))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2504-002 (Filter Press Ventilation)	27 ²	47 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV2504-006 (Old Side Cat Adders)	10 ²	42 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV2504-007 (South Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV2504-010 (Lab Hood)	10 ²	31 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV2504-012 (Catalyst Prep Hood)	16 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV2504-014 (Old Side Nedermans, SDO, MDO, TDO)	10 ²	40 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV2504-015 (Old Side Precoat Tanks)	10 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV2504-031 (North Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
9. SV2514-006 (THROX)	54 ²	90 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)
10. SV2512-001 (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)
11. SV2512-002 (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)

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IX. OTHER REQUIREMENT(S)

NA

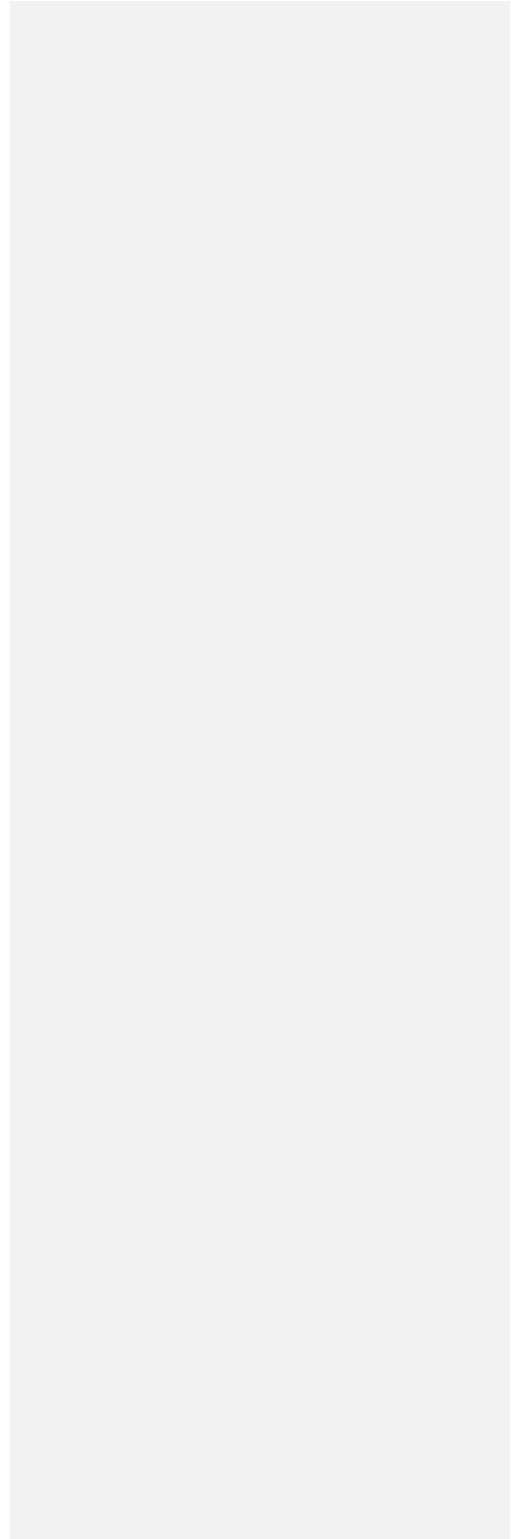
Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

General Business



**EU2504-18
EMISSION UNIT CONDITIONS**

DESCRIPTION

Mixing process in 8220 Kettle with product. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and UU.

The most recent PTI for this emission unit is PTI No. 141-20.

Flexible Group ID: FGMONMACT, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

- Vent recovery system consisting of two parallel condenser trains. Each condenser train includes two shell-and-tube condensers, the first condenser of each train (24608 & 24610) uses service water as coolant, and the second condenser of each train (24609 & 24611) uses a chilled mix of water and glycol as coolant. The condenser trains (24608/24609 and 24610/24611) typically operate in parallel, but only one set of condensers is required to operate at any given time.
- FGTHROX
- FGSITESCRUBBERS

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I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	0.53 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU2504-18	SC V.1, SC VI.2, SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2504-18, except for packaging and filtering operations, unless the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-18 emissions are being exhausted is 40°F or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCRUBBERS unless one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
 - a. FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCRUBBERS.
 - c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCRUBBERS.

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IV. DESIGN/EQUIPMENT PARAMETER(S)

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

1. The permittee shall not operate EU2504-18, except for packaging and filtering operations, unless the vent recovery system is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes operating one service water condenser and one chilled water/glycol condenser in series and includes meeting the requirements of SC III.1.1.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

2. The permittee shall equip and maintain each condenser (24608, 24609, 24610, and 24611) with a coolant outlet temperature indicator. The permittee shall calibrate the coolant outlet temperature indicators in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a).
 - b. FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b) or (c).

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify VOC emission rates from EU2504-18 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-18 exhausts with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2504-18 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. (R 336.1213(3)(c), R 336.2001(5))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2504-006 (Old Side Cat Adders)	10 ²	42 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV2504-007 (South Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV2504-010 (Lab Hood)	10 ²	31 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV2504-012 (Catalyst Prep Hood)	16 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV2504-014 (Old Side Nedermans, SDO, MDO, TDO)	10 ²	40 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV2504-031 (North Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV2514-006 (THROX)	54 ²	90 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)
8. SV2512-001 (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)
9. SV2512-002 (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU2504-19
EMISSION UNIT CONDITIONS**

DESCRIPTION

Mixing process in 8240 Kettle with product. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and UU.

The most recent PTI for this emission unit is PTI No. 142-20.

Flexible Group ID: FGMONMACT, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

- Vent recovery system consisting of two parallel condenser trains. Each condenser train includes two shell-and-tube condensers, the first condenser of each train (24608 & 24610) uses service water as coolant, and the second condenser of each train (24609 & 24611) uses a chilled mix of water and glycol as coolant. The condenser trains (24608/24609 and 24610/24611) typically operate in parallel, but only one set of condensers is required to operate at any given time.
- FGTHROX
- FGSITESCRUBBERS

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I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	1.30 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU2504-19	SC VI.2, SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2504-19, except for packaging and filtering operations, unless the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-19 emissions are being exhausted is 40°F or less.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCRUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCRUBBERS.
 - c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCRUBBERS.

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IV. DESIGN/EQUIPMENT PARAMETER(S)

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

1. The permittee shall not operate EU2504-19, except for packaging and filtering operations, unless the vent recovery system is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes operating one service water condenser and one chilled water/glycol condenser in series and includes meeting the requirements of SC III.1.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

2. The permittee shall equip and maintain each condenser (24608, 24609, 24610, and 24611) with a coolant outlet temperature indicator. The permittee shall calibrate the coolant outlet temperature indicators in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCRUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a).
 - b. FGSITESCRUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b) or (c).

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify VOC emission rates from EU2504-19 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-19 exhausts with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2504-19 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. (R 336.1213(3)(c), R 336.2001(5))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

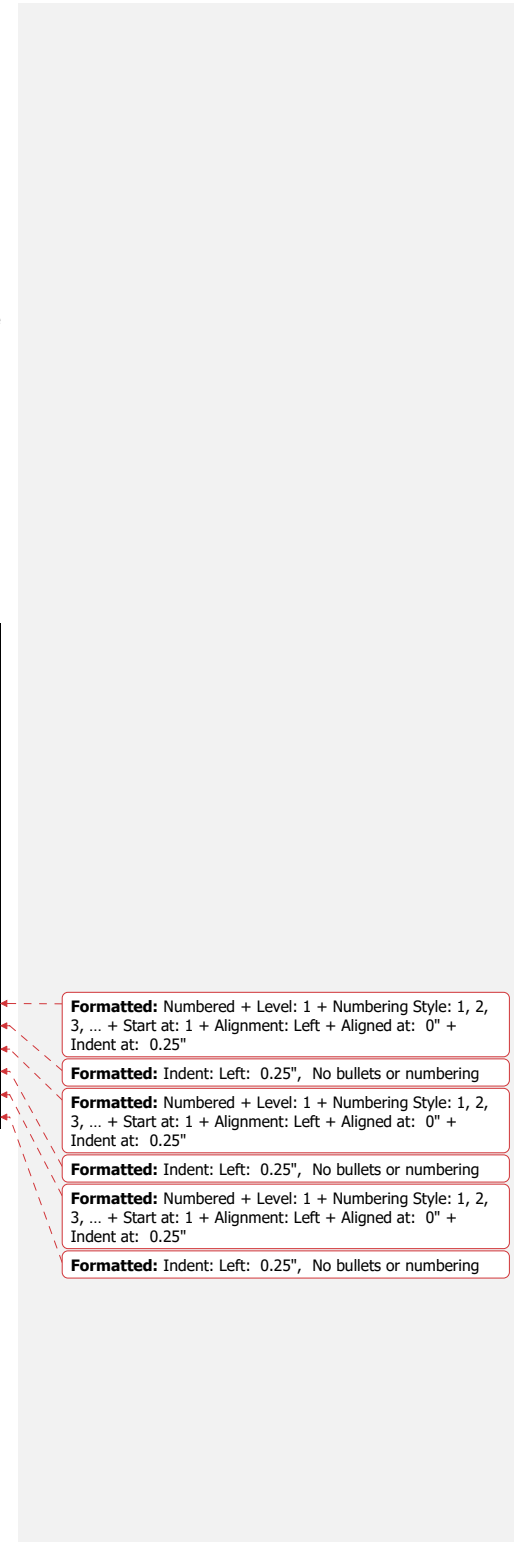
Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2504-006 (Old Side Cat Adders)	10 ²	42 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV2504-007 (South Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV2504-010 (Lab Hood)	10 ²	31 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV2504-012 (Catalyst Prep Hood)	16 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV2504-014 (Old Side Nedermans, SDO, MDO, TDO)	10 ²	40 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV2504-031 (North Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV2514-006 (THROX)	54 ²	90 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)
8. SV2512-001 (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)
9. SV2512-002 (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).



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**EU2504-20
EMISSION UNIT CONDITIONS**

DESCRIPTION

The Bis H process consisting of reaction followed by two-pass distillation to remove impurities. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611.

The most recent PTI for this emission unit is PTI No. 143-20.

Flexible Group ID: [NAFGTHROX_FGSITESCUBBERS_FGSITEBLOWER](#)

POLLUTION CONTROL EQUIPMENT

- Vent recovery system consisting of two parallel condenser trains. Each condenser train includes two shell-and tube condensers, the first condenser of each train (24608 & 24610) uses service water as coolant, and the second condenser of each train (24609 & 24611) uses a chilled mix of water and glycol as coolant. The condenser trains (24608/24609 and 24610/24611) typically operate in parallel, but only one set of condensers is required to operate at any given time.
- [FGTHROX](#)
- [FGSITESCUBBERS](#)

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I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	3.1 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU2504-20	SC VI.2, VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2504-20 unless the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-20 emissions are being exhausted is 40°F or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
 - a. FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.

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IV. DESIGN/EQUIPMENT PARAMETER(S)

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

1. The permittee shall not operate EU2504-20 unless the vent recovery system is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes operating one service water condenser and one chilled water/glycol condenser in series and meeting the requirements of SC III.1.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall equip and maintain each condenser (24608, 24609, 24610, and 24611) with a coolant outlet temperature indicator. The permittee shall calibrate the coolant outlet temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. ~~The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)~~
 - a. ~~FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a).~~
 - b. ~~FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b) or (c).~~

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-20 exhausts with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2504-20 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

ROP No: MI-ROP-A4043-2019b
 Expiration Date: February 20, 2024
 PTI No: MI-PTI-A4043-2019b

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2504-007 (South Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c)&(d)
2. SV2504-031 (North Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c)&(d)
3. <u>SV2514-006</u> (THROX)	54 ²	90 ²	40 CFR 336.1225, 40 FR 52.21(c)&(d)
4. <u>SV2512-001</u> (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 FR 52.21(c)&(d)
5. <u>SV2512-002</u> (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)

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ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

**EU2505-06
EMISSION UNIT CONDITIONS**

DESCRIPTION

200 gallon Myers change can mixer used to produce emulsion and silicone blends. Emissions are controlled by baghouse FL2-25703 and condenser DV25714. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart UU.

The most recent PTI for this emission unit is PTI No. 161-20.

Flexible Group ID: FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Service Water Condenser (DV25714)
- Baghouse (FL2-25703)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	0.7 tpy* ²	Based on a 12-month rolling time period as determined at the end of each calendar month.	EU2505-06	SC V.1, SC VI.2, SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2505-06 unless the exit gas temperature of the condenser (DV25714) is 60°C or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2505-06 unless the condenser (DV25714) and baghouse (FL2-25703) are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 and VI.3 apply to the condenser and dust collector.² (**R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d)**)
2. The permittee shall equip and maintain the condenser (DV25714) with an exit gas temperature indicator. The permittee shall calibrate the exit gas temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request from the AQD District Supervisor, the permittee may be required to verify the VOC emission rates from EU2505-06 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of the condenser (DV25714) with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall perform, and record the results of, a monthly visible emission observation of SV2505-016 during routine operating conditions as an indicator of satisfactory operation. This observation need not be performed using Method 9. If abnormal visible emissions are observed, the permittee shall take corrective actions as necessary to ensure the baghouse (FL2-25703) is operating in a satisfactory manner. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))
4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2505-06 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))

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- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2505-015 (condenser vent)	6 ²	31 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV2505-016 (baghouse vent)	8 ²	22 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV2505-022 ^A (flaker room/SEB warehouse)	30.5 x 30.5 ²	23 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

^A. This stack is not required to be discharged unobstructed vertically upwards to the ambient air

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

**EU2505-07
EMISSION UNIT CONDITIONS**

DESCRIPTION

Myers change can mixer (200 gallons) producing emulsion and silicone blends. Emissions are controlled by condenser 25714 and baghouse FL2-25703. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 159-20.

Flexible Group ID: FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Condenser 25714
- Baghouse FL2-25703

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	0.7 tpy* ²	12-month rolling time period as determined at the end of each calendar month	EU2505-07	SC VI.2, VI.5	R 336.1702(a)
2. PM	1.39 pph ²	Hourly	EU2505-07	SC VI.3, VI.4	R 336.1331, 40 CFR 52.21(c)&(d)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2505-07 activities exhausting to the condenser (25714) unless the exit gas temperature of the condenser (25714) is 60°C or less.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2505-07 activities exhausting to the condenser (25714) unless the condenser (25714) is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.1.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall not operate EU2505-07 activities exhausting to the baghouse (FL2-25703) unless the baghouse (FL2-25703) is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c)&(d))

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c)&(d))
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of the condenser (25714) with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall perform, and record the results of, a monthly visible emission observation of SV2505-07 during routine operating conditions as an indicator of satisfactory operation. This observation need not be performed using Method 9. If abnormal visible emissions are observed, the permittee shall take corrective actions as necessary to ensure the baghouse (FL2-25703) is operating in a satisfactory manner. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c)&(d))
4. The permittee shall keep, in a satisfactory manner acceptable to the AQD District Supervisor, records of all visible emission readings for SV2505-016. At a minimum, records shall include the date, time, name of observer/reader, whether the reader is certified, status of visible emissions, and records of maintenance performed when visible emissions were observed. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c)&(d))
5. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2505-07 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

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VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2505-015 (Condenser vent)	6 ²	31 ²	R 336.1225, 40 CFR 52.21(c)&(d)
2. SV2505-016 (Baghouse vent)	8 ²	22 ²	R 336.1225, 40 CFR 52.21(c)&(d)
3. SV2505-022 (Flaker Room/SEB Warehouse)	30.5 × 30.5 ²	23 ²	R 336.1225, 40 CFR 52.21(c)&(d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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PTI No: MI-PTI-A4043-2019b

**EU2703-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

Hydrosilylation and alkoxylation process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 155-80H.

Flexible Group ID: FGTHROX, FGSITEBLOWER, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Shell and tube condensers (9214 and 9228).
- PP S/D (Pilot Plant Shutdown) scrubber (9163).
- Spray tower scrubbers (9208).
- Activated carbon drums (23228 and 23229)
- FGTHROX

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	3.19 pph ^{*2}	Hourly	EU2703-01	SC V.1, VI.2	R 336.1702(a)
2. VOC	2.58 tpy ^{*2}	12-month rolling time period as determined at the end of each calendar month.	EU2703-01	SC V.1, VI.2, VI.3	R 336.1702(a)
3. Methallyl Chloride (CAS 563-47-3)	0.025 pph ^{*1}	Hourly	EU2703-01	SCV.1	R 336.1225

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2703-01 when exhausting to the condensers (9214 and 9228) unless the coolant return temperature of the condensers (9214 and 9228) is -10°C or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. Except while manufacturing a compound that emits methallyl chloride, the permittee shall not operate EU2703-01 unless the liquid flow rate of the spray tower scrubber (9208) is 6 gallons per minute or more.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
3. In the event of venting to the PP S/D scrubber (9163), the permittee shall not operate EU2703-01 unless the liquid flow rate of the PP S/D scrubber (9163) is 6 gallons per minute or more.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

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4. The permittee shall not operate EU2703-01 while manufacturing a compound that emits methallyl chloride unless one of the following conditions are met:² **(R 336.1225, R 336.1702(a), R 336.1910)**
 - a. The first tote of activated carbon drums (23228 and 23229) is replaced whenever the second tote's weight increases by 50 pounds and the second tote becomes the first tote.
 - b. The equipment exhaust is routed to FGTHROX and FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of FGTHROX.
5. The permittee shall not operate EU2703-01 when exhausting to FGTHROX unless FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of FGTHROX.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2703-01 unless the condensers (9214 and 9228) are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. Except while manufacturing a compound that emits methallyl chloride, the permittee shall not operate EU2703-01 unless the spray tower scrubber (9208) is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. In the event of venting to the PP S/D scrubber (9163), the permittee shall not operate EU2703-01 unless the PP S/D scrubber (9163) is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.3.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. While manufacturing a compound that emits methallyl chloride, the permittee shall not operate EU2703-01 unless FGTHROX or the activated carbon drums (23228 and 23229) is/are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.4.² **(R 336.1225, R 336.1702(a), R 336.1910)**
5. The permittee shall not operate EU2703-01 unless FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.5.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
6. The permittee shall equip and maintain the condensers (9214 and 9228) with coolant return temperature indicators. The permittee shall calibrate the coolant return temperature indicators in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
7. The permittee shall equip and maintain the scrubbers (9208 and 9163) with liquid flow rate indicators. The permittee shall calibrate the liquid flow rate indicators in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
8. The permittee shall equip and maintain activated carbon drums (23228 and 23229) with scales that measure each carbon tote's weight whenever the carbon adsorption system is operating. The permittee shall calibrate the scales in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Upon request from the AQD District Supervisor, the permittee shall verify the VOC and/or methallyl chloride emission rates from EU2703-01, by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

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Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A
Methallyl chloride	40 CFR Part 63, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a))
2. The permittee shall monitor and record, on a continuous basis, the coolant return temperature of the condensers (9214 and 9228), the liquid flow rate of the scrubbers (9208 and 9163), and the weight of each activated carbon tote (23228 and 23229) with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2703-01 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
4. The permittee shall keep, in a satisfactory manner, records of the date and time of each use of PP S/D scrubber (9163). The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
5. The permittee shall keep, in a satisfactory manner, records of the date and time a compound that emits methallyl chloride is manufactured. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1225, R 336.1702(a), R 336.1910)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))

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- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2703-064 (Carbon drums vent)	2 ²	82 ²	R 336.1225 40 CFR 52.21 (c) & (d)
2. SV2703-063 (Scrubber vent)	2 ²	84 ²	R 336.1225 40 CFR 52.21 (c) & (d)
3. SV2703-021 ^A (9008 tank vent)	1 ²	36 ²	R 336.1225 40 CFR 52.21 (c) & (d)
4. SV2703-048 ^A (Tank 9021C vent)	1 ²	22 ²	R 336.1225 40 CFR 52.21 (c) & (d)
5. SV2703-037 ^A (Waste tank 9010 vent)	1 ²	26 ²	R 336.1225 40 CFR 52.21 (c) & (d)
6. SV2703-043 ^A (PP S/D scrubber 9163)	2 ²	101 ²	R 336.1225 40 CFR 52.21 (c) & (d)
7. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225 40 CFR 52.21 (c) & (d)

^A This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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PTI No: MI-PTI-A4043-2019b

**EU2703-03
EMISSION UNIT CONDITIONS**

DESCRIPTION

Chloropropyl trichlorosilane process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart UU. ~~EU2703-03 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.~~

The most recent PTI for this emission unit is PTI No. 920-84C.

Flexible Group ID: FGTHROX, FGSITEBLOWER, FGMONMACT, ~~FGHAP2012A2A~~

POLLUTION CONTROL EQUIPMENT

- Venturi scrubbers 9390 A and B (scrubbers alternate in operation and act as backup for one another).
- FGTHROX

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	6.7 tpy* ²	Based on a 12-month rolling time period as determined at the end of each calendar month	EU2703-03	SC VI.2, VI.3	R 336.1225, R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2703-03 unless one of the following is true.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
 - a. EU2703-03 emissions are exhausted to 9390 A or B scrubber and the water flow rate for the scrubber in use is 6.0 gallons per minute or greater.
 - b. EU2703-03 emissions are exhausted to FGTHROX and FGTHROX is installed, maintained, and operated in a satisfactory manner as provided in the Special Conditions for FGTHROX.
2. The permittee shall not load the allyl chloride storage tank unless a vapor-tight connection between the allyl chloride storage tank and the loading vessel is established and maintained whenever allyl chloride is being loaded.² (**R 336.1225, R 336.1702(a), R 336.1910**)

~~3. Proper operation of scrubbers 9390 A and B means the total scrubber water flow rate for scrubbers 9390 A and B shall not be less than 6.0 gallons per minute, respectively. An excursion is a flow rate less than 6.0 gallons per minute. An excursion is a liquid flow rate less than the operational parameter limit or outside the acceptable range defined in this condition or demonstrated during testing. Upon detecting an excursion of total scrubber water flow rate limit, the permittee shall restore operation of scrubbers 9390 A and B to the normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~

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IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2703-03 while exhausting emissions to 9390 A and B scrubbers unless the scrubber in use is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 that apply to the scrubbers.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall equip and maintain scrubber 9390 A and scrubber 9390 B with a total scrubber water flow rate indicator. The permittee shall calibrate the total scrubber water flow rate indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, ~~40 CFR 64.6(c)(1)(i), 40 CFR 64.6(c)(1)(iii)~~)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the total scrubber water flow rate for the scrubber in use of scrubbers 9390 A and 9390 B with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(1))
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2703-03 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
- ~~4. For venturi scrubbers 9390 A and B, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))~~
- ~~5. For venturi scrubbers 9390 A and B, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.6(c)(3), 40 CFR 64.7(c))~~

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- ~~6. For venturi scrubbers 9390 A and B, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))~~
- ~~7. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))~~

VII. REPORTING

- 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
- 2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
- 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
- ~~4. Each semiannual report of monitoring and deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no excursions and/or exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))~~
- ~~5. Each semiannual report of monitoring and deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))~~
- ~~4. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))~~

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air.

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2703-011 (9390 A and B CPTC Scrubber Vent) ^A	2 ²	78 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c)&(d)

^A This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

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IX. OTHER REQUIREMENT(S)

- ~~1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))~~
2. The permittee shall comply with all requirements of 40 CFR Part 64. (40 CFR Part 64)NA

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Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU2703-08
EMISSION UNIT CONDITIONS**

DESCRIPTION

9140 Batch Kettle and associated equipment. This kettle is used for batch production of several materials and also used as a neutralization kettle for highly acidic products and alkoxylation startup material. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, and the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 155-20.

Flexible Group ID: FGMONMACT, FGTHROX, FGSITEBLOWER, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Scrubber 9254
- Scrubber 9255
- FGTHROX

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOCs	11.83 tpy* ²	12-month rolling time period as determined at the end of each calendar month	EU2703-08	SC VI.2, SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2703-08 unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. When exhausting to scrubber 9254, the scrubber liquid flow rate of scrubber 9254 is 4 gallons per minute or more.
 - b. When exhausting to scrubber 9255, the scrubber liquid flow rate of scrubber 9255 is 4 gallons per minute or more.
 - c. When exhausting to FGTHROX, FGTHROX is operated in accordance with the requirements of FGTHROX.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2703-08 unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. When exhausting to scrubber 9254, scrubber 9254 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(a).
 - b. When exhausting to scrubber 9255, scrubber 9255 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(b).

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- c. When exhausting to FGTHROX, FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(c).
2. The permittee shall equip and maintain each scrubber (9254 and 9255) with a liquid flow rate indicator. The permittee shall calibrate each liquid flow rate indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))
2. When exhausting to either scrubber (9254 or 9255), the permittee shall monitor and record, on a continuous basis, the scrubber liquid flow rate of the scrubber to which exhaust is being directed with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2703-08 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

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VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2703-004 (Scrubber 9255)	1.5 ²	65 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV2703-005 (Scrubber 9254)	2 ²	65 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV2703-008 ^a (Kettle Room Drum-off)	14 ²	57 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
4. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

^a This stack is not required to be discharged unobstructed vertically upwards to the ambient air

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU2703-09
EMISSION UNIT CONDITIONS**

DESCRIPTION

9250 Batch Kettle. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart MMM and FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 157-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#), FGTHROX

POLLUTION CONTROL EQUIPMENT

- Scrubber (9255)
- Scrubber (9254)
- FGTHROX

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	9.47 pph ^{*.2}	Hourly	EU2703-09	SC V.1, VI.2	R 336.1702(a)
2. VOC	3.82 tpy ^{*.2}	12-month rolling time period as determined at the end of each calendar month.	EU2703-09	SC VI.2, VI.3	R 336.1702(a)
3. PM	0.24 lb/hr ²	Hourly	EU2703-09	SC V.1, VI.2	R 336.1331
4. PM10	0.24 lb/hr ²	Hourly	EU2703-09	SC V.1, VI.2	40 CFR 52.21 (c) & (d)
5. PM2.5	0.24 lb/hr ²	Hourly	EU2703-09	SC V.1, VI.2	40 CFR 52.21 (c) & (d)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2703-09 unless one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21 (c) & (d)**)
 - a. When exhausting to scrubber 9254, the scrubber liquid flow rate of scrubber 9254 is 4 gallons per minute or more.
 - b. When exhausting to scrubber 9255, the scrubber liquid flow rate of scrubber 9255 is 4 gallons per minute or more.
 - c. When exhausting to FGTHROX, FGTHROX is installed, maintained, and operated in accordance with the requirements of FGTHROX.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2703-09 unless the scrubbers (9255 and 9254) or FGTHROX are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the applicable requirements of SC III.1.² (**R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d)**)

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2. The permittee shall equip and maintain each scrubber (9255 and 9254) with a liquid flow rate indicator. The permittee shall calibrate each liquid flow rate indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request from the AQD District Supervisor, the permittee shall verify the VOC, PM, PM10, and/or PM2.5 emission rates from EU2703-09, by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), 40 CFR 52.21(c) & (d))
2. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of each scrubber (9255 and 9254) with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), 40 CFR 52.21(c) & (d))
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2703-09 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))

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- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2703-004 ^A (Scrubber 9255 vent)	1.5 ²	65 ²	R 336.1225 40 CFR 52.21 (c) & (d)
2. SV2703-005 ^A (Scrubber 9254 vent)	2 ²	65 ²	R 336.1225 40 CFR 52.21 (c) & (d)
3. SV2703-007 ^A (Scrubber 9253 receiver vent)	1 ²	57 ²	R 336.1225 40 CFR 52.21 (c) & (d)
4. SV2703-008 ^A (Kettle room drum-off vent)	14 ²	57 ²	R 336.1225 40 CFR 52.21 (c) & (d)
5. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225 40 CFR 52.21 (c) & (d)

^A. This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

- The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart MMM for Pesticide Active Ingredient Industry by the initial compliance date, as they apply to EU2703-09.² **(40 CFR Part 63, Subpart A and Subpart MMM)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU2703-13
EMISSION UNIT CONDITIONS**

DESCRIPTION

22270 Batch Kettle Process. Emissions are controlled by Scrubbers 9254 and 9255, Condenser 22274, and FGTHROX. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 190-20.

Flexible Group ID: FGMONMACT, FGTHROX, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Scrubbers 9254 and 9255 (only one is used at any time)
- Condenser 22274
- FGTHROX

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	14.9 pph ^{*2}	Hourly	EU2703-13	SC V.1, VI.2	R 336.1702(a)
2. VOC	7.0 tpy ^{*2}	12-month rolling time period as determined at the end of each calendar month	EU2703-13	SC VI.2, VI.3, VI.4	R 336.1702(a)
3. PM	0.67 lb/hr ²	Hourly	EU2703-13	SC V.1, VI.2	R 336.1331
4. PM10	0.67 lb/hr ²	Hourly	EU2703-13	SC V.1, VI.2	40 CFR 52.21 (c) & (d)
5. PM2.5	0.67 lb/hr ²	Hourly	EU2703-13	SC V.1, VI.2	40 CFR 52.21 (c) & (d)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Unless the exception in SC III.3 applies, the permittee shall not operate equipment in EU2703-13 that exhausts to Scrubbers 9254 and 9255 unless the water flow rate for the scrubber in use is 4 gallons per minute or more.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. Unless the exception in SC III.4 applies, the permittee shall not operate equipment in EU2703-13 while exhausting to Condenser 22274 unless the coolant flow rate to the condenser is 4 gallons per minute or more.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee may operate equipment in EU2703-13 that exhausts to Scrubbers 9254 and 9255 when neither scrubber is operating in a satisfactory manner as long as all of the following conditions are true.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. The equipment exhaust is routed to FGTHROX.
 - b. FGTHROX is installed, maintained, and operated in a satisfactory manner.

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4. The permittee may operate equipment that exhausts to Condenser 22274 when the condenser is not operating in a satisfactory manner as long as all of the following conditions are true.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. The equipment exhaust is routed to FGTHROX.
 - b. FGTHROX is installed, maintained, and operated in a satisfactory manner.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. Except as allowed in SC III.3, the permittee shall not operate equipment in EU2703-13 that exhausts to Scrubbers 9254 and 9255 unless the scrubber in use is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through III.4 that apply to the scrubber in use.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. Except as allowed in SC III.4, the permittee shall not operate equipment in EU2703-13 while exhausting to Condenser 22274 unless the condenser is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through III.4 that apply to the condenser.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall equip and maintain Scrubbers 9254 and 9255 with devices to continuously monitor and record each scrubber's water flow rate. The permittee shall calibrate each device in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall equip and maintain Condenser 22274 with a device to continuously monitor and record the coolant flow rate to the condenser. The permittee shall calibrate the device in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify the VOC, PM, PM10, and/or PM2.5 emission rates from EU2703-13 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

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2. The permittee shall monitor and record, on a continuous basis, the water flow rates for Scrubber 9254 and for Scrubber 9255 with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall monitor and record, on a continuous basis, the coolant flow rate to Condenser 22274 with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2703-13 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2703-004 (9255 Scrubber) ^A	1.5 ²	65 ²	R 336.1225, 40 CFR 52.21(c)&(d)
2. SV2703-005 (9254 Scrubber) ^A	2 ²	65 ²	R 336.1225, 40 CFR 52.21(c)&(d)
3. SV2703-008 (Kettle Room Drum-Off) ^A	14 ²	57 ²	R 336.1225, 40 CFR 52.21(c)&(d)
4. SV2703-052 (22270 Kettle Vent) ^A	2 ²	57 ²	R 336.1225, 40 CFR 52.21(c)&(d)
5. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c)&(d)

^A This stack is not required to discharge unobstructed vertically upwards.

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IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU2703-17
EMISSION UNIT CONDITIONS**

DESCRIPTION

9025C dedicated waste tank in 2703 building.

The most recent PTI for this emission unit is PTI No. 26-44A14B.

Flexible Group ID: FGTHROX, FGSITEBLOWER, FGMONMACT

POLLUTION CONTROL EQUIPMENT

- This emission unit vents to FGTHROX and, when FGTHROX is not operating, scrubbers 9390 A and B.
- Emissions from transfers from the tank to tank trucks will be controlled by vapor balance back to the tank.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	0.184 tpy* ²	12-month rolling time period as determined at the end of each calendar month	EU2703-17	SC VI.2, VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2703-17 unless one of the following is true.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. EU2703-17 emissions are exhausted to 9390 A or B scrubber and the water flow rate for the scrubber in use is 6.0 gallons per minute or greater.
 - b. EU2703-17 emissions are exhausted to FGTHROX and FGTHROX is installed, maintained, and operated in a satisfactory manner as provided in the Special Conditions for FGTHROX.
2. The permittee shall not load any tank truck from EU2703-17 unless the vapor balance system is installed, maintained, and operated in a satisfactory manner.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2703-17 unless the scrubbers (either scrubber 9390 A or B) or FGTHROX are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the applicable requirements of SC III.1.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall equip and maintain scrubber 9390 A and scrubber 9390 B with a total scrubber water flow rate indicator. The permittee shall calibrate the total scrubber water flow rate indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the total scrubber water flow rate for the scrubber in use of scrubbers 9390 A and 9390 B with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2703-17 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. The permittee shall notify the Department if a change in land use occurs for property classified as industrial or public roadway, where this classification was relied upon to demonstrate compliance with Rule 225(1). The permittee shall submit the notification to the AQD District Supervisor, within 30 days of the actual land use change. Within 60 days of the land use change, the permittee shall submit to the AQD District Supervisor a plan for complying with the requirements of Rule 225(1). The plan shall require compliance with Rule 225(1) no later than one year after the due date of the plan submittal.¹ (R 336.1225(4))
2. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
3. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
4. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

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VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2703-011 (9390 A and B CPTC Scrubber Vent) ^A	2 ²	78 ²	R 336.1225, 40 CFR 52.21(c)&(d)
2. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c)&(d)
3. SV2517-001 (TOX vent) ^B	30 ²	102 ²	R 336.1225 40 CFR 52.21(c) & (d)

^A This stack is not required to be discharged unobstructed vertically upwards to the ambient air

^B This EU may exhaust from SV2517-001 after that stack has been installed

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU2901-12
EMISSION UNIT CONDITIONS**

DESCRIPTION

Distillation pilot process consisting of distillation column and ancillary equipment.

The most recent PTI for this emission unit is PTI No. 125-10A.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Cryogenic condenser

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	7.5 TPY ²	12-month rolling time period as determined at the end of each calendar month	EU2901-12	SC VI.3	R 336.1205(3), R 336.1702(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2901-12 unless the cryogenic condenser coolant temperature is -40°C or less, except during the phase separator cleanout operation.² (R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU2901-12 unless the cryogenic condenser is installed, maintained, and operated in a satisfactory manner, except during the phase separator cleanout operation.² (R 336.1225, R 336.1702(a))
2. The permittee shall equip and maintain the cryogenic condenser with a coolant temperature indicator.² (R 336.1225, R 336.1720(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall monitor and record, in a satisfactory manner, the cryogenic condenser's coolant temperature on a continuous basis. Monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the

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continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time, and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event.² (R 336.1225, R 336.1702(a), R 336.1910)

2. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1205(3), R 336.1702(a))
3. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the VOC emission rate from EU2901-12, using a method acceptable to the AQD District Supervisor, on file at the facility and make them available to the Department upon request.² (R 336.1205(3), R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2901-019 ^A	2 ¹	52 ¹	R 336.1225

^A This stack is not required to exhaust vertically upwards to the ambient air.

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU2901-16
EMISSION UNIT CONDITIONS**

DESCRIPTION

2901 B Module Twin Screw Extruder located in the 2901 building. The extruder operates under vacuum. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF.

The most recent PTI for this emission unit is PTI No. 180-15A.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

Xylene contact condenser 16621

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	9.9 TPY ²	12-month rolling time period as determined at the end of each calendar month	EU2901-16	SC VI.5	R 336.1702(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2901-16 unless the 16621 exhaust gas temperature is 35°C or less on an instantaneous basis.² (R 336.1225, R 336.1702(a))

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU2901-16 unless condenser 16621 is installed, maintained, and operated in a satisfactory manner.² (R 336.1225, R 336.1702(a))
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the exhaust gas temperature of condenser 16621 on a continuous basis while EU2901-16 is operating.² (R 336.1225, R 336.1702(a))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

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VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1225, R 336.1702(a))
2. The permittee shall monitor and record, in a satisfactory manner, the exhaust gas temperature of condenser 16621 on a continuous basis. Monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event.² (R 336.1225, R 336.1702(a))
3. The permittee shall calculate the VOC emission rate from EU2901-16 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1225, R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2901-010 ^A	2 ²	45 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV2901-011	12 ²	48 ²	40 CFR 52.21(c) & (d)

^A This stack is not required to exhaust vertically upwards to the ambient air.

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU303-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

Phenyl methyl fluids and resin hydrolysis and polymerization. This emission unit vents to either the condenser 3475, carbon beds, the FGTHROX, or FGSITESCUBBERS. This emission unit is subject to 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 158-20.

Flexible Group ID: FGSITESCUBBERS, FGTHROX, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser (3475)
- Carbon Beds
- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	6.52 tpy* ²	Based on a 12-month rolling time period as determined at the end of each calendar month	EU303-01	SC VI.2, SC VI.3, SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate equipment in EU303-01 that exhausts directly to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
 - a. FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.
2. The permittee shall not operate equipment in EU303-01 that exhausts first to condenser 3475 and then to either the carbon beds, FGTHROX, or FGSITESCUBBERS unless one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
 - a. When exhausting to the carbon beds, the minimum exit gas temperature of condenser 3475 is 2.2°C, and the weight of the carbon drum is 23.46 kg or less.
 - b. When exhausting to FGTHROX, FGTHROX is operated in accordance with the requirements of FGTHROX.
 - c. When exhausting to Site Scrubber #1, the minimum exit gas temperature of condenser 3475 is 2.2°C, and Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - d. When exhausting to Site Scrubber #2, the minimum exit gas temperature of condenser 3475 is 2.2°C, and Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.

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IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate equipment in EU303-01 that exhausts directly to either FGTHROX or FGSITESCUBBERS unless the one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(a).
 - b. FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(b) or (c).
2. The permittee shall not operate equipment in EU303-01 that exhausts directly to condenser 3475 and then to either the carbon beds or FGSITESCUBBERS unless:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. Condenser 3475 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a), and
 - b. One of the following requirements is met:
 - i. The carbon beds are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a)
 - ii. FGTHROX or FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b), (c), or (d).
3. The permittee shall equip and maintain condenser 3475 with a device to continuously monitor and record the condenser exit gas temperature. The permittee shall calibrate the exit gas temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall equip and maintain the carbon beds with a device to continuously monitor the mass of the carbon beds. The permittee shall calibrate the carbon bed mass indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall monitor and record, in a satisfactory manner, the exit gas for condenser 3475 on a continuous basis. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. When venting to the carbon beds, the permittee shall record the mass of the carbon beds, on a continuous basis, with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

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- The permittee shall calculate the VOC emission rate from EU303-01 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

- Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
- Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-303-047 (Acid Surge Tank)	2 ²	41 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV-303-055 (THROX Blower Bypass Vent)	3 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV-303-001 (DV1656 KO Bypass Vent)	6 ²	42 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV-303-057 (PhMe Fluids Carbon Bed Bypass Vent No.1)	2 ²	26 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV-303-058 (PhMe Fluids Carbon Bed Bypass Vent No.2)	2 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV-303-038 (DV3320/DV3337 Bypass Vent)	1 ²	40 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV-2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV-2512-001 (Site Scrubber)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)
9. SV-2512-002 (Site Scrubber)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)
10. SV-303-059 (Nederman Arm Vent)	8 ²	41 ²	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

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NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU303-02
EMISSION UNIT CONDITIONS**

DESCRIPTION

Polymer and resin surge, mixing, filtration, and blending. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 15-22.

Flexible Group ID: FGTHROX, FGSITESCUBBERS, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	1.36 tpy ^{*.2}	Based on a 12-month rolling time period as determined at the end of each calendar month	EU303-02	SC VI.2	R 336.1702(a)
2. Vinyl Dimethylsilanol (CAS No. 5906-75-2) ¹	0.31 tpy ^{*.1}	Based on a 12-month rolling time period as determined at the end of each calendar month	EU303-02	SC VI.3	R 336.1225

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate equipment in EU303-02 that exhausts directly to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
 - a. FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate equipment in EU303-02 that exhausts directly to either FGTHROX or FGSITESCUBBERS unless the one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
 - a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(a).
 - b. FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(b) or (c).

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1225, R 336.1702(a))
2. The permittee shall calculate the VOC emission rate from EU303-02 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
3. The permittee shall calculate the vinyl dimethylsilanol emission rate from EU303-02 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.¹ (R 336.1225)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV303-001 (DV1656 Knock Out Tank Atmospheric Bypass Vent)	6 ²	41 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV303-010 (Local Exhaust Ventilation)	45 ²	50 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV303-011 ^a (DV1628, DV1629 and DV1617 Kettles)	2 ²	1 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV303-013 ^a (DV1630 Kettle)	2 ²	0 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV303-014 ^a (DV3305 and DV3312 Kettles)	2 ²	1 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV303-015 ^a (DV1648 Kettle)	2 ²	5 ²	R 336.1225, 40 CFR 52.21(c) & (d)

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Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
7. SV303-021 ^a (DV3314 Kettle)	2 ²	2 ²	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV303-036 (Specific Ventilation for Manways)	13 ²	44 ²	R 336.1225, 40 CFR 52.21(c) & (d)
9. SV303-037 (Specific Ventilation for Manways)	12 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
10. SV303-055 (THROX Blower Atmospheric Bypass Vent)	3 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
11. SV303-059 (Nederman Arm Vent)	8 ²	41 ²	R 336.1225, 40 CFR 52.21(c) & (d)
12. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)
13. SV2512-001 (Site Scrubber)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)
14. SV2512-002 (Site Scrubber)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU303-06
EMISSION UNIT CONDITIONS**

DESCRIPTION

Batch and semi continuous polymer and resin processing including reactors, distillation columns, strippers, receivers, storage tanks, accumulators, separators, vacuum pumps, condensers, adsorbers, filters and related equipment. This emission unit is subject to the requirements of 40 CFR Part 61, Subparts A, J, and V, and 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. ~~EU303-06 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.~~

The most recent PTI for this emission unit is PTI No. 160-20A.

Flexible Group ID: FGTHROX, FGSITESCUBBERS, FGSITEBLOWER, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser (1637)
- HX Condenser (3458)
- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOCs	4.15 tpy* ²	12-month rolling time period as determined at the end of each calendar month	EU303-06	SC VI.2, SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate equipment in EU303-06 that exhausts first to condenser 1637, and then to either FGTHROX or FGSITESCUBBERS, unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. When exhausting to FGTHROX, FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. When exhausting to Site Scrubber #1, the exit gas temperature of condenser 1637 is 10°C or less and Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - c. When exhausting to Site Scrubber #1, the exit gas temperature of condenser 1637 is 10°C or less and Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.
2. The permittee shall not operate equipment in EU303-06 that exhausts first to HX condenser 3458, and then to either FGTHROX or FGSITESCUBBERS, unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. When exhausting to FGTHROX, FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. When exhausting to Site Scrubber #1, the exit gas temperature of HX condenser 3458 is 10°C or less and Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.

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- c. When exhausting to Site Scrubber #2, the exit gas temperature of HX condenser 3458 is 10°C or less and Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.
3. The permittee shall not operate equipment in EU303-06 that exhausts to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.
- ~~4. The exhaust gas temperature at the outlet of condenser 3458 on the silicone mixing process shall not exceed 50°F. An excursion of the exhaust gas temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the outlet gas temperature limit, the permittee shall restore operation of condenser 3458 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~
- ~~5. If the exhaust gas temperature at the outlet of condenser no. 1637 exceeds 50 F, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. An excursion of the exhaust gas temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the exhaust gas temperature limit, the permittee shall restore operation of condenser 1637 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(1)(i), 40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~
- ~~6. While venting to the carbon drum, if the weight of the drum exceeds 36 pounds, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. An excursion of the weight of the carbon drum is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the weight of the carbon drum limit, the permittee shall restore operation of the carbon drum to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(1)(i), 40 CFR 64.6(c)(2), 40 CFR 64.7.)~~

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate equipment in EU303-06 that exhausts to condenser 1637 unless the condenser is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(b) or SC III.1(c).² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall not operate equipment in EU303-06 that exhausts to HX condenser 3458 unless the condenser is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b) or SC III.2(c).² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall not operate equipment in EU303-06 that exhausts to FGTHROX or FGSITESCUBBERS unless FGTHROX or FGSITESCUBBERS are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1, SC III.2, or SC III.3.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall equip and maintain each condenser (1637 and 3458) with a device to continuously monitor and record the condenser exit gas temperature. The permittee shall calibrate the exit gas temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

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NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of each condenser (1637, 3458) with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, ~~40 CFR 64.6(c)(1)(i), (ii), (iii)~~)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU303-06 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
4. ~~For condensers 1637 and 3458, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))~~
5. ~~For condensers 1637 and 3458, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.6(c)(3), 40 CFR 64.7(c))~~
6. ~~For condensers 1637 and 3458, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))~~
7. ~~The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))~~

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))

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2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- ~~4. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**~~
- ~~5. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**~~
- ~~6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**~~

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV303-001 ^a (1656 Tank Bypass)	41 ²	6 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV303-036 (Manways Ventilation)	44 ²	13 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV303-037 (Local Exhaust Ventilation)	43 ²	12 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
4. SV303-046 (1637 Condenser Bypass)	42 ²	2 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
5. SV303-049 ^a (3344 KOH Tank)	35 ²	1 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
6. SV303-055 (THROX Blower Bypass)	43 ²	3 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
7. SV2514-006 (THROX)	90 ²	54 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
8. SV2512-001 (Site Scrubber 1)	67 ²	6 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
9. SV2512-002 (Site Scrubber 2)	67 ²	6 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
10. SV2517-001 ^b (TOX Vent)	30 ²	102 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^aThis stack is not required to discharge unobstructed vertically upwards

^bThis EU may exhaust from SV2517-001 after that stack has been installed.

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IX. OTHER REQUIREMENT(S)

1. ~~If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))~~
2. ~~The permittee shall comply with all requirements of 40 CFR Part 64. (40 CFR Part 64)NA~~

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU303-09
EMISSION UNIT CONDITIONS**

DESCRIPTION

Flake resin hydrolysis process. Emissions are vented through FGTHROX, solids hopper 3460, FGSITESCUBBERS, cyclone 3446, as well as other vents. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. ~~EU303-09 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.~~

The most recent PTI for this emission unit is PTI No. 726-78C.

Flexible Group ID: FGTHROX, FGSITESCUBBERS, FGSITEBLOWER, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condensers (3458 & 24697)
- Cyclone (3446). ~~This device is a CAM subject unit for Particulate.~~
- Reverse jet fabric filter (22770). ~~This device is a CAM subject unit for Particulate.~~
- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	3.47 tpy* ²	12-month rolling time period as determined at the end of each calendar month	EU303-09	SC VI.2, SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate equipment in EU303-09 that exhausts directly to either condenser 24697, FGTHROX, or FGSITESCUBBERS unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. The exit gas temperature of condenser 24697 is 95°F or less.
 - b. FGTHROX is operated in accordance with the requirements of FGTHROX.
 - c. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - d. site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.
2. The permittee shall not operate equipment in EU303-09 that exhausts first to condenser 3458 and then to either FGTHROX, or FGSITESCUBBERS unless:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. The exit gas temperature of condenser 3458 is 10°C or less, and
 - b. One of the following requirements is met:
 - i. When exhausting to FGTHROX, FGTHROX is operated in accordance with the requirements of FGTHROX.

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- ii. When exhausting to Site Scrubber #1, Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - iii. When exhausting to Site Scrubber #2, Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.
3. The permittee shall not operate EU303-09 unless the pressure drop across cyclone 3446/reverse jet fabric filter 22770 is 0 inches water or more but not more than 20 inches water.² (R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))
- ~~4. Proper operation for the reverse jet fabric filter (22770) means that the pressure drop is maintained within a range of 0 to 20 inches water. An excursion is a pressure drop reading outside the range defined in this condition or demonstrated during testing. Upon detecting an excursion of the pressure drop limit, the permittee shall restore operation of the reverse jet fabric filter (22770) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(e)(2), 40 CFR 64.7(d))~~

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate equipment in EU303-09 that exhausts directly to either condenser 24597, FGTHROX, or FGSITESCUBBERS unless the one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. Condenser 24697 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(a).
 - b. FGTHROX or FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(b), (c), or (d).
2. The permittee shall not operate equipment in EU303-09 that exhausts directly to condenser 3458 and then to either FGTHROX or FGSITESCUBBERS unless:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. Condenser 3458 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a), and
 - b. FGTHROX or FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b)(i), (ii), or (iii).
3. The permittee shall equip and maintain each condenser (3458 and 24697) with a device to continuously monitor and record the condenser exit gas temperature. The permittee shall calibrate the exit gas temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall not operate EU303-09 unless the cyclone/reverse jet fabric filter 3446/ 22770 are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through III.4 that apply to each control device.² (R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))
5. The permittee shall equip and maintain cyclone/reverse jet fabric filter 3446/22770 with a pressure drop indicating device. The permittee shall calibrate pressure drop indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

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VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of condensers 3458 and 24697 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall monitor and record, on a continuous basis, the pressure drop of cyclone/reverse jet fabric filter 3446/22770 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d), ~~40 CFR 64.6(e)(1)~~)
4. The permittee shall calculate the VOC emission rate from EU303-09 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
5. ~~For the cyclone (3446) and reverse jet fabric filter (22770), upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))~~
6. ~~For the cyclone (3446) and reverse jet fabric filter (22770), except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.6(e)(3), 40 CFR 64.7(c))~~
7. ~~For the cyclone (3446), and reverse jet fabric filter (22770), the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))~~
8. ~~The permittee shall equip and maintain the cyclone (3446) and the reverse jet fabric filter (22770) with a pressure drop indicator. (40 CFR 64.6(e)(1)(i)(iii))~~

~~9. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))~~

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
- ~~4. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))~~
- ~~5. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))~~
- ~~6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))~~

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV303-001 ^a (1656 Catch Tank Vent)	6 ²	41 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV303-002 (3360 Tank Vent – Maintenance Bypass Only)	2 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV303-004 (3399 Tank Vent – Maintenance Bypass Only)	1 ²	42 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV303-005 ^a (3460 Solids Hopper Vent)	3 ²	41 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV303-006 (3446 Cyclone Vent)	20 ²	46 ²	R 336.1225, 40 CFR 52.21(c) & (d)

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Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
6. SV303-007 (3416 Tank Vent – Maintenance Bypass Only)	2 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV303-037 (Nederman Arm Product Drum Off)	12 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV303-055 (THROX Blower Bypass Vent)	3 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
9. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)
10. SV2512-001 (Site Scrubber Vent)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)
11. SV2512-002 (Site Scrubber Vent)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

- ~~1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))~~
- ~~2. The permittee shall comply with all requirements of 40 CFR Part 64. (40 CFR Part 64)NA~~

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU303-15
EMISSION UNIT CONDITIONS**

DESCRIPTION

1600 Batch Kettle batch manufacturing process consisting of an agitated, jacketed kettle, water trap, receiver, blending and filtration, and product packaging. Emissions are controlled by FGTHROX (as well as FGSITESCUBBERS, condenser 1637, or condenser 1602 during periods where FGTHROX is out of operation or when total or partial diversion is necessary for any safety-related or operational scenarios). The process can also use a shared vacuum pump that exhausts through a glycol condenser (DV1637). This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. [EU303-15 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.](#)

The most recent PTI for this emission unit is PTI No. 146-16A.

Flexible Group ID: FGSITESCUBBERS, FGTHROX, FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Condensers (Glycol condenser DV1637 and service water condenser DV1602). ~~These condensers are CAM subject units for VOC.~~
- FGSITESCUBBERS
- FGTHROX

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	12.1 tpy ^{2*}	12 month rolling time period as determined at the end of each calendar month	EU303-15	SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate equipment in EU303-15 that exhausts to FGTHROX unless FGTHROX is operated in accordance with the requirements of FGTHROX.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee may operate EU303-15 when FGTHROX is not operating in a satisfactory manner, as long as all of the following conditions are true.² (**R 336.1224, R 336.1225, R 336.1702, R 336.1910**)
 - a. The equipment exhaust is routed to either the local vents SV303-001, SV303-019, SV303-046, and SV303-055, or FGSITESCUBBERS.
 - b. When exhausting to local vents SV303-001, SV303-046, or SV303-055, emissions are routed through condenser 1637 and the minimum exit gas temperature of condenser 1637 is 10°C or less during operation under vacuum.

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- c. When exhausting to local vents SV303-001, SV303-019, or SV303-055, emissions are routed through the condenser 1602 and the maximum exit coolant temperature of condenser 1602 is 37°C or less when not operating under vacuum.
 - d. When exhausting to Site Scrubber #1, Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - e. When exhausting to Site Scrubber #2, Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.
- ~~3. While 1600 Batch Kettle is venting through SV303-019, the permittee shall not operate 1600 Batch Kettle unless the service water condenser DV1602 exit water temperature is 35°C or less. An excursion of the exit water temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the exit water temperature limit, the permittee shall restore operation of condenser DV1602 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~
- ~~4. While 1600 Batch Kettle is venting through the vacuum pump to glycol condenser DV1637, the permittee shall not operate 1600 Batch Kettle unless the glycol condenser DV1637 exit coolant temperature is 5°C or less. An excursion of the exit coolant temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the exit temperature limit, the permittee shall restore operation of condenser DV1637 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate equipment in EU303-15 that exhausts to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.
 - b. FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(d) or (e).
2. The permittee shall not operate equipment in EU303-15 that exhausts directly to condenser 1637 and then to local vents SV303-001, SV303-046, and SV303-055 unless condenser 1637 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b).² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall not operate equipment in EU303-15 that exhausts directly to condenser 1602 and then to either FGSITESCUBBERS, or local vents SV303-001, SV303-019, or SV303-055 unless condenser 1602 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(c).² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall not, during periods when FGTHROX is out of operation or when the vent to FGTHROX is diverted for any safety-related or operational reason, operate EU303-15 unless FGSITESCUBBERS, condenser 1637, or condenser 1602 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a) through (e).² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
5. The permittee shall equip and maintain condenser 1637 with a device to continuously monitor and record the condenser exit gas temperature. The permittee shall calibrate the exit gas temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, ~~40 CFR 64.6(c)(1)(i), 40 CFR 64.6(c)(1)(iii)~~)

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6. The permittee shall equip and maintain condenser 1602 with a device to continuously monitor and record the condenser exit coolant temperature. The permittee shall calibrate the exit gas temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, ~~40 CFR 64.6(c)(1)(i), 40 CFR 64.6(c)(1)(iii)~~)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a))
2. The permittee shall monitor and record, in a satisfactory manner, the exit gas temperature for condenser 1637 on a continuous basis. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall monitor and record, in a satisfactory manner, the exit coolant temperature for condenser 1602 on a continuous basis. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall calculate the VOC emission rate from EU303-15 monthly, including the emission rate from the operational scenario as described in SC IV.4, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

~~5. For condensers DV1602 and DV1637, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))~~

~~6. For condensers DV1602 and DV1637, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.6(c)(3), 40 CFR 64.7(c))~~

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~~7. For condensers DV1602 and DV1637, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))~~

~~8. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))~~

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
- ~~4. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))~~
- ~~5. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))~~
- ~~6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))~~

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV303-010 Building Exhaust	45 ²	50 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV303-019 1600 and 1650 Kettles	2 ²	36 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV303-037 Local Exhaust Ventilation	12 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV303-046 1637 Condenser	2 ²	42 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV303-001 DV1656 Knock Out Tank Atmospheric Bypass Vent	6 ²	41 ²	R 336.1225, 40 CFR 52.21(c) & (d)

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Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
6. SV303-055 THROX Blower Atmospheric Bypass Vent	3 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV2517-001 ^a (TOX)	30 ²	102 ²	R 336.1225, 40 CFR 52.21(c) & (d)
9. SV2512-001 (Site Scrubber No. 1)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)
10. SV2512-002 (Site Scrubber No. 2)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This EU may exhaust from SV2517-001 after that stack has been installed.

IX. OTHER REQUIREMENTS

~~1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))~~

~~2. The permittee shall comply with all requirements of 40 CFR Part 64. (40 CFR Part 64)~~

~~NA~~

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU303-16
EMISSION UNIT CONDITIONS**

DESCRIPTION

1650 Batch Kettle batch manufacturing process consisting of an agitated, jacketed kettle, water trap, receiver, blending and filtration, and product packaging. Emissions are controlled by FGTHROX (as well as FGSITESCUBBERS, condenser 1637, or condenser 3420 during periods where FGTHROX is out of operation or when total or partial diversion is necessary for any safety-related or operational scenarios). This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. ~~EU303-16 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.~~

The most recent PTI for this emission unit is PTI No. 147-16A.

Flexible Group ID: FGSITESCUBBERS, FGTHROX, FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Service water condenser DV3420 and glycol condenser DV1637. ~~These devices are CAM subject units for VOC.~~
- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	12.1 tpy ²	12 month rolling time period as determined at the end of each calendar month	EU303-16	SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate equipment in EU303-16 that exhausts to FGTHROX unless FGTHROX is operated in accordance with the requirements of FGTHROX.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee may operate EU303-16 when FGTHROX is not operating in a satisfactory manner, as long as all of the following conditions are true.² (**R 336.1224, R 336.1225, R 336.1702, R 336.1910**)
 - a. The equipment exhaust is routed to either the local vents SV303-001, SV303-019, SV303-046, and SV303-055, or FGSITESCUBBERS.
 - b. When exhausting to local vents SV303-001, SV303-046, or SV303-055, emissions are routed through condenser 1637 and the minimum exit gas temperature of condenser 1637 is 10°C or less during operation under vacuum.
 - c. When exhausting to local vents SV303-001, SV303-019, or SV303-055, emissions are routed through the condenser 3420 and the maximum exit coolant temperature of condenser 3420 is 37°C or less when not operating under vacuum.

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- d. When exhausting to Site Scrubber #1, Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - e. When exhausting to Site Scrubber #2, Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.
- ~~3. While 1650 Batch Kettle is venting through SV303-019, the permittee shall not operate 1650 Batch Kettle unless the service water condenser DV3420 exit water temperature is 35°C or less. An excursion of the exit water temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the exit water temperature limit, the permittee shall restore operation of condenser DV3420 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~
- ~~4. While 1650 Batch Kettle is venting through the vacuum pump to glycol condenser DV1637, the permittee shall not operate 1650 Batch Kettle unless the glycol condenser DV1637 exit coolant temperature is 5°C or less. An excursion of the exit coolant temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the exit coolant temperature limit, the permittee shall restore operation of condenser DV1637 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate equipment in EU303-16 that exhausts to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.
 - b. FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(d) or (e).
2. The permittee shall not operate equipment in EU303-16 that exhausts directly to condenser 1637 and then to local vents SV303-001, SV303-046, and SV303-055 unless condenser 1637 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b).² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall not operate equipment in EU303-16 that exhausts directly to condenser 3420 and then to either FGSITESCUBBERS, or local vents SV303-001, SV303-019, or SV303-055 unless condenser 3420 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(c).² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall not, during periods when FGTHROX is out of operation or when the vent to FGTHROX is diverted for any safety-related or operational reason, operate EU303-16 unless FGSITESCUBBERS, condenser 1637, or condenser 3420 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a) through (e).² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
5. The permittee shall equip and maintain condenser 1637 with a device to continuously monitor and record the condenser exit gas temperature. The permittee shall calibrate the exit gas temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, ~~40 CFR 64.6(c)(1)(i)(iii), 40 CFR 64.6(c)(1)(iii)~~)
6. The permittee shall equip and maintain condenser 3420 with a device to continuously monitor and record the condenser exit coolant temperature. The permittee shall calibrate the exit gas temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, ~~40 CFR 64.6(c)(1)(i)(iii), 40 CFR 64.6(c)(1)(iii)~~)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a))
2. The permittee shall monitor and record, in a satisfactory manner, the exit gas temperature for condenser 1637 on a continuous basis. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(4))
3. The permittee shall monitor and record, in a satisfactory manner, the exit coolant temperature for condenser 3420 on a continuous basis. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(4))
4. The permittee shall calculate the VOC emission rate from EU303-16 monthly, including the emission rate from the operational scenario as described in SC IV.4, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
- ~~5. For condensers DV3420 and DV1637, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))~~
- ~~6. For condensers DV3420 and DV1637, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.6(c)(3), 40 CFR 64.7(c))~~
- ~~7. For condensers DV3420 and DV1637, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(4))~~

~~8. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))~~

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
- ~~4. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))~~
- ~~5. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))~~
- ~~6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))~~

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV303-010 Building Exhaust	45 ²	50 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV303-019 1600 and 1650 Kettles	2 ²	36 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV303-037 Local Exhaust Ventilation	12 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV303-046 1637 Condenser	2 ²	42 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV303-001 DV1656 Knock Out Tank Atmospheric Bypass Vent	6 ²	41 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV303-055 THROX Blower Atmospheric Bypass Vent	3 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV2517-001 ^a (TOX)	30 ²	102 ²	R 336.1225, 40 CFR 52.21(c) & (d)

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Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
9. SV2512-001 (Site Scrubber No. 1)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)
10. SV2512-002 (Site Scrubber No. 2)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This EU may exhaust from SV2517-001 after that stack has been installed.

IX. OTHER REQUIREMENTS

- ~~1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))~~
- ~~2. The permittee shall comply with all requirements of 40 CFR Part 64. (40 CFR Part 64)NA~~

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU303-19
EMISSION UNIT CONDITIONS**

DESCRIPTION

Phenyl methyl polymerization semi-continuous process consisting of an agitated kettle, water trap, storage tanks, distillation column, receivers, filters, vacuum pumps, and related equipment. Some equipment vents through condenser 3469 or FGTHROX; other equipment vents through condenser 3475 to either carbon beds or FGTHROX. FGSITESCUBBERS are used as control equipment if FGTHROX is not in operation. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.

The most recent PTI for this emission unit is PTI No. 166-20A.

Flexible Group ID: FGTHROX, FGSITESCUBBERS, FGSITEBLOWER, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser (3469)
- Condenser (3475)
- Carbon Beds
- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOCs	2.06 tpy* ²	12-month rolling time period as determined at the end of each calendar month	EU303-19	SC VI.2, SC VI.3, SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate equipment in EU303-19 that exhausts directly to either condenser 3469, FGTHROX, or FGSITESCUBBERS unless one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
 - a. The exit gas temperature of condenser 3469 is 25°C or less.
 - b. FGTHROX is operated in accordance with the requirements of FGTHROX.
 - c. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - d. site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.
2. The permittee shall not operate equipment in EU303-19 that exhausts first to condenser 3475 and then to either the carbon beds, FGTHROX, or FGSITESCUBBERS unless one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
 - a. When exhausting to the carbon beds, the exit gas temperature of condenser 3475 is 2.22°C or less and the weight of the carbon drum is 23.46 kg or less.

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- b. When exhausting to FGTHROX, FGTHROX is operated in accordance with the requirements of FGTHROX.
- c. When exhausting to Site Scrubber #1, the exit gas temperature of 3475 is 2.22°C or less and Site Scrubber #1 is operated in accordance with the requirements of FGSITESCRUBBERS.
- d. When exhausting to Site Scrubber #2, the exit gas temperature of 3475 is 2.22°C or less and Site Scrubber #2 is operated in accordance with the requirements of FGSITESCRUBBERS.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate equipment in EU303-19 that exhausts directly to either condenser 3469, FGTHROX, or FGSITESCRUBBERS unless the one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. Condenser 3469 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(a).
 - b. FGTHROX or FGSITESCRUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(b), (c), or (d).
2. The permittee shall not operate equipment in EU303-19 that exhausts directly to condenser 3475 and then to either the carbon beds, FGTHROX, or FGSITESCRUBBERS unless:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. Condenser 3475 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a), (c), or (d),
 - b. When exhausting to the carbon beds, the carbon beds are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a),
 - c. When exhausting to FGTHROX or FGSITESCRUBBERS, FGTHROX or FGSITESCRUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b), (c), or (d).
3. The permittee shall equip and maintain each condenser (3469 and 3475) with a device to continuously monitor and record the condenser exit gas temperature. The permittee shall calibrate the exit gas temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall equip and maintain the carbon beds with a device to continuously monitor the mass of the carbon drum. The permittee shall calibrate the carbon drum mass indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of each condenser (3469, 3475) with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

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3. When venting to the carbon beds, the permittee shall record the mass of the carbon drum, on a continuous basis, with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU303-19 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV303-001 ^a (1656 Tank Bypass)	6 ²	42 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV303-024 (3463 Reactor Bypass)	1 ²	57 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV303-026 ^a (3434 Volatile Tank)	1 ²	42 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
4. SV303-027 ^a (3435 Volatile Tank)	1 ²	43 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
5. SV303-055 (THROX Blower Bypass)	3 ²	43 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
6. SV303-057 (Carbon Beds Bypass #1)	2 ²	26 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
7. SV303-058 (Carbon Beds Bypass #2)	2 ²	43 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
8. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
9. SV2512-001 (Site Scrubber 1)	6 ²	67 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
10. SV2512-002 (Site Scrubber 2)	6 ²	67 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
11. SV2517-001 ^b (TOX Vent)	30 ²	102 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^aThis stack is not required to discharge unobstructed vertically upwards

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PTI No: MI-PTI-A4043-2019b

^bThis EU may exhaust from SV2517-001 after that stack has been installed.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU304-02
EMISSION UNIT CONDITIONS**

DESCRIPTION

Alkylsilane process including reactors, distillation columns, condensers, scrubber, storage tanks, tanker station, and related equipment. Tanks that do not vent include 259. This emission unit vents to FGTHROX and FGSITESCRUBBERS. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU304-02 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 616-92B.

Flexible Group ID: FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Condensers (1154) - This is a CAM subject unit for VOCs
- FGTHROX
- FGSITESCRUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC ^A	13.10 pph ²	Hourly	EU304-02	SC VI.1	R 336.1225, R 336.1702(a)
2. VOC ^A	7.3 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU304-02	SC VI.1 & VI.2	R 336.1205, R 336.1225, R 336.1702(a)

^A. This limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the process.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The maximum coolant inlet temperature of condenser 1154 shall not exceed -13°C. An excursion of the maximum coolant inlet temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition or demonstrated during testing. Upon detecting an excursion of the maximum coolant inlet temperature limit, the permittee shall restore operation of condenser 1154 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² (**R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1910, 40 CFR 64.6(c)(2), 40 CFR 64.7(d)**)
2. The permittee shall not operate the process unless the condenser (1154) is installed and operating properly.² (**R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1910**)
3. The permittee shall equip and maintain the coolant line connected to the condenser (1154) with a temperature indication device.² (**R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1910, 40 CFR 64.6(c)(1)(i), (ii)**)
4. The permittee shall calibrate the temperature indicator for condenser 1154 in a satisfactory manner. (**40 CFR 64.6(c)(1)(iii)**)

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall monitor and record, on a continuous basis, the coolant inlet temperature of condenser 1154, with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time, and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event.² (R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1910, 40 CFR 64.6(c)(1))
2. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission limits specified in this table. These records shall be made available to the AQD upon request.² (R 336.1205, R 336.1225, R 336.1702)
3. For condenser 1154, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emission unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))
4. For condenser 1154, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emission unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.6(c)(3), 40 CFR 64.7(c))
5. For condenser 1154, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))
6. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**
5. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**
6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV304-016	1 ^{A,2}	45 ^{A,2}	R 336.1224, R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV2514-006	54 ²	90 ²	R 336.1224, R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV2512-001	6 ²	65 ²	R 336.1224, R 336.1225, 40 CFR 52.21 (c) & (d)
4. SV2512-002	6 ²	65 ²	R 336.1224, R 336.1225, 40 CFR 52.21 (c) & (d)

^A This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

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IX. OTHER REQUIREMENT(S)

1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU311-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

HCl/MeCl recovery process including scrubbers, tanks, columns, vaporizer, absorber, compressor, and related equipment. Several processes at the on-site vent to this recovery process. Emissions are controlled by two sets of control device trains, each operating in series, that vent through an absorber (2810/24101) and then a vent scrubber (2812/24102). This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart UU. [EU311-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.](#)

The most recent PTI for this emission unit is PTI No. 1-08A.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Absorbers (2810 and 24101), [These are CAM subject devices for Hydrogen Chloride and Methyl Chloride](#)
- Packed bed scrubber (2812 and 24102) [These are CAM subject devices for Hydrogen Chloride and Methyl Chloride](#)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	8.7 tpy ^{*.2}	12-month rolling time period as determined at the end of each calendar month	EU311-01	SC VI.3	R 336.1702(a)
2. Acetyl chloride (CAS No. 75-36-5)	5.7 tpy ^{*.2}	12-month rolling time period as determined at the end of each calendar month	EU311-01	SC VI.4	R 336.1225

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate equipment in EU311-01 unless the following requirements are met:²
(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. The liquid flow rate of absorber 2810 is at a minimum of 4 gallons per minute.
 - b. The liquid flow rate of packed bed scrubber 2812 is at a minimum of 2.4 gallons per minute.
 - c. The liquid flow rate of absorber 24101 is at a minimum of 2.5 gallons per minute.
 - d. The liquid flow rate of packed bed scrubber 24102 is at a minimum of 1 gallon per minute.

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- ~~2. If the liquid flow rate of the absorber (2810) is less than 4.0 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. An excursion is a liquid flow rate less than 4.0 gallons per minute defined in this condition, or demonstrated during testing. Upon detecting an excursion of the liquid flow rate limit, the permittee shall restore operation of the absorber (2810) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~
- ~~3. If the liquid flow rate of the packed bed scrubber (2812) is less than 2.4 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. An excursion is a liquid flow rate less than 2.4 gallons per minute defined in this condition, or demonstrated during testing. Upon detecting an excursion of the liquid flow rate limit, the permittee shall restore operation of the packed bed scrubber (2812) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~
- ~~4. If the liquid flow rate of the absorber 24101 is less than 2.5 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. An excursion is a liquid flow rate less than 2.5 gallons per minute defined in this condition, or demonstrated during testing. Upon detecting an excursion of the liquid flow rate limit, the permittee shall restore operation of the absorber (24101) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~
- ~~5. If the liquid flow rate of packed bed scrubber 24102 is less than 1.0 gallon per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. An excursion is a liquid flow rate less than 1.0 gallons per minute defined in this condition, or demonstrated during testing. Upon detecting an excursion of the liquid flow rate limit, the permittee shall restore operation of the packed bed scrubber (24102) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU311-01 unless each absorber (2810/24101) and packed bed scrubber (2812/24102) is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(a)-(d).² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, ~~40 CFR 64.6(e)(1)(i)~~)
2. The permittee shall equip and maintain each absorber (2810/24101) and packed bed scrubber (2812/24102) with a flow indicating device. The permittee shall calibrate each flow indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, ~~40 CFR 64.6(e)(1)(i), 40 CFR 64.6(e)(1)(iii)~~)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of the absorbers (2810 and 24101) and packed bed scrubbers (2812 and 24102) through which EU311-01 exhausts with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15

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minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, ~~40 CFR 64.6(c)(1)~~)

3. The permittee shall calculate the VOC emission rate from EU311-01 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
4. The permittee shall calculate the acetyl chloride emission rate from EU311-01 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
5. ~~For absorbers 2810 and 24101, and packed bed scrubbers 2812 and 24102, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))~~
6. ~~For absorbers 2810 and 24101, and packed bed scrubbers 2812 and 24102, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.6(c)(3), 40 CFR 64.7(c))~~
7. ~~For absorbers 2810 and 24101, and packed bed scrubbers 2812 and 24102, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))~~
8. ~~The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))~~

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

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- ~~4. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))~~
- ~~5. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))~~
- ~~6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))~~

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV311-005	2 ²	119 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV311-009 (HCl scrubber vent 2812 for 311 HCl/MeCl recovery)	2 ²	118 ²	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

- ~~1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))~~
- ~~2. The permittee shall comply with all requirements of 40 CFR Part 64. (40 CFR Part 64)NA~~

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU321-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

40x Resin process including a reaction loop, capping reactor, 3 separators, 2 columns, and ancillary equipment. Emissions from neutralization activities can vent to FGTHROX or FGSITESCUBBERS. During FGTHROX downtime, Scrubbers 7170, 4776, and 11472 will continue to achieve Group 1 control for HCl. The process does not release emissions through SV321-001, SV321-019, SV321-021, or SV321-069 during normal operations. This emission unit is subject to the miscellaneous chemical manufacturing NESHAP in 40 CFR Part 63, Subparts A and FFFF.

The most recent PTI for this emission unit is PTI No. 174-12B.

Flexible Group ID: FGTHROX, FGSITESCUBBERS, FGSITEBLOWER, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser (24623)
- Venturi scrubber (11472, 7170, 4776)
- Scrubber 7159
- Activated carbon bed
- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOC	2.5 tpy ² *	12-month rolling time period as determined at the end of each calendar month	EU321-01	SC VI.2, VI.3, VI.4, VI.5, VI.6, VI.7	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate equipment in EU321-01 that exhausts to condenser 24623 unless the coolant return temperature of the condenser is 40°C or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. Except as allowed in SC III.5, the permittee shall not operate equipment in EU321-01 that exhausts to scrubber 11472 unless the scrubber liquid flow rate is 4.2 gallons per minute or more.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
3. The permittee shall not operate equipment in EU321-01 that exhausts to scrubber 7170 unless the scrubber liquid flow rate is 4.8 gallons per minute or more.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
4. The permittee shall not operate equipment in EU321-01 that exhausts to scrubber 4776 unless the scrubber liquid flow rate is 1.9 gallons per minute or more.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

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5. During periods of planned routine maintenance for scrubber 11472, the permittee may continue to store material in, and withdraw material from, storage tank DV4755. If an extension has been approved, planned routine maintenance shall not exceed 360 hours per year. Otherwise, planned routine maintenance shall not exceed 240 hours per year. This condition does not authorize adding material to storage tank DV4755 during periods of planned routine maintenance.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
6. The permittee shall not operate equipment in EU321-01 that exhausts to scrubber 7159 unless the scrubber liquid flow rate is 5.2 gallons per minute or more.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
7. The permittee shall not operate equipment in EU321-01 that exhausts to the activated carbon bed unless the first tote of activated carbon bed is replaced whenever the second tote's weight increases by 175 pounds and the second tote becomes the first tote.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
8. The permittee shall not operate equipment in EU321-01 that exhausts to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate equipment in EU321-01 that exhausts to condenser 24623 unless the condenser is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. Except as allowed in SC III.5 and 8, the permittee shall not operate equipment in EU321-01 that exhausts to scrubber 11472 unless the scrubber is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2 and III.5.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall not operate equipment in EU321-01 that exhausts to scrubbers 7170 and 4776 unless the scrubbers are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.3 and III.4.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall not operate equipment in EU321-01 that exhausts to scrubbers 7159 unless the scrubber is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.6.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
5. The permittee shall not operate equipment in EU321-01 that exhausts to FGTHROX or FGSITESCUBBERS unless FGTHROX or FGSITESCUBBERS are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.8.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
6. The permittee shall not operate equipment in EU321-01 that exhausts to the activated carbon bed unless the activated carbon bed is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.7.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
7. The permittee shall equip and maintain condenser 24623 with a device to continuously monitor and record the condenser coolant return temperature. The permittee shall calibrate the coolant return temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

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8. The permittee shall equip and maintain each of the scrubbers (11472, 7170, 4776, 7159) with a device to continuously monitor and record the scrubber liquid flow rate. The permittee shall calibrate each liquid flow rate indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
9. The permittee shall equip and maintain the activated carbon bed with scales that measure each carbon tote's weight whenever the carbon adsorption system is operating. The permittee shall calibrate the scales in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the coolant return temperature of condenser 24623 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of each scrubber with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall monitor and record, on a continuous basis, the weight of each activated carbon tote with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
5. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU321-01 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
6. The permittee shall keep a record of the number of hours per month and per year that planned routine maintenance occurs for scrubber 11472 while material is stored in storage tank DV4755. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1910, R 336.1910)

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- The permittee shall keep a record of any extension approval of planned routine maintenance for scrubber 11472 and of any requirements accompanying the approval. If the extension approval has an expiration date, the permittee shall keep this record on file at the facility for a period of five years after the approval expires. If the extension has no expiration, the permittee shall keep this record on file at the facility for five years after the HCI scrubber is removed from service. The permittee shall make all records available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1910, R 336.1910)

VII. REPORTING

- Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
- Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV321-002 ^A 24623 Condenser Vent	1.5 ²	82 ²	R 336.1225 40 CFR 52.21(c)&(d)
2. SV321-004 ^A 15100 EBB Column Vent	2 ²	68 ²	R 336.1225 40 CFR 52.21(c)&(d)
3. SV321-012 ^A 4774 Tank Vent	1 ²	4 ²	R 336.1225 40 CFR 52.21(c)&(d)
4. SV321-013 ^A 5126 IPA recovery Column	2 ²	52 ²	R 336.1225 40 CFR 52.21(c)&(d)
5. SV321-065 ^A 24419 Tank Vent	1 ²	25 ²	R 336.1225 40 CFR 52.21(c)&(d)
6. SV321-070 ^A 25803 A/B Tank Vent	1 ²	27 ²	R 336.1225 40 CFR 52.21(c)&(d)
7. SV321-044 ^A Scrap Solvent Tank 6900	1 ²	9 ²	R 336.1225 40 CFR 52.21(c)&(d)
8. SV321-046 ^A Scrap Solvent Tank 690	1 ²	9 ²	R 336.1225 40 CFR 52.21(c)&(d)
9. SV321-047 ^A Scrap Solvent Tank 6903	1 ²	10 ²	R 336.1225 40 CFR 52.21(c)&(d)
10. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
11. SV2512-001 (Site Scrubber #1)	6 ²	67 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
12. SV2512-002 (Site Scrubber #2)	6 ²	67 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

^A This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

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IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU321-02
EMISSION UNIT CONDITIONS**

DESCRIPTION

Capped resin manufacturing process including jacketed reactors, process condensers, a receiver, and auxiliary equipment. During FGTHROX downtime, Group 1 MON processes are shut down. Non-Group 1 processes may continue to operate and vent locally or to FGSITESCUBBERS. This EU is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.

The most recent PTI for this emission unit is PTI No. 176-20.

Flexible Group ID: FGTHROX, FGSITESCUBBERS, FGSITEBLOWER, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Scrubber 7158
- Scrubber 7170
- Scrubber 4776
- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	0.56 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU321-02	SC VI.2, SC VI.3, SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate equipment in EU321-02 that exhausts to scrubber 7158 unless the scrubber liquid flow rate is 3 gallons per minute or more.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall not operate equipment in EU321-02 that exhausts to scrubber 7170 unless the service water flow rate is 4.8 gallons per minute or more.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall not operate equipment in EU321-02 that exhausts to scrubber 4776 unless the scrubber liquid flow rate is 1.9 gallons per minute or more.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall not operate equipment in EU321-02 that exhausts to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.

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5. The permittee shall not exhaust any equipment in EU321-02 through scrubber 11476.² (R 336.1224, R 336.1225, R 336.1702(a))

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate equipment in EU321-02 that exhausts to scrubber 7158 unless the scrubber is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall not operate equipment in EU321-02 that exhausts to scrubber 7170 unless the scrubber is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall not operate equipment in EU321-02 that exhausts to scrubber 4776 unless the scrubber is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.3.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall not operate equipment in EU321-02 that exhausts to FGTHROX or FGSITESCUBBERS unless FGTHROX or FGSITESCUBBERS are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.4.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
5. The permittee shall equip and maintain each of the scrubbers (7158, 7170, 4776) with a device to continuously monitor and record the scrubber liquid flow rate. The permittee shall calibrate each liquid flow rate indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of each scrubber (7158, 7170, 4776) with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU321-02 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))

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2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV321-006 ^a (4719 Storage Tanks)	1 ²	32 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV321-022 ^a (5194/5196 Storage Tanks)	1 ²	8 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV321-044 ^a (Scrap Solvent Tank 6900)	1 ²	9 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
4. SV321-045 ^a (6924 Storage Tank)	1 ²	3 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
5. SV321-046 ^a (Scrap Solvent Tank 6901)	1 ²	9 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
6. SV321-047 ^a (Scrap Solvent Tank 6903)	1 ²	10 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
7. SV321-056 (Nederman Arms)	15 ²	60 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
8. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
9. SV2512-001 (Site Scrubber #1)	6 ²	67 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
10. SV2512-002 (Site Scrubber #2)	6 ²	67 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

^a This stack is not required to discharge unobstructed vertically upwards.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU321-07
EMISSION UNIT CONDITIONS**

DESCRIPTION

Mixing process in 5132 Kettle producing organo-compatible silicones products. Emissions are vented through FGTHROX, FGSITESCUBBERS, as well as other vents. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 179-20.

Flexible Group ID: FGMONMACT, FGTHROX, FGSITESCUBBERS, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condensers (5143)
- Carbon Totes
- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	2.01 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU321-07	SC VI.2, SC VI.3, SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate equipment in EU321-07 that exhausts directly to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
 - a. FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.
2. The permittee shall not operate equipment in EU321-07 that exhausts first to condenser 5143 and then to either the carbon totes, FGTHROX, or FGSITESCUBBERS unless one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
 - a. When exhausting to the carbon beds, the maximum coolant return temperature of condenser 5143 is 5°C, and the weight of the carbon totes is 80.3 kg or less.
 - b. When exhausting to FGTHROX, FGTHROX is operated in accordance with the requirements of FGTHROX.
 - c. When exhausting to Site Scrubber #1, the max coolant return temperature of condenser 5143 is 5°C, and Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - d. When exhausting to Site Scrubber #2, the max coolant return temperature of condenser 5143 is 5°C, and Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.

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IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate equipment in EU321-07 that exhausts directly to either FGTHROX or FGSITESCUBBERS unless the one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(a).
 - b. FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(b) or (c).
2. The permittee shall not operate equipment in EU321-07 that exhausts directly to condenser 5143 and then to either the carbon beds or FGSITESCUBBERS unless:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. Condenser 5143 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a), and
 - b. One of the following requirements is met:
 - i. The carbon beds are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a)
 - ii. FGTHROX or FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b), (c), or (d).
3. The permittee shall equip and maintain condenser 5143 with a device to continuously monitor and record the condenser coolant return temperature. The permittee shall calibrate the coolant return temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1205, R 336.1224, R 336.1225)**
2. The permittee shall monitor and record, on a continuous basis, the coolant return temperature of condenser 5143 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. When venting to the carbon beds, the permittee shall record the mass of the carbon totes, on a continuous basis, with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall calculate the VOC emission rate from EU321-07 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

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1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV2512-001 (Site Scrubber)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV2512-002 (Site Scrubber)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV321-044 ^a (Scrap Solvent Tank 6900)	1 ²	9 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV321-046 ^a (Scrap Solvent Tank 6901)	1 ²	9 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV321-047 ^a (Scrap Solvent Tank 6903)	1 ²	10 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV321-056 (Blower Vent for Nederman Arms)	15 ²	60 ²	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV321-069 ^a (321 Carbon Beds)	2 ²	46 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU321-11
EMISSION UNIT CONDITIONS**

DESCRIPTION

Capped resin manufacturing process including jacketed reactors, process condensers, a receiver, and auxiliary equipment. During FGTHROX downtime, Group 1 MON processes are shut down. Non-Group 1 processes may continue to operate and either vent locally or to FGSITESCUBBERS. This EU is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.

The most recent PTI for this emission unit is PTI No. 175-20.

Flexible Group ID: FGTHROX, FGSITESCUBBERS, FGSITEBLOWER, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Scrubber 7158
- Scrubber 7170
- Scrubber 4776
- Condenser 5141
- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOCs	0.44 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU321-11	SC VI.2, SC VI.3, SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate equipment in EU321-11 that exhausts to scrubber 7158 unless the scrubber liquid flow rate is 3 gallons per minute or more.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall not operate equipment in EU321-11 that exhausts to scrubber 7170 unless the service water flow rate is 4.8 gallons per minute or more.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall not operate equipment in EU321-11 that exhausts to scrubber 4776 unless the scrubber liquid flow rate is 1.9 gallons per minute or more.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall not operate equipment in EU321-11 that exhausts to condenser 5141 unless the coolant return temperature is 2°C or less.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

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5. The permittee shall not operate equipment in EU321-11 that exhausts to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate equipment in EU321-11 that exhausts to scrubber 7158 unless the scrubber is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall not operate equipment in EU321-11 that exhausts to scrubber 7170 unless the scrubber is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall not operate equipment in EU321-11 that exhausts to scrubber 4776 unless the scrubber is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.3.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall not operate equipment in EU321-11 that exhausts to condenser 5141 unless the condenser is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.4.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
5. The permittee shall not operate equipment in EU321-11 that exhausts to FGTHROX or FGSITESCUBBERS unless FGTHROX or FGSITESCUBBERS are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.5.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
6. The permittee shall equip and maintain each scrubber (7158, 7170, 4776) with a device to continuously monitor and record the scrubber liquid flow rate. The permittee shall calibrate each liquid flow rate indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
7. The permittee shall equip and maintain condenser 5141 with a device to continuously monitor and record the coolant return temperature. The permittee shall calibrate the coolant return temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

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2. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of each scrubber (7158, 7170, 4776) with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall monitor and record, on a continuous basis, the coolant return temperature of condenser 5141 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU321-11 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV321-006 ^a (4719 Storage Tanks)	1 ²	32 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV321-022 ^a (5194/5196 Storage Tanks)	1 ²	8 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV321-044 ^a (Scrap Solvent Tank 6900)	1 ²	9 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
4. SV321-045 ^a (6924 Storage Tank)	1 ²	3 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
5. SV321-046 ^a (Scrap Solvent Tank 6901)	1 ²	9 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
6. SV321-047 ^a (Scrap Solvent Tank 6903)	1 ²	10 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
7. SV321-056 (Nederman Arms)	15 ²	60 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
8. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

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Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
9. SV2512-001 (Site Scrubber #1)	6 ²	67 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
10. SV2512-002 (Site Scrubber #2)	6 ²	67 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

^a This stack is not required to discharge unobstructed vertically upwards.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU321-12
EMISSION UNIT CONDITIONS**

DESCRIPTION

Cosmetic wax manufacturing process consisting of a reactor, process condenser, receiver, and auxiliary equipment. The process vents through one of two scrubbers operating in parallel. Exhaust then goes through two polishing scrubbers before going to FGTHROX, FGSITESCRUBBERS, or 321 Carbon Beds.

The most recent PTI for this emission unit is PTI No. 38-22.

Flexible Group ID: FGTHROX, FGSITESCRUBBERS, FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Scrubber 24756
- Scrubber 7158
- Polishing Scrubber 7170
- Polishing Scrubber 4776
- Glycol Condenser 5141
- 321 Carbon Beds
- FGTHROX
- FGSITESCRUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOCs	0.31 tpy* ²	12-month rolling time period as determined at the end of each calendar month	EU321-12	SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1702(a)
2. VOCs	16.0 pph* ²	Hourly	EU321-12	SC V.1, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate equipment in EU321-12 that exhausts to scrubber 24756 unless the scrubber water flow rate is 1.0 gallon per minute (gpm) or more.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall not operate equipment in EU321-12 that exhausts to glycol condenser 5141 and scrubber 7158 unless the following requirements are met:² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
 - a. The coolant exit temperature of glycol condenser 5141 is 2°C or less.
 - b. The scrubber water flow rate of scrubber 7158 is 2.7 gpm or more.

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3. The permittee shall not operate EU321-12 unless the following requirements are met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. The scrubber water flow rate for polishing scrubber 7170 is 4.8 gpm or more,
 - b. The scrubber water flow rate for polishing scrubber 4776 is 1.6 gpm or more.
4. The permittee shall not operate EU321-12 unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. When exhausting to FGTHROX, FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. When exhausting to Site Scrubber #1, Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - c. When exhausting to Site Scrubber #2, Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.
 - d. When exhausting to the 321 carbon beds, the adsorbed weight of the carbon totes is 80.3 kg or less.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate equipment in EU321-12 that exhausts to scrubber 24756 unless it is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall not operate equipment in EU321-12 that exhausts to glycol condenser 5141 and scrubber 7158 unless they are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a) for glycol condenser 5141 and SC III.2(b) for scrubber 7158.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall not operate EU321-12 unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. When exhausting to FGTHROX, FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.4(a).
 - b. When exhausting to Site Scrubber #1, Site Scrubber #1 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.4(b).
 - c. When exhausting to Site Scrubber #2, Site Scrubber #2 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.4(c).
 - d. When exhausting to the 321 carbon beds, the 321 carbon beds are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.4(d).
4. The permittee shall equip and maintain glycol condenser 5141 with a device to continuously monitor and record the coolant exit temperature. The permittee shall calibrate the coolant exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
5. The permittee shall equip and maintain each scrubber (24756, 7158, 7170, and 4776) with a separate device to continuously monitor and record the scrubber water flow rate. The permittee shall calibrate each scrubber water flow rate indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
6. The permittee shall equip and maintain the carbon beds with a device to continuously monitor the weight of the carbon totes. The permittee shall calibrate the carbon tote weight indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify VOC emission rates from EU321-12 by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60, Appendix A. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1702, R 336.2001, R 336.2003, R 336.2004)
2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

See Appendix 5

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the coolant exit temperature of glycol condenser 5141 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall monitor and record, on a continuous basis, the scrubber water flow rate for each scrubber (24756, 7158, 7170, and 4776) with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. When venting to the carbon beds, the permittee shall record the adsorbed weight of the carbon drum, on a continuous basis, with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
5. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU321-12 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

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VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. (R 336.1213(3)(c), R 336.2001(5))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV321-044 ^a (Scrap Solvent Tank 6900)	1 ²	9 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV321-056 (Blower Vent for Nederman Arms)	15 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV321-069 ^a (321 Carbon Beds)	2 ²	46 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV2512-001 (Site Scrubber No. 1)	6 ²	65 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV2512-002 (Site Scrubber No. 2)	6 ²	65 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV2517-001 ^b (TOX Vent)	30 ²	102 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This stack is not required to discharge unobstructed vertically upwards to the ambient air.

^b This EU may exhaust from SV2517-001 after that stack has been installed.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU322-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

LP-1 process including reactors, distillation equipment, storage tanks, condensers, and related equipment. Emissions are controlled by Scrubber 22452. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF as well as the equipment leak provisions in 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 134-20.

Flexible Group ID: [FGHAP2012A2A](#), FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Scrubber 22452

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	8.4 pph ^{*.2}	Hourly	EU322-01	SC V.1, VI.2	R 336.1702(a)
2. VOC	32.5 tpy ^{*.2}	12-month rolling time period as determined at the end of each calendar month	EU322-01	SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU322-01 unless the liquid flow rate of scrubber 22452 is 10.0 gallons per minute or more.² (**R 336.1225, R 336.1702(a), R 336.1910**)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU322-01 unless scrubber 22452 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² (**R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall equip and maintain scrubber 22452 with a liquid flow indicating device. The permittee shall calibrate the liquid flow indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (**R 336.1225, R 336.1702(a), R 336.1910**)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (**R 336.1213(3)(b)(ii)**)

1. Upon request of the AQD District Supervisor, the permittee shall verify the VOC emission rates from EU322-01 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

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Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1702, R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of scrubber 22452 with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU322-01 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. (R 336.1213(3)(c), R 336.2001(5))

See Appendix 8

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VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV322-004 (Scrubber 22452) ^A	3 ²	68 ²	R 336.1225, 40 CFR 52.21(c)&(d)

^A This stack is not required to discharge unobstructed vertically upwards.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU322-02
EMISSION UNIT CONDITIONS**

DESCRIPTION

HP-7 process producing silane products. Emissions are controlled by the FGTHROX (as well as scrubber 22452 during periods where FGTHROX is out of operation or when total or partial diversion is necessary for any safety-related or operational scenarios). This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 132-20A.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Scrubber (22452)
- FGTHROX

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	10.9 pph ^{*.2}	Hourly	EU322-02	SC V.1 SC VI.2	R 336.1702(a)
2. VOC	7.66 tpy ^{*.2}	12-month rolling time period as determined at the end of each calendar month	EU322-02	SC VI.2 SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not exhaust emissions from EU322-02 to scrubber 22452 unless the liquid flow rate is at a minimum of 10.0 gallons per minute.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall not operate EU322-02 unless FGTHROX is operated in accordance with the requirements of FGTHROX, except as described in SC IV.1.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not, during periods when FGTHROX is out of operation or when the vent to FGTHROX is diverted for any safety-related or operational reason, operate EU322-02 unless scrubber 22452 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall equip and maintain scrubber 22452 with a liquid flow indicating device. The permittee shall calibrate the liquid flow indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

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3. The permittee shall not operate EU322-02, except as described in SC IV.1, unless FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify VOC emission rates from EU322-02 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a))
2. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of scrubber 22452 with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate the VOC emission rate from EU322-02 monthly, including the emission rate from the operational scenario as described in SC IV.1, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))

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- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV322-004 ^a (Scrubber 22452 Vent)	3 ²	68 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU322-03
EMISSION UNIT CONDITIONS**

DESCRIPTION

Silizane manufacturing process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF.

The most recent PTI for this emission unit is PTI No. 296-07.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

Condensers (6391, 6392, 7604, 7605, 7623)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	11.2 pph ²	Hourly	EU322-03	SC VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1201
2. VOC	0.8 tpy ²	12-month rolling time period*	EU322-03	SC VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1201
3. Hexane	3.6 pph ²	Hourly	Equipment venting to SV322-014	SC VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1201
4. Hexane	0.1 tpy ²	12-month rolling time period*	Equipment venting to SV322-014	SC VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1201
5. Ammonia	70.0 pph ¹	Hourly	Equipment venting to SV322-011	SC VI.1, VI.2, & VI.3	R 336.1224, R 336.1225, R 336.1901
6. Ammonia	179.3 tpy ¹	12-month rolling time period*	Equipment venting to SV322-011	SC VI.1, VI.2, & VI.3	R 336.1224, R 336.1225, R 336.1901

* as determined at the end of each calendar month

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The coolant outlet temperature for condenser Nos. 6391 and 6392 shall not exceed 30°F.² (**R 336.1702(a), R 336.1910, R 336.1201**)
2. The process gas outlet temperature from condenser No. 7623 shall not exceed 30°F.² (**R 336.1702(a), R 336.1910, R 336.1201**)
3. The coolant exit temperature for the condensers (7604, 7605) shall not exceed 40°F.² (**R 336.1910, R 336.1201**)

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IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate the process unless the condensers (6391, 6392 and 7623) are installed and operating properly.² **(R 336.1702(a), R 336.1201)**
2. The permittee shall not operate the process unless the condensers (7604, 7605) are installed and operating properly.² **(R 336.1702(a), R 336.1201)**
3. The permittee shall equip and maintain the condensers (6391, 6392) associated with vent stack numbers SV322-011 and SV322-014 with a temperature instrument to monitor the coolant's outlet temperature.² **(R 336.1702(a), R 336.1910, R 336.1201)**
4. The permittee shall equip and maintain the condenser (7623) associated with vent stack number SV322-013 with a temperature instrument to monitor the process gas outlet temperature.² **(R 336.1702(a), R 336.1910, R 336.1201)**
5. The permittee shall equip and maintain the condensers (7604, 7605) with a coolant exit temperature instrument.² **(R 336.1910, R 336.1201)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall monitor and record, on a continuous basis, the outlet temperature for condensers 6391 and 6392 and, the process gas outlet temperature from condenser 7623 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.² **(R 336.1910)**
2. The permittee shall monitor and record, on a continuous basis, the exit temperature for condensers 7604 and 7605 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is an instantaneous data point recorded at least once every 15 minutes.² **(R 336.1910)**
3. The permittee shall keep records as required to demonstrate compliance with the emission limits specified in this table. Emission totals shall be calculated using the method described in Appendix 7, Section 7.7. A monthly summary of these emissions shall be made available to the AQD upon request. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission totals specified in this table.² **(R 336.1224, R 336.1702(a), R 336.1201)**

See Appendix 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

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See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted: SV322-013 has an offset with a drain cut.

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV322-011	15 ¹	80 ¹	R 336.1225
2. SV322-012	1.5 ¹	42 ¹	R 336.1225
3. SV322-013	2 ¹	42 ¹	R 336.1225
4. SV322-014	1.5 ¹	42 ¹	R 336.1225
5. SV322-015	1 ¹	26 ¹	R 336.1225
6. SV322-017	25 ¹	43 ¹	R 336.1225
7. SV322-025	1 ¹	42 ¹	R 336.1225

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU322-04
EMISSION UNIT CONDITIONS**

DESCRIPTION

HP-6 process producing silane products. Emissions are controlled by FGTHROX (as well as scrubber 22452 during periods where FGTHROX is out of operation or when total or partial diversion is necessary for any safety-related or operational scenarios). This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 133-20A.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#), FGTHROX

POLLUTION CONTROL EQUIPMENT

- Scrubber (22452)
- FGTHROX

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	8.5 pph ^{*2}	Hourly	EU322-04	SC V.1 SC VI.2	R 336.1702(a)
2. VOC	7.63 tpy ^{*2}	12-month rolling time period as determined at the end of each calendar month	EU322-04	SC VI.2 SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not exhaust emissions from EU322-04 to scrubber 22452 unless the liquid flow rate is at a minimum of 10.0 gallons per minute.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall not operate EU322-04 unless FGTHROX is operated in accordance with the requirements of FGTHROX, except as described in SC IV.1.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not, during periods when FGTHROX is out of operation or when the vent to FGTHROX is diverted for any safety-related or operational reason, operate EU322-04 unless scrubber 22452 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall equip and maintain scrubber 22452 with a liquid flow indicating device. The permittee shall calibrate the liquid flow indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

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3. The permittee shall not operate EU322-04, except as described in SC IV.1, unless FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify VOC rates from EU322-04 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a))
2. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of scrubber 22452 with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate the VOC emission rate from EU322-04 monthly, including the emission rate from the operational scenario as described in SC IV.1, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))

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- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV322-004 ^a (Scrubber 22452 Vent)	3 ²	68 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EU322-06
EMISSION UNIT CONDITIONS

DESCRIPTION

Siloxane catalyst process. ~~EU322-06 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.~~

The most recent PTI for this emission unit is PTI No. 308-94B.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Condenser 4507. ~~This device is a CAM subject unit for VOC.~~

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	4.0 tpy ^{*.2}	12-month rolling time period as determined at the end of each calendar month	EU322-06	SC VI.2, SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU322-06 unless the coolant exit temperature of condenser (4507) is 50°F or less.² **(R 336.1225, R 336.1702(a), R 336.1910)**

~~2. If the coolant exit temperature of condenser 4507 exceeds 50°F, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. An excursion of the coolant exit temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the coolant exit temperature limit, the permittee shall restore operation of condenser 4507 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d))**~~

~~3. The permittee shall calibrate the temperature indicator for condenser 4507 in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**~~

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU322-06 unless the condenser (4507) is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² **(R 336.1225, R 336.1702(a), R 336.1910)**

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2. The permittee shall equip and maintain condenser 4507 with a coolant exit temperature indicator. The permittee shall calibrate the coolant exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a per shift basis, the coolant exit temperature for condenser 4507 with instrumentation acceptable to the AQD District Supervisor. For the purpose of this condition, "on a per shift basis" is defined as an instantaneous data point recorded at least once every eight hours. The permittee may record block average values for eight hour or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU322-06 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1225, R 336.1702(a))
4. The permittee shall monitor and record, on a per shift basis, the coolant exit temperature for condenser 4507 with instrumentation acceptable to the AQD. (40 CFR 64.6(e)(1), R 336.1213(3))
5. ~~For condenser 4507, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))~~
6. ~~For condenser 4507, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.6(e)(3), 40 CFR 64.7(e))~~
7. ~~For condenser 4507, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))~~

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~~8. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))~~

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- ~~4. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))~~
- ~~5. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))~~
- ~~6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))~~

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted: SV322-013 has an offset with a drain cut. SV322-024 is 45 degrees down.

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1.SV322-024 (Condenser 4507) ^A	2 ²	42 ²	R 336.1225, 40 CFR 52.21(c)&(d)

^A This stack is required to discharge vertically upward but is allowed to be equipped with a flapper-type rain protection device.

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IX. OTHER REQUIREMENT(S)

- ~~1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))~~
2. The permittee shall comply with all requirements of 40 CFR Part 64. ~~(40 CFR Part 64)~~NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU322-11
EMISSION UNIT CONDITIONS**

DESCRIPTION

Methylvinylchlorosilane crude distillation process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart UU.

The most recent PTI for this emission unit is PTI No. 146-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser 6384
- Scrubber 22452

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	37.3 pph ^{2,*}	Hourly	EU322-11	SC V.1, VI.2, VI.3, VI.5	R 336.1702(a)
2. VOC	13.4 tpy ^{2,*}	Based on a 12-month rolling time period as determined at the end of each calendar month.	EU322-11	SC V.1, VI.2, VI.3, VI.4, VI.5	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU322-11 unless the coolant exit temperature of condenser 6384 is -15°C or less.² (**R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall not operate EU322-11 unless the liquid flow rate through scrubber 22452 is 10 gallons per minute or more.² (**R 336.1225, R 336.1702(a), R 336.1910**)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU322-11 unless condenser 6384 and scrubber 22452 are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes complying with the requirements of SC III.1 and III.2.² (**R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall equip and maintain condenser 6384 with a coolant exit temperature indicator. The permittee shall calibrate the coolant exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (**R 336.1225, R 336.1702(a), R 336.1910**)

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3. The permittee shall equip and maintain scrubber 22452 with a liquid flow indicator. The permittee shall calibrate the liquid flow rate indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify the VOC emission rates from EU322-11 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1702, R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1225, R 336.1702(a))
2. The permittee shall monitor and record, on a continuous basis, the coolant exit temperature of condenser 6384 with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of scrubber 22452 with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU322-11 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1225, R 336.1702(a))

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5. The permittee shall keep records as required to demonstrate compliance with the emission limits specified in this table. A monthly summary of these emissions shall be made available to the AQD upon request. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from EU322-11 for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission totals specified in this table. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1225, R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. (R 336.1213(3)(c), R 336.2001(5))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV322-004 ^A - Vent for Scrubber 22452	3 ²	68 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

^A This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU324-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

4820 batch kettle process producing silane and siloxane products. Emissions are controlled by service water condenser 4818 and chilled condensers 4804 and 4807. The chilled condensers alternate in operation. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. ~~EU324-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.~~

The most recent PTI for this emission unit is PTI No. 15-13A.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Service Water Condenser (4818)
- Chilled Condensers (4804 and 4807)

Service water condenser 4818 and chilled condensers 4804 and 4807. The chilled condensers alternate in operation. ~~These devices are CAM subject units for VOC.~~

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	9.56 tpy ^{*2}	12-month rolling time period as determined at the end of each calendar month	EU324-01	SC VI.2 SC VI.3	R 336.1225, R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU324-01 unless the exit coolant temperature of each condenser (4804 and 4807) is -8°C or less.² **(R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall not operate EU324-01 unless the exit coolant temperature of the service water condenser 4818 is 40°C or less.² **(R 336.1225, R 336.1702(a), R 336.1910)**
- ~~3. The permittee shall not vent EU324-01 to the atmosphere through chilled condenser 4804 unless the coolant exit temperature of the condenser -8°C or less. An excursion of the coolant exit temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the coolant exit temperature limit, the permittee shall restore operation of chilled condenser 4804 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d))**~~

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- ~~4. The permittee shall not vent EU324-01 to the atmosphere through chilled condenser 4807 unless the coolant exit temperature of the condenser -8°C or less. An excursion of the coolant exit temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the coolant exit temperature limit, the permittee shall restore operation of chilled condenser 4807 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d))**~~
- ~~5. The permittee shall not vent EU324-01 to the atmosphere through service water condenser 4818 unless the coolant exit temperature of the condenser 40°C or less. An excursion of the coolant exit temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the coolant exit temperature limit, the permittee shall restore operation of service water condenser 4818 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d))**~~
- ~~6. If any of the condenser coolant exit temperatures specified in SC III.1 to SC III.3 is exceeded, when venting to the atmosphere, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. Exceeding any of these parameters is an excursion. **(40 CFR 64.6(c)(2))**~~
- ~~7. The permittee shall calibrate the temperature indicators for condensers 4804, 4807, and 4818 in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**~~

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU324-01 unless the chilled condensers (4804 and 4807), which alternate in operation, and service water condenser 4818 are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 and III.2 that apply to the condensers.² **(R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall equip and maintain service water condenser 4818 and chilled condensers 4804 and 4807 with condenser coolant exit temperature indicators. The permittee shall calibrate the temperature indicators for each condenser (4804, 4807, and 4818) in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(1)(i) and (ii))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall monitor and record, in a satisfactory manner, the exit temperatures for chilled condensers 4804 and 4807 and service water condenser 4818 on a continuous basis. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(1))**
3. The permittee shall calculate the VOC emission rate from EU324-01 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702)**

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- ~~4. For service water condenser 4818 and chilled condensers 4804 and 4807, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))~~
- ~~5. For service water condenser 4818 and chilled condensers 4804 and 4807, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.6(c)(3), 40 CFR 64.7(c))~~
- ~~6. For service water condenser 4818 and chilled condensers 4804 and 4807, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))~~
- ~~7. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))~~

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- ~~4. Each semiannual report of monitoring and deviations shall include summary information on the number, duration, and cause of excursions and/or exceedances and the corrective actions taken. If there were no excursions and/or exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))~~
- ~~5. Each semiannual report of monitoring and deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))~~
- ~~6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))~~

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV324-005 ^a (DV5638 203 Tank)	1 ²	0.93 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV324-006 ^a (DV5632 204 Tank)	1 ²	0.6 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV324-033 (Bldg 328 Vent Drum Off)	8 ²	3 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV324-039 ^a (DV5636 Waste Tank)	1 ²	0.6 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV324-042 ^a (DV4820 Reactor Vent)	2 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV324-048 ^a (DV4804 & DV4807 Condensers)	4 ²	50 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

- ~~1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))~~
- ~~2. The permittee shall comply with all requirements of 40 CFR Part 64. (40 CFR Part 64)NA~~

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU324-08
EMISSION UNIT CONDITIONS**

DESCRIPTION

5617 batch kettle process producing silane and siloxane products, controlled by condenser 5618 and, if pulling vacuum, chilled condensers 4804 and 4807, which alternate in operation. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU. ~~EU324-08 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.~~

The most recent PTI for this emission unit is PTI No. 14-13A.

Flexible Group ID: FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Service Water Condenser (5618)
- Chilled Condenser (4804)
- Chilled Condenser (4807)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOCs	0.20 tpy ^{*2}	12-month rolling time period as determined at the end of each calendar month	EU324-08	SC VI.2, SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU324-08 unless the service water exit temperature of condenser 5618 is 30°C or less.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall not conduct vacuum stripping in EU324-08 unless:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. When exhausting to chilled condenser 4804, the coolant exit temperature of chilled condenser 4804 is minus 13°C (-13°C) or less.
 - b. When exhausting to chilled condenser 4807, the coolant exit temperature of chilled condenser 4807 is minus 13°C (-13°C) or less.
- ~~3. An excursion of the coolant exit temperature is the exceedance of the operational parameter limit or acceptable range defined in SC III.2, or demonstrated during testing. Upon detecting an excursion of the coolant exit temperature limit, the permittee shall restore operation of chilled condenser 4804 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d))**~~

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~~4. An excursion of the coolant exit temperature is the exceedance of the operational parameter limit or acceptable range defined in SC III.2, or demonstrated during testing. Upon detecting an excursion of the coolant exit temperature limit, the permittee shall restore operation of chilled condenser 4807 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~

~~5. An excursion of the coolant exit temperature is the exceedance of the operational parameter limit or acceptable range defined in SC III.1, or demonstrated during testing. Upon detecting an excursion of the coolant exit temperature limit, the permittee shall restore operation of service water condenser 5618 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU324-08 unless service water condenser 5618 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall not conduct vacuum stripping in EU324-08 unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. Chilled condenser 4804 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a).
 - b. Chilled condenser 4807 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b).
3. The permittee shall equip and maintain service water condenser 5618 with a device to continuously monitor and record the condenser service water exit temperature. The permittee shall calibrate the service water exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. When conducting vacuum stripping, the permittee shall equip and maintain chilled condensers 4804 and 4807 with a device to continuously monitor and record the condenser coolant exit temperature of the condenser to which the exhaust is being directed. The permittee shall calibrate the coolant exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

~~5. The permittee shall equip and maintain service water condenser 5618 and chilled condensers 4804 and 4807 with condenser coolant exit temperature indicators. (40 CFR 64.6(c)(1)(i),(ii))~~

~~6. The permittee shall calibrate the temperature indicator for condensers 5618, 4804, and 4807 in a satisfactory manner. (40 CFR 64.6(c)(1)(iii))~~

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

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2. The permittee shall monitor and record, on a continuous basis, the service water exit temperature of condenser 5618 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. When conducting vacuum stripping, the permittee shall monitor and record, on a continuous basis, the coolant exit temperature of condensers 4804 and 4807 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU324-08 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
- ~~5. The permittee shall monitor and record, in a satisfactory manner, the coolant exit temperatures for chilled condensers 4804 and 4807 and service water condenser 5618 on a continuous basis. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. **(40 CFR 64.6(c)(1))**~~
- ~~6. For service water condenser 5618 and chilled condensers 4804 and 4807, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). **(40 CFR 64.7(d))**~~
- ~~7. For service water condenser 5618 and chilled condensers 4804 and 4807, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**~~
- ~~8. For service water condenser 5618 and chilled condensers 4804 and 4807, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**~~
- ~~9. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**~~

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
- ~~4. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))~~
- ~~5. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))~~
- ~~6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))~~

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV324-005 ^a (5638 203 Fluid Tank)	1 ²	0.93 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV324-006 ^a (5632 204 Fluid Tank)	1 ²	0.6 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV324-033 (328 Building Vent System on Drum-off Filter Housing)	8 ²	3 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
4. SV324-039 ^a (5636 Waste Tank)	1 ²	0.6 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
5. SV324-046 ^a (Condenser 5618)	2 ²	52 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
6. SV324-048 ^a (Condensers 4804/4807)	4 ²	50 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

^a This stack is not required to discharge unobstructed vertically upwards

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IX. OTHER REQUIREMENT(S)

- ~~1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))~~
- ~~2. The permittee shall comply with all requirements of 40 CFR Part 64. (40 CFR Part 64)NA~~

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU324-11
EMISSION UNIT CONDITIONS**

DESCRIPTION

Batch distillation kettle 4895 including 4896 distillation column and 24924/24925/4898 overhead receivers. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.

The most recent PTI for this emission unit is PTI No. 152-20.

Flexible Group ID: FGMONMACT

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	11.34 lb/hr*.2	Hourly	EU324-11	SC V.1	R 336.1702(a)
2. VOC	3.37 tpy*.2	12-month rolling time period as determined at the end of each calendar month	EU324-11	SC V.1, VI.2	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (**R 336.1213(3)(b)(ii)**)

1. Upon request from the AQD District Supervisor, the permittee may be required to verify the VOC emission rates from EU324-11 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD

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must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)

- The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

- The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a))
- The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU324-11 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

- Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
- Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
- The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. (R 336.1213(3)(c), R 336.2001(5))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV324-022 ^A (Condenser HX1-4895)	1.5 ²	54 ²	R 336.1225 40 CFR 52.21 (c) & (d)
2. SV324-027 ^A (324 South side exhaust fan)	20 ²	3 ²	R 336.1225 40 CFR 52.21 (c) & (d)
3. SV324-035 ^A (4806 vacuum pump)	3 ²	53 ²	R 336.1225 40 CFR 52.21 (c) & (d)
4. SV324-039 ^A (5636 waste tank)	1 ²	0.6 ²	R 336.1225 40 CFR 52.21 (c) & (d)

^A This stack is not required to be discharged unobstructed vertically upwards to the ambient air

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IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU324-18
EMISSION UNIT CONDITIONS**

DESCRIPTION

25156 batch kettle in 324 building, consisting of a reactor, heat exchanger, and a receiver. Emissions are controlled by a service water cooled condenser and two parallel chilled condensers. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.

The most recent PTI for this emission unit is PTI No. 19-14C.

Flexible Group ID: FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Service water cooled condenser (25159) vents to SV324-054 or operates in series with the chilled condenser pair (4804/4807).
- Chilled condenser pair (4804/4807) that vents to SV324-048. The condensers operate in parallel, but only one at a time, sharing a common coolant line and temperature monitor.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	65.06 pph ² *	Hourly	EU324-18	SC V.1, VI.2, VI.3	R 336.1702(a)
2. VOC	23.03 tpy ² *	Based on a 12-month rolling time period as determined at the end of each calendar month.	EU324-18	SC V.1, VI.2, VI.3, VI.4	R 336.1205(3) R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. Except when producing 204 fluid, the permittee shall not operate EU324-18 unless the chilled condenser pair (4804/4807) outlet coolant temperature is -8°C or less.² (**R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. During stripping operations, the permittee shall not operate EU324-18 unless the service water condenser (25159) outlet coolant temperature is 45°C or less.² (**R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

IV. DESIGN/EQUIPMENT PARAMETERS

1. Except when producing 204 fluid, the permittee shall not operate EU324-18 unless the chilled condenser pair (4804/4807) are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 that apply to the condensers.² (**R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

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2. During stripping operations, the permittee shall not operate EU324-18 unless the service water condenser (25159) is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2 that apply to the condenser.² (R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall equip and maintain the chilled condenser pair (4804/4807) with an outlet coolant temperature indicator. The permittee shall calibrate the outlet coolant temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall equip and maintain the service water condenser (25159) with an outlet coolant temperature indicator. The permittee shall calibrate the outlet coolant temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request from the AQD District Supervisor, the permittee shall verify the VOC emission rates from EU324-18, by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1205(3), R 336.1224, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a))
2. While EU324-18 is operating, except when producing 204 fluid, the permittee shall monitor and record, on a continuous basis, the chilled condenser pair (4804/4807) outlet coolant temperature with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. While EU324-18 is operating during stripping operations, the permittee shall monitor and record, on a continuous basis, the service water condenser (25159) outlet coolant temperature with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point

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recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

- The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU324-18 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1205(3), R 336.1702(a))

VII. REPORTING

- Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
- Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV324-005 ^A (DV5638 – 203 Fluid storage tank)	1 ²	0.9 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV324-033 (Vent system on drum-off filter housing)	8 ²	3 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV324-039 ^A (DV5636 waste tank)	1 ²	0.6 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV324-048 ^A (4804/4807 condensers)	4 ²	50 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV324-054 ^A (25159 condenser)	2 ²	58 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV324-001 ^A (T-16511A tank vent)	1 ²	24	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV324-013 ^A (DV5624 – 230 Fluid storage tank)	1 ²	3 ²	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV324-056 ^A (DV25156 – 4-2776 process tank)	1 ²	57 ²	R 336.1225, 40 CFR 52.21(c) & (d)
9. SV324-008 ^A (DV5629 – 2-2728 storage tank)	1 ²	11 ²	R 336.1225, 40 CFR 52.21(c) & (d)
10. SV324-006 ^A (DV5632 – 204 Fluid storage tank)	1 ²	0.6 ²	R 336.1225, 40 CFR 52.21(c) & (d)
11. SV324-057 ^A (DV16511W – 2-5471 storage tank)	1 ²	25 ²	R 336.1225, 40 CFR 52.21(c) & (d)
12. SV324-007 ^A (324 feed tank – C-12 Olefin 23134)	1 ²	8 ²	R 336.1225, 40 CFR 52.21(c) & (d)

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Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
13. SV324-024 ^A (324 Building East Side Exhaust Fan)	18 ²	4 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^A This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU325-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

TCS (trichlorosilane) vent recovery system. EU325-01 receives vents from different processes to recover TCS. EU325-01 is located in 317 building. This emission unit typically vents to the carbon bed and venturi scrubber system described in FG325-01; however, the emission unit may vent to the 337 wet scrubber in the event the venturi scrubber system is down.

The most recent PTI for this emission unit is PTI No. 44-06B.

Flexible Group ID: FG325-01, FG337SCRUBBER, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

- Carbon bed bank No. 1 (regenerative) comprised of carbon beds 20587, 20588, and 20589
- Carbon bed bank No. 2 (regenerative) comprised of carbon beds 22200, 22205, and 22210
- Venturi scrubber bank No. 1 comprised of venturi scrubbers 9956, 9957, and 9958 (operate in series)
- Venturi scrubber bank No. 2 comprised of venturi scrubbers 22245-1, 22245-2, and 22245-3 (operate in series)
- 337 wet scrubber (9950, 9960 – scrubbers typically alternate in operation but can operate in parallel and vent to SV337-001/002, respectively). NOTE – 337 scrubber acts as backup to venturi scrubber bank Nos. 1 and 2
- FGTHROX
- FGSITESCRUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Hydrogen Chloride	1.9 pph ¹	Hourly	EU325-01	SC III.2	R 336.1224, R 336.1225
2. Hydrogen Chloride	14.6 pph ²	Hourly	EU325-01	SC IV.1, VI.1	R 336.1225 R 336.1910

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate the process unless either carbon bed bank No. 1 (carbon beds 20587, 20588, and 20589) or carbon bed bank No. 2 (carbon beds 22200, 22205, and 22210) is installed, maintained, and operated in a satisfactory manner.² **(R 336.1910)**
2. The permittee shall not operate the process unless either venturi scrubber bank No. 1 (venturi scrubbers 9956, 9957, and 9958), venturi scrubber bank No. 2 (venturi scrubbers 22245-1, 22245-2, and 22245-3), or the 337 scrubber is installed, maintained, and operated in a satisfactory manner.² **(R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee may operate equipment in EU325-01 under maintenance and/or upset conditions for a maximum of 200 hours per rolling 12-month time period.² **(R 336.1225, R 336.1910)**

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall keep, in a satisfactory manner, records of the number and duration of maintenance and/or upset operation periods per calendar month and 12-month rolling time period as determined at the end of each calendar month. The permittee shall also record the reason the maintenance and/or upset operation period occurred. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1225, R 336.1910)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV337-003	10 ²	30 ²	R 336.1224, R 336.1225, 40 CFR 52.21(c) & (d)
2. SV337-004	10 ²	30 ²	R 336.1224, R 336.1225, 40 CFR 52.21(c) & (d)
3. SV337-001	10 ²	30 ²	R 336.1224, R 336.1225, 40 CFR 52.21(c) & (d)
4. SV337-002	10 ²	30 ²	R 336.1224, R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU325-03
EMISSION UNIT CONDITIONS**

DESCRIPTION

Solids recovery system. EU325-03 receives vents from different processes to recover silicon. EU325-03 is located in 348 building.

The most recent PTI for this emission unit is PTI No. 44-06.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

- Venturi scrubbers in series (16810, 16811) or FG337SCRUBBER
- Scrubber liquid tank

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Particulate Matter	0.10 lbs/1,000 lb exhaust gas ²	Instantaneous	EU325-03	SC VI.1	R 336.1331(1)(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. If the liquid flow rate of venturi scrubber 16810 is less than 40 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence.² **(R 336.1910)**
2. The permittee shall not operate the process serviced by the spent silicon material handling operation, including recovery of direct process residue solid/fines tank and spent bed tanks, hereinafter "system", unless the 348 building scrubbers (16810, 16811) are installed and operating properly.² **(R 336.1910, R 336.1201)**
3. The permittee shall equip and maintain scrubber 16810 with a liquid flow indicator.² **(R 336.1910, R 336.1201)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

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VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall monitor and record, on a continuous basis, the following operational parameters with instrumentation acceptable to the AQD.
 - The liquid flow rate of venturi scrubber no. 16810.
 - The liquid level of the scrubber tank.

For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.² (R 336.1910)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV348-001	10 ¹	35 ¹	R 336.1225

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU340-01
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Calcium chloride process including condensers, scrubbers, columns, vaporizers, storage tanks, compressor, and related equipment. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU340-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 34-04B.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#), FGLEAKDETECTION

POLLUTION CONTROL EQUIPMENT

- Absorber (8745A). This device is a CAM subject unit for VOC and Methyl Chloride
- Scrubbers (8745B). This device is a CAM subject unit for VOC and Methyl Chloride

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Benzene	0.05 pph ¹	Hourly	EU340-01	SC VI.1 & VI.2	R 336.1225
2. Methyl Chloride	3.5 pph, except when the gas stream is diverted to No. 8745 absorber and scrubber. ¹	Hourly	EU340-01	SC VI.1 & VI.2	R 336.1225
3. Methyl Chloride	70.0 pounds per the first hour of one of the infrequent episodes when the gas stream is diverted to No. 8745 absorber and scrubber, not to exceed 101 pounds per episode. ¹	Hourly	EU340-01	SC VI.1 & VI.2	R 336.1225
4. Methyl Chloride	2.6 tpy ¹	12-month rolling period*	EU340-01	SC VI.1 & VI.2	R 336.1225
5. VOC	7.0 pounds per hour, except when the gas stream is diverted to No. 8745 absorber and scrubber. ²	Hourly	EU340-01	SC VI.1 & VI.2	R 336.1702(a)
6. VOC	97.7 pounds per the first hour of one of the infrequent episodes when the gas stream is diverted to No. 8745 absorber and scrubber, not to exceed 126 pounds per episode. ²	Hourly	EU340-01	SC VI.1 & VI.2	R 336.1702(a)
7. VOC	5.0 tpy ²	12-month rolling period*	EU340-01	SC VI.1 & VI.2	R 336.1702(a)

*As determined at the end of each calendar month.

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II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate the process unless the scrubbing water flow of scrubber 8745B is greater than 2.5 gallons per minute. An excursion is a scrubbing water flow rate less than 2.5 gallons per minute defined in this condition or demonstrated during testing. Upon detecting an excursion of the scrubbing water flow limit, the permittee shall restore operation of scrubber 8745B to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1702(a), R 336.1910)**
2. The permittee shall not operate the process unless the coolant flow rate of absorber 8745A is greater than 50 gallons per minute. An excursion is a water flow rate less than 50 gallons per minute defined in this condition or demonstrated during testing. Upon detecting an excursion of the scrubbing water flow limit, the permittee shall restore operation of scrubber 8745B to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1702(a), R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain absorber 8745A with a liquid flow indication device. An alarm shall warn the operator whenever the coolant flow rate drops below 50 gallons per minute.² **(R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(1)(i), (ii))**
2. The permittee shall equip and maintain scrubber 8745B with a liquid flow indication device that shall warn the operator whenever the scrubbing water flow rate is less than 2.5 gallons per minute.² **(R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(1)(i), (ii))**
3. The permittee shall calibrate the flow indicators for scrubber 8745B and absorber 8745A in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall maintain a record of the date, time and duration of every low flow alarm, as well as, the actions taken to restore proper flow for scrubber 8745B and absorber 8745A.² **(40 CFR 64.6(c)(1), R 336.1910)**
2. The permittee shall keep records as required to demonstrate compliance with the emission limits specified in this table. A monthly summary of these emissions shall be made available to the AQD upon request. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission totals specified in this table.² **(R 336.1225, R 336.1702(a))**

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3. For absorber 8745A and scrubber 8745B, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). **(40 CFR 64.7(d))**
4. For absorber 8745A and scrubber 8745B, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
5. For absorber 8745A and scrubber 8745B, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
6. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**
5. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**
6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

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VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV340-001	6.0 ¹	70.0 ¹	R 336.1225, R 336.1901
2. SV340-003	2.0 ¹	55.0 ¹	R 336.1225, R 336.1901

IX. OTHER REQUIREMENT(S)

1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU356-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

Hydrochloric Acid (HCl) production plant with a packed bed scrubber (24388) and venturi scrubber (24386), capable of producing both anhydrous HCl and aqueous HCl. Production and storage of liquid HCl product at a concentration of 30 weight percent or greater during normal operations is subject to the requirements of the Hydrochloric Acid Production NESHAP, 40 CFR Part 63, Subpart NNNNN. Columns 24350 and 24370 and vessels 24358, 24360, and 24362 are only used to produce anhydrous HCl. Absorbers 24387 and 26018 are only used to produce aqueous HCl. Tanks 24345 and 24346 and the packed bed and venturi scrubbers are used during production of both anhydrous and aqueous HCl.

The most recent PTI for this emission unit is PTI No. 29-07D.

Flexible Group ID: FGHCMACT

POLLUTION CONTROL EQUIPMENT

- Packed bed scrubber (24388) and potential future identical backup spare. Only one scrubber is used at a time.
- Venturi scrubber (24386).

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. HCl	2.0 pph ^{1,*}	Hourly	EU356-01, from anhydrous HCl production activities	SC VI.1, VI.2	R 336.1224

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not produce anhydrous HCl in EU356-01 unless a packed bed scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining a minimum liquid flow rate of 1,012 pph in the packed bed scrubber or the minimum flow rate determined during performance testing acceptable to the AQD District Supervisor.² (**R 336.1224, R 336.1225, R 336.1910**)
2. The permittee shall not produce aqueous HCl in EU356-01 unless a packed bed scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining a minimum liquid flow rate of 1,012 pph in the packed bed scrubber or the minimum flow rate determined during the most recent performance testing conducted for FGHCMACT.² (**R 336.1910**)

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3. The permittee shall not produce anhydrous HCl in EU356-01 unless the venturi scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the venturi scrubber includes meeting the requirements below.² (R 336.1224, R 336.1225, R 336.1910)

	Operating mode	Requirement
a.	Anhydrous HCl flow to the absorbers is 2500 pph or less.	A minimum liquid flow rate of 9 gallons per minute or the minimum flow rate determined during performance testing acceptable to the AQD District Supervisor.
b.	Anhydrous HCl flow to the absorbers is greater than 2500 pph.	A minimum liquid flow rate of 11 gallons per minute or the minimum flow rate determined during performance testing acceptable to the AQD District Supervisor.

4. The permittee shall not produce aqueous HCl in EU356-01 unless the venturi scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the venturi scrubber includes meeting the requirements below.² (R 336.1910)

	Operating mode	Requirement
a.	Anhydrous HCl flow to the absorbers is 2500 pph or less.	A minimum liquid flow rate of 9 gallons per minute or the minimum flow rate determined during the most recent performance testing conducted for FGHCLMACT.
b.	Anhydrous HCl flow to the absorbers is greater than 2500 pph.	A minimum liquid flow rate of 11 gallons per minute or the minimum flow rate determined during the most recent performance testing conducted for FGHCLMACT.

5. The permittee shall equip and maintain the operating packed bed scrubber and the venturi scrubber with a liquid flow meter.² (R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall monitor, in a satisfactory manner, the liquid flow rates of the venturi scrubber and of the operating packed bed scrubber on a continuous basis. Unless otherwise specified in this permit, monitoring, and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis.² (R 336.1224, R 336.1225, R 336.1910)
2. The permittee shall keep, in a satisfactory manner, records of the liquid flow rates for the venturi scrubber and the operating packed bed scrubber. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1910)
3. The permittee shall keep, in a manner satisfactory to the AQD District Supervisor, records of the times during which EU356-01 produces anhydrous HCl and the times during which EU356-01 produces aqueous HCl.² (R 336.1224, R 336.1225, R 336.1910)
4. The permittee shall monitor, in a satisfactory manner, the flow rate of anhydrous HCl to the absorbers. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1910)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV356-001 ^a (Packed bed scrubber)	2 ²	103 ²	R 336.1225, 40 CFR 52.21(c)&(d)

^a This stack discharges horizontally and is not required to discharge unobstructed vertically upwards.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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PTI No: MI-PTI-A4043-2019b

**EU356-02
EMISSION UNIT CONDITIONS**

DESCRIPTION

Rail car unloading station No. 9E with packed bed scrubber (24401) capable of either loading rail cars with aqueous HCl or unloading aqueous HCl from rail cars. Loading rail cars with liquid HCl product at a concentration of 30 weight percent or greater during normal operations is subject to the requirements of the Hydrochloric Acid Production NESHAP, 40 CFR Part 63, Subpart NNNNN.

The most recent PTI for this emission unit is PTI No. 29-07C.

Flexible Group ID: FGHCLMACT

POLLUTION CONTROL EQUIPMENT

Packed bed scrubber (24401)

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU356-02 unless packed bed scrubber 24401 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining a minimum liquid flow rate of 2,500 lbs/hr in the packed bed scrubber.² (R 336.1224, R 336.1225, R 336.1910)
2. The permittee shall equip and maintain packed bed scrubber 24401 with a liquid flow meter.² (R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall monitor, in a satisfactory manner, the liquid flow rate of scrubber 24401 on a continuous basis whenever EU356-02 operates. Unless otherwise specified in this permit, monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis.² (R 336.1910)

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2. The permittee shall keep, in a satisfactory manner, records of the flow rate for scrubber 24401 as required by SC IV.2. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.² (R 336.1910)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV356-002	4 ¹	20 ¹	R 336.1225

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU356-03
EMISSION UNIT CONDITIONS**

DESCRIPTION

Rail car unloading station No. 10E with packed bed scrubber (24344) capable of unloading aqueous HCl from rail cars.

The most recent PTI for this emission unit is PTI No. 29-07C.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Packed bed scrubber (24344)

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU356-03 unless packed bed scrubber 24344 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining a minimum liquid flow rate of 2,500 lbs/hr in the packed bed scrubber.² **(R 336.1224, R 336.1225, R 336.1910)**
2. The permittee shall equip and maintain packed bed scrubber 24344 with a liquid flow meter.² **(R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall monitor, in a satisfactory manner, the liquid flow rate of scrubber 24344 on a continuous basis whenever EU356-03 operates. Unless otherwise specified in this permit, monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis.² **(R 336.1910)**

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2. The permittee shall keep, in a satisfactory manner, records of the flow rate for scrubber 24344. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.² (R 336.1910)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV356-003	4 ¹	20 ¹	R 336.1225

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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PTI No: MI-PTI-A4043-2019b

**EU501-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

Intermediate viscosity (IV) and very low viscosity (VLV) silicone fluid manufacturing process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF.

The most recent PTI for this emission unit is PTI No. 158-87B.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

Carbon drum system - Plant currently vents to 5 drums in series; however, the number of drums may vary. The last drum is placed on a scale and weighed periodically to prevent breakthrough.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	0.34 pph ²	Hourly	EU501-01	SC VI.1 & VI.2	R 336.1702(a), R 336.1201
2. VOC	0.5 tpy ²	12-month rolling time period*	EU501-01	SC VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1201
3. Methyl Siloxane	4.1 pph ²	Hourly	EU501-01	SC VI.1 & VI.2	R 336.1702(a), R 336.1201
4. Methyl Siloxane	4.2 tpy ²	12-month rolling time period*	EU501-01	SC VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1201

*as determined at the end of each calendar month

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The weight increase of the last carbon drum (i.e., drum prior to discharge) within the carbon drum system shall not exceed 45 pounds.² **(R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

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VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall monitor and record, at least once per shift, the weight of the last carbon drum (i.e., drum prior to discharge to atmosphere) within the carbon drum system with instrumentation acceptable to the AQD. A written log of these weights shall be kept on file and made available to the AQD upon request. (R 336.1213(3))
2. A written record of the amount of material processed per 12-month rolling period shall be kept on file and made available to the AQD upon request.² (R 336.1201(3))
3. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission limits specified in this table. These records shall be made available to the AQD upon request. (R 336.1213(3))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV501-103	8 ²	57 ²	R 336.1201(3)
2. SV501-222	2 ²	58 ²	R 336.1201(3)
3. SV501-229	2 ²	59 ²	R 336.1201(3)
4. SV501-230	1.5 ²	59 ²	R 336.1201(3)
5. SV501-231	1 ²	59 ²	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

1. The permittee shall not operate the process unless the carbon drum system is installed and operating properly.² (R 336.1910)
2. The permittee shall equip and maintain the carbon drum system with a scale that measures the weight of the last carbon drum.² (R 336.1910)

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU501-02
EMISSION UNIT CONDITIONS**

DESCRIPTION

1107 hydrolysis process, including tanks 4160 and 23535. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU501-02 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 126-03A.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

Venturi scrubbers (4109, 7585). These devices are CAM subject units for VOCs.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	9.1 pph ²	Hourly	EU501-02	SC VI.1 & VI.2	R 336.1702(a)
2. VOC	5.9 tpy ²	12-month rolling time period*	EU501-02	SC VI.1 & VI.2	R 336.1702(a)

*as determined at the end of each calendar month

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. If the liquid flow rate of venturi scrubber 4109 during startup, shutdown and emergency conditions is less than 18 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence.² **(40 CFR 64.6(c), 40 CFR 64.7(d), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. If the liquid flow rate for venturi scrubber 7585 during process operations in EU501-02 is less than 1.5 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence.² **(40 CFR 64.6(c), 40 CFR 64.7(d), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall calibrate the liquid flow measurement devices for scrubbers 4109 and 7585 in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not initiate startup or planned shutdown of operations in EU501-02 unless venturi scrubber 4109 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of venturi scrubber 4109 includes maintaining a minimum liquid flow rate of 18 gallons per minute to the scrubber.² **(R 336.1224, R 336.1910)**
2. The permittee shall not operate EU501-02 unless venturi scrubber 7585 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of venturi scrubber 7585 includes maintaining a minimum liquid flow rate of 1.5 gallons per minute to the scrubber.² **(R 336.1224, R 336.1910)**

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3. The permittee shall equip and maintain venturi scrubbers 4109 and 7585 with liquid flow measurement devices.² **(R 336.1201 R 336.1910, 40 CFR 64.6(c)(1)(i), (ii))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor within 30 days of the end of each calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(40 CFR 64.6(c)(1), R 336.1224, R 336.1225, R 336.1702(a))**
2. The permittee shall monitor and record, on a per shift basis, the liquid flow rate of venturi scrubber 7585 with instrumentation acceptable to the AQD.² **(40 CFR 64.6(c)(1), R 336.1224, R 336.1225, R 336.1702(a))**
3. During startup, shutdown, and emergency conditions, the permittee shall monitor and record, on a per shift basis, the liquid flow rate of venturi scrubber 4109 with instrumentation acceptable to the AQD.² **(40 CFR 64.6(c)(1), R 336.1224, R 336.1225, R 336.1702(a))**
4. The permittee shall calculate the VOC emission rate from EU501-02 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1702(a))**
5. The permittee shall keep, in a satisfactory manner, a log of each startup, shutdown and emergency operation condition. The log shall include the date, time, duration, and cause of each emergency operation condition. The permittee shall keep all records on file at the facility and make them available to the Department upon request² **(R 336.1912)**
6. For venturi scrubbers 4109 and 7585, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). **(40 CFR 64.7(d))**
7. For venturi scrubbers 4109 and 7585, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**

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8. For venturi scrubbers 4109 and 7585, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
9. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Each semiannual report of monitoring and deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no excursions and/or exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**
5. Each semiannual report of monitoring and deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**
6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV501-141	2 ²	54 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV503-158	1 ²	20 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV503-159	1 ²	20 ²	R 336.1225, 40 CFR 52.21(c) & (d)

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IX. OTHER REQUIREMENT(S)

1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EU501-05
EMISSION UNIT CONDITIONS

DESCRIPTION

Crosslinkers manufacturing process consisting of jacketed reactors, condensers, mixers, pumps and vacuum equipment, and product packaging. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 24-23.

Flexible Group ID: FGMONMACT

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

<u>Pollutant</u>	<u>Limit</u>	<u>Time Period/ Operating Scenario</u>	<u>Equipment</u>	<u>Monitoring/ Testing Method</u>	<u>Underlying Applicable Requirements</u>
<u>1. VOC</u>	<u>4.2 tpy*²</u>	<u>12-month rolling time period*</u>	<u>EU501-02</u>	<u>SC VI.1 & VI.2</u>	<u>R 336.1702(a)</u>

* The emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.1224, R 336.1225, R 336.1702(a))

2. The permittee shall calculate the VOC emission rate from EU501-05 monthly for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

<u>Stack & Vent ID</u>	<u>Maximum Exhaust Dimensions (inches)</u>	<u>Minimum Height Above Ground (feet)</u>	<u>Underlying Applicable Requirements</u>
<u>1. SV501-021^a (DV4275)</u>	<u>2</u>	<u>53</u>	<u>R 336.1225, 40 CFR 52.21(c) & (d)</u>
<u>2. SV501-204 (Drum Off Vent)</u>	<u>27</u>	<u>56</u>	<u>R 336.1225, 40 CFR 52.21(c) & (d)</u>
<u>3. SV501-244^b (DV4284)</u>	<u>4</u>	<u>53</u>	<u>R 336.1225, 40 CFR 52.21(c) & (d)</u>

^a This stack is equipped with a raincap.
^b This stack vents downwards.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

**EU501-12
EMISSION UNIT CONDITIONS**

DESCRIPTION

Small Emulsion Polymer (EP) process. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 154-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	0.12 tpy*, ²	12-month rolling time period as determined at the end of each calendar month	EU501-12	SC VI.2	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1702(a))**
2. The permittee shall calculate the VOC emission rate from EU501-12 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-501-106 ^a (7540 E.P. Pre-Mix Tank Vent)	3 ²	54 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV-501-121 ^a (7504 E.P. Poly Tank Vent)	2 ²	51 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV-501-122 ^a (7509 E.P. Poly Tank Vent)	2 ²	51 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the applicable provisions of 40 CFR Part 63, Subpart HHHHH (Coatings MACT).² **(40 CFR Part 63, Subpart HHHHH)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

EU501-49
EMISSION UNIT CONDITIONS

DESCRIPTION

Low viscosity fluids and 3-component fluids process including reactors, tanks, condensers, and a vacuum system. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, and the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 437-90C.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

Condenser (15091)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	6.30 tpy ² *	12-month rolling time period as determined at the end of each calendar month	EU501-49	SC VI.2, SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU501-49 unless the exit gas temperature of condenser 15091 is 90°F or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU501-49 unless condenser 15091 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall equip and maintain the condenser 15091 with a continuous exit gas temperature indicator. The permittee shall calibrate the temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (**R 336.1213(3)(b)(ii)**)

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a))
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of condenser 15091 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU501-49 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep these records on file at the facility and make them available to the AQD upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV501-018 ^a (Busch R5 Vacuum system)	2 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV501-047 ^a (LV Equilibrate Tanks)	1 ²	55 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV501-149 (West Dust Collector)	21 ²	58 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV501-228 ^a (4361 3-Component Fluid Equilibrator)	2 ²	55 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^aThis stack is not required to discharge unobstructed vertically upwards.

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IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

EU502-01
EMISSION UNIT CONDITIONS

DESCRIPTION

Methyl vent system consisting of emissions from tanks T-100, T-102, T-150, T-151, T-208, T-20841, and T-25-100, emissions from maintenance procedures involving portable storage containing methyltrichlorosilane, methylchlorosilane, dimethyldichlorosilane, dimethylchlorosilane, trimethylchlorosilane, phenyltrichlorosilane, and ethyltrichlorosilane, and the vent from the Cabot Mix Tank operation. This emission unit is subject to the requirements of 40 CFR Part 60, Subparts A and Kb and 40 CFR Part 61, Subparts A, J, and V. This emission unit vents to the 337 Spray Scrubber System or to the dry vent tank of the THROX System. The dry vent tank is either sent to the THROX System burner or diverted to the Site Scrubber System. Emissions from loading stations 9G, 10G, DVST-28, and DVST 56 also have the option to vent directly to the Site Scrubber System via the "Bulk Move Vent" described in EU502-07.

The most recent PTI for this emission unit is PTI No. 131-15.

Flexible Group ID: FG304VENTRECOVERY, FG337SCRUBBER, FG325-01, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- 337 Spray Scrubber (9950, 9960 – scrubbers typically alternate in operation but can operate in parallel and vent to SV337-001/002, respectively)
- THROX System comprised of thermal incinerator burner DV24422, quencher DV24424, HCl Absorber. This device is a CAM subject unit for VOCs.
- DV24425, IWS 1st Stage DV24427, IWS 2nd Stage DV 24428, vent SV2514-006
- Site Scrubber System comprised of two parallel spray tower scrubbers DV23709 and DV23710, vents SV2512-001/002

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	4.8 pp ^h	Annual	EU502-01	SC VI.1	R 336.1702(a)
2. VOC	2.5 tpy ²	12-month rolling time period*	EU502-01	SC VI.2	R 336.1702(a)

* 12-month rolling time period as determined at the end of each calendar month.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

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PTI No: MI-PTI-A4043-2019b

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate the equipment listed below unless the vent streams from the equipment are exhausted to the emission control devices listed below. For a storage tank, "operate" refers only to transfers into or out of the tank. The permittee shall not exhaust emissions from any equipment identified below to an associated device listed below unless the device is installed, maintained, and operated in a satisfactory manner:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

	Emission Control	Required Control Efficiency
a. EU502-01	i. 337 Spray Scrubbers or	99.4%
	ii. THROX System or	99.9%
	iii. Site Scrubber System	99.4%

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1702(a))**
2. The permittee shall calculate the VOC emission rate from EU502-01 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
3. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart Kb, Section 60.116b (Monitoring of Operations) for storage vessel nos. DV100, DV102, DV150, DV151, DV208, DV20841, and DV25-100. **(40 CFR Part 60, Subpart Kb, Section 60.116b)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart Kb, Section 61.115b (Reporting and recordkeeping requirements) for storage vessel nos. DV100, DV102, DV150, DV151, DV208, DV20841, and DV25-100. **(40 CFR Part 60, Subpart Kb, Section 60.115b)**

See Appendix 8

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PTI No: MI-PTI-A4043-2019b

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2514-006	54 ²	90 ²	R 336.1225, R 336.2803, R 336.2804
2. SV2512-001	6 ²	65 ²	R 336.1225, R 336.2803, R 336.2804
3. SV2512-002	6 ²	65 ²	R 336.1225, R 336.2803, R 336.2804

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subparts A (General Provisions) and Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels) for storage vessel nos. DV100, DV102, DV150, DV151, DV208, DV20841, and DV25-100. The applicable sections of Subpart Kb include, but are not necessarily limited to: **(40 CFR Part 60, Subparts A and Kb)**
 - a. 60.112b (Standard of VOCs)
 - b. 60.113b (Testing and procedures)
 - c. 60.114b (Alternative means of emission limitation)

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

**EU502-04
EMISSION UNIT CONDITIONS**

DESCRIPTION

Container Maintenance and Wash area for the High Volume Silanes production facility. Includes nitrogen purge for some containers. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No PTI No. 18-18A.

Flexible Group ID: FGSITEBLOWER, FGTHROX, FGMONMACT

POLLUTION CONTROL EQUIPMENT

FGTHROX for nitrogen purge

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOCs	0.33 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU502-04	SC VI.2, SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate nitrogen purging activities of containers in EU502-04 unless FGTHROX is operated in accordance with the requirements of FGTHROX.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not conduct nitrogen purging activities exhausted to FGTHROX unless FGTHROX is installed, maintained, and operated in a satisfactory manner, which includes meeting the requirements of SC III.1.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (**R 336.1213(3)(b)(ii)**)

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (**R 336.1213(3)(b)(ii)**)

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (**R 336.1224, R 336.1225, R 336.1702(a)**)

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2. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU502-04 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
3. The permittee shall keep a record of nitrogen purging activities for each calendar month, noting all occasions when nitrogen purging was interrupted because FGTHROX was not installed, maintained, and operated in a satisfactory manner. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV502-009a (12G Tank Truck Wash Station)	48 ²	0 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV502-009b (13G Tank Truck Wash Station)	48 ²	0 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV502-009c (13G Rail Car Station)	48 ²	0 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV2514-006 (THROX Vent)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EU502-07 EMISSION UNIT CONDITIONS

DESCRIPTION

This emission unit consists of two sets of related equipment with different emission profiles and different vent control paths:

1. Distillation Vents: Trichlorosilane (TCS) distillation equipment for purifying crude TCS into various grades (electronic-, chemical-, and plant-grade) of TCS product as well as chemical-grade silicon tetrachloride.

Typically, the add-on control equipment for the Distillation Vents consists of the 304 Vent Recovery System followed by the dry vent tank at the THROX System. The dry vent tank is either sent to the THROX System burner or diverted to the Site Scrubber System. In the event both the THROX System and the Site Scrubber System are off-line, the Distillation Vents will be directed through the 337 Spray Scrubber System after 304 Vent Recovery. However, in the event 304 Vent Recovery System goes down, the Distillation Vents will be directed to the 325 Vent Recovery System. The 325 Vent Recovery System consists of two carbon bed banks (Nos. 1 and 2) and the 337 Venturi Scrubbers. Each one of the carbon beds (either No. 1 or No. 2) vent to one of the 337 Venturi Scrubbers (No. 1 or No. 2), or to the THROX System or the Site Scrubber System.

2. Bulk Move Vents: trichlorosilane (TCS), silicon tetrachloride (STC), and dichlorosilane (DCS) "bulk move" operations. These operations include the loading and unloading of storage tanks, railcars, and semi-trailers and occur primarily at Dow Corning's 502 Building, supporting the distillation operations.

Typically, the add-on control equipment for the Bulk Move Vents is the Site Scrubber System. If the Site Scrubber System is down, the Bulk Move Vents have the capability to follow the vent path of the Distillation Vents as described above.

The 337 Spray Scrubber System discharges to the atmosphere through either SV337-001 or SV337-002. 337 Venturi Scrubber bank No. 1 discharges to the atmosphere through SV337-003. 337 Venturi Scrubber bank No. 2 discharges to the atmosphere through SV337-004. The THROX System discharges through SV2514-006. The Site Scrubber System discharge through either SV2512-001 or SV2512-002. This emission unit is subject to the requirements of 40 CFR Part 60, Subparts A and Kb.

The most recent PTI for this emission unit is PTI No. 185-07B.

Flexible Group ID: FG304VENTRECOVERY, FG337SCRUBBER, FG325-01, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

- 304 Vent Recovery System comprised of interchangers HX1 2040 and HX2 2040 and condensers HX1 2044 and HX2 2044
- THROX System comprised of thermal incinerator burner DV24422, quencher DV24424, HCl Absorber DV24425, IWS 1st Stage DV24427, and IWS 2nd Stage DV 24428, vent SV2514-006
- Site Scrubber System comprised of two parallel spray tower scrubbers DV23709 and DV23710, vents SV2512-001/002
- 337 Spray Scrubber (9950, 9960 – scrubbers typically alternate in operation but can operate in parallel and vent to SV337-001/002, respectively)
- Tanker trailer vapor equalization
- 325 Vent Recovery System consisting of carbon beds (Bank No.1 - 20587, 20588, 20589 and Bank No. 2 - 22200, 22205, 22210) and the 337 Venturi Scrubbers (Bank No. 1 - 9956, 9957, 9958 operate in series and Bank No. 2 - 22245-1, 22245-2, 22245-3 operate in series) used as a backup control device for the emission unit in the event 304 Vent Recovery goes down.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Trichlorosilane & tetrachlorosilane combined	6.0 tpy ¹	12-month rolling time period as determined at the end of each calendar month.	EU502-07	SC VI.2	R 336.1224

II. MATERIAL LIMIT(S)

1. The permittee shall not route more than 1,000 pounds of material per hour, based on a one-hour average, from the Bulk Move Vents to the Site Scrubber System.¹ **(R 336.1225)**
2. The permittee shall not route more than 600 pounds of material per hour, based on an annual average, from the Bulk Move Vents to the Site Scrubber System.¹ **(R 336.1225)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the mass flow rate of the vapor from the Bulk Move Vents to the Site Scrubber System on a continuous basis. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.¹ **(R 336.1225)**
2. The permittee shall not operate the equipment listed below unless the vent streams from the equipment are exhausted to the emission control devices listed below. For a storage tank, "operate" refers only to transfers into or out of the tank. The permittee shall not exhaust emissions from any equipment identified below to an associated device listed below unless the device is installed, maintained, and operated in a satisfactory manner.² **(R 336.1224, R 336.1225, R 336.1910)**

Equipment	First Emission Control	Required Control Efficiency	Second Emission Control	Required Control Efficiency
a. Distillation Vents	i. 304 Vent Recovery System followed by	88%-99%*	1. THROX System or	99.9%
			2. Site Scrubber System or	99.4%
			3. 337 Spray Scrubbers	99.4%
	ii. Or 325 Vent recovery System followed by	99.9%	1. THROX System or	99.9%
			2. Site Scrubber System or	99.4%
			3. 337 Venturi Scrubbers	99.4%

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b. Bulk Move Vents	i. Site Scrubber System	99.4%	NA	
	ii. Or 304 Vent Recovery System followed by	88%-99%*	1. THROX System or	99.9%
			2. Site Scrubber System or	99.4%
			3. 337 Spray Scrubbers	99.4%
	iii. Or 325 Vent recovery System followed by	99.9%	1. THROX System or	99.9%
			2. Site Scrubber System or	99.4%
3. 337 Venturi Scrubbers			99.4%	

* Control efficiency depends on the chlorosilane – 96% for trichlorosilane, 99% for silicon tetrachloride, and 88% for dichlorosilane.

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall monitor and record, in a satisfactory manner, when the Bulk Move Vents are operating, the mass flow rate of the vapor from the Bulk Move Vents to the Site Scrubber System on a continuous basis. Monitoring and recording of data “on a continuous basis” is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event.¹ (R 336.1225)
2. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the Distillation Vents for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission limits specified in the table listed in Section I of this permit. These records shall be made available to the AQD upon request.¹ (R 336.1224)
3. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart Kb, Section 60.116b (Monitoring of Operations) for storage vessels DV153, DV155, DV252, DV25-102, DV25-105, and DV25-107. (40 CFR Part 60, Subpart Kb, Section 60.116b)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

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4. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart Kb, Section 61.115b (Reporting and recordkeeping requirements) for storage vessels DV153, DV155, DV252, DV25-102, DV25-105, and DV25-107. **(40 CFR Part 60, Subpart Kb, Section 60.115b)**

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2514-006	54 ²	90 ²	R 336.1225, R 336.2803, R 336.2804
2. SV2512-001	6 ²	65 ²	R 336.1225, R 336.2803, R 336.2804
3. SV2512-002	6 ²	65 ²	R 336.1225, R 336.2803, R 336.2804
4. SV337-003	10 ²	30 ²	R 336.1225, R 336.2803, R 336.2804
5. SV337-004	10 ²	30 ²	R 336.1225, R 336.2803, R 336.2804

IX. OTHER REQUIREMENTS

1. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subparts A (General Provisions) and Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels) for storage vessels DV153, DV155, DV252, DV25-102, DV25-105, and DV25-107. The applicable sections of Subpart Kb include, but are not necessarily limited to: **(40 CFR Part 60, Subparts A and Kb)**
- a. 60.112b (Standard of VOCs)
 - b. 60.113b (Testing and procedures)
 - c. 60.114b (Alternative means of emission limitation)

Footnotes:

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**EU502-09
EMISSION UNIT CONDITIONS**

DESCRIPTION

Chlorosilane waste tank 25403 for phenyl supply chain located in the 502 tank farm.

The most recent PTI for this emission unit is PTI No. 91-14.

Flexible Group ID: FGTHROX, FGSITESCUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

This emission unit vents to the site THROX and, when the THROX is not operating, the site scrubbers. Emissions from transfers from the tank to tank trucks and rail cars will be controlled by the THROX or vapor balance back to the tank.

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not load any tank truck or railcar from EU502-09 unless the THROX or the vapor balance system is installed, maintained, and operated in a satisfactory manner.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU502-09 unless the emissions are routed to FGTHROX or FGSITESCUBBERS and the control device (FGTHROX or FGSITESCUBBERS) is installed, maintained, and operated in a satisfactory manner, as described in ROP No. MI-ROP-A4043-2008 (or any subsequent revisions).² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))

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3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year.
(R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU502-11
EMISSION UNIT CONDITIONS**

DESCRIPTION

Chlorosilane waste tank 256 in the 2502 tank farm, with nominal capacity of 20,000 gallons. The tank receives liquid waste from various emission units at the facility and can be unloaded to either tank trucks or railcars. The tank typically vents to the site thermal oxidizer (THROX). In the event the THROX is offline, the tank vents to one of the parallel site scrubbers. If both the THROX and the site scrubbers are unavailable, the tank vents to one of the 337 tower scrubbers.

The most recent PTI for this emission unit is PTI No. 132-15.

Flexible Group ID: FGTHROX, FGSITESCRUBBERS, FG337SCRUBBER

POLLUTION CONTROL EQUIPMENT

- THROX: thermal incinerator (24422 - burner, quench, and scrubber system), vent SV2514-006
- Site scrubber system: two parallel spray tower scrubbers (23709 and 23710), vents SV2512-001/002
- 337 Spray Scrubber System: (9950, 9960 – scrubbers typically alternate in operation but can operate in parallel and vent to SV337-001/002, respectively.)

I. EMISSION LIMITS

Pollutant	Limit	Time Period /Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	1.9 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU502-11	SC VI.4	R 336.1702(a)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall only transfer the 3295 vessel and column bottoms stream from 311 building to EU502-11 when emissions from the transfer are being exhausted to the THROX and the THROX is installed, maintained, and operated in a satisfactory manner.¹ (**R 336.1224, R 336.1225**)

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU502-11 unless all emissions are vented to one of the emission control devices listed below and the emission control device is installed, maintained, and operated in a satisfactory manner.² (**R 336.1224, R 336.1702(a), R 336.1910**)
 - a. THROX
 - b. Site scrubber system
 - c. 337 Spray Scrubber System
2. The permittee shall not transfer material from EU502-11 to DV15G railcar station or to DVST-61 trailer station unless the transfer is vapor balanced and the vapor balance equipment is installed, maintained, and operated in a satisfactory manner.² (**R 336.1224, R 336.1702(a), R 336.1910**)

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations and records in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1702(a))
2. The permittee shall keep a monthly record of the time periods when emissions from EU502-11 are vented to each emission control device listed in SC IV.1. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
3. The permittee shall keep a monthly record of the identity and source of waste streams transferred to EU502-11. For the 3295 vessel and column bottoms stream from 311 building, the record shall also include the date and time during which the stream was transferred to EU502-11. The permittee shall keep all records on file at the facility and make them available to the Department upon request.¹ (R 336.1224, R 336.1225)
4. The permittee shall calculate the VOC emission rate from EU502-11 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
4. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR 60.115b (Reporting and recordkeeping requirements), as they apply to EU502-11. (40 CFR 60.115b)

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

NA

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IX. OTHER REQUIREMENTS

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A (General Provisions) and Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels), as they apply to EU502-11. The applicable sections of Subpart Kb include, but are not necessarily limited to, the following: **(40 CFR Part 60, Subparts A & Kb)**
 - a. 60.112b (Standard of VOCs)
 - b. 60.113b (Testing and procedures)
 - c. 60.114b (Alternative means of emission limitation)

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU505-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

Resin and coating manufacturing including reactors, kettles, condensers, scrubber, drum off, vacuum system, and related equipment. This emission unit is subject to the requirements of 40 CFR Part 61, Subparts A, J, and V, and 40 CFR Part 63, Subpart FFFF. Tanks 508 and 509 are subject to Subpart FFFF.

The most recent PTI for this emission unit is PTI No. 169-12B.

Flexible Group ID: FGLEAKDETECTION, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Chilled condensers (16092/25094, 6553).
- FGTHROX
- FGSITESCRUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOC	24.32 pph ² *	Hourly	EU505-01	SC V.1, VI.2	R 336.1702(a)
2. VOC	8.67 tpy ² *	12-month rolling time period as determined at the end of each calendar month	EU505-01	SC VI.2, VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Unless the exception in SC III.3 applies, the permittee shall not operate equipment in EU505-01 that exhausts to chilled condenser 6553 unless the coolant exit temperature of the condenser is 7°C or less.² (**R 336.1225, R 336.1702(a), R 336.1910**)
2. Unless the exception in SC III.3 applies, the permittee shall not operate equipment in EU505-01 that exhausts to either chilled condenser 16092 or chilled condenser 25094, whichever is in use, unless the coolant exit temperature of whichever condenser is in use is 0°C or less.² (**R 336.1225, R 336.1702(a), R 336.1910**)
3. The permittee may operate equipment in EU505-01 that exhausts to one of the chilled condensers (condenser 6553 and either condenser 16092 or condenser 25094) when the chilled condenser to which the equipment exhausts is not operating in a satisfactory manner, as long as all of the following conditions are true.² (**R 336.1224, R 336.1225, R 336.1702, R 336.1910**)
 - a. The equipment exhaust is routed to FGTHROX or FGSITESCRUBBERS.
 - b. FGTHROX or FGSITESCRUBBERS (whichever is receiving exhaust from EU505-01) is installed, maintained, and operated in a satisfactory manner.

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IV. DESIGN/EQUIPMENT PARAMETER(S)

1. Except as allowed in SC III.3, the permittee shall not operate equipment in EU505-01 that exhausts to chilled condenser 6553 and either chilled condenser 16092 or chilled condenser 25094, whichever is in use, unless the chilled condenser is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through III.3 that apply to the condenser.² **(R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall equip and maintain each of the chilled condensers with a device to continuously monitor and record the condenser coolant exit temperature. The permittee shall calibrate the coolant exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Upon request of the AQD District Supervisor, the permittee shall verify VOC emission rates from EU505-01 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOCs	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² **(R 336.1702(a), R 336.2001, R 336.2003, R 336.2004,)**

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. **(R 336.1213(3))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall monitor and record, on a continuous basis, the coolant exit temperature of chilled condenser 6553 and either chilled condenser 16092 or chilled condenser 25094, whichever is in use, with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU505-01 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV505-001 16092/25094 Vent Condenser	2.0 ²	60.0 ²	R 336.1225 40 CFR 52.21(c)&(d)
2. SV505-011 Drum off vent	15.0 ²	44.0 ²	R 336.1225 40 CFR 52.21(c)&(d)
3. SV505-002 ^A 6553 condenser vent	1.0 ²	21.0 ²	R 336.1225 40 CFR 52.21(c)&(d)
4. DV23654 ^A Atmospheric Vent	2.0 ²	20 ²	R 336.1225 40 CFR 52.21(c)&(d)
5. SV505-032 ^A THROX blower atmospheric bypass vent	3.0 ²	47.0 ²	R 336.1225 40 CFR 52.21(c)&(d)

^A This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU505-04
EMISSION UNIT CONDITIONS**

DESCRIPTION

23390 batch reactor and manufacturing process containing a receiver, filters, carbon beds, vacuum pump, condensers, storage tanks, and other associated equipment.

The most recent PTI for this emission unit is PTI No. 200-15A.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#), FGLEAKDETECTION

POLLUTION CONTROL EQUIPMENT

- 23412 service water condenser
- 23414 glycol condenser
- 23401 packed tower scrubber
- 5-510 glycol condenser

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	174 lb/year ²	12-month rolling time period as determined at the end of each calendar month	EU505-04	SC VI.2, VI.3	R 336.1702(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU505-04 unless the emission control devices listed below are installed, maintained, and operated in a satisfactory manner. Satisfactory operation of each emission control device includes meeting the operating parameters listed below for the device.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

	Required control device	Indicator of satisfactory operation
a.	23401 scrubber	Scrubber liquid flow rate not less than 3.1 gallons per minute (gpm)
b.	23412 service water condenser and 23414 glycol condenser	Glycol return temperature from 23414 condenser no higher than 15°C
c.	5-510 glycol condenser	Glycol return temperature no higher than 7 °C

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the equipment listed below with the devices listed below:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

	Equipment	Device to be equipped and maintained
a.	23401 scrubber	Liquid flow rate indicator
b.	23414 glycol condenser	Glycol return temperature indicator
c.	5-510 glycol condenser	Glycol return temperature indicator

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, in a satisfactory manner, the following operational parameters for the listed equipment at the specified frequency.

	Equipment	Operational parameter	Frequency of monitoring
a.	23401 scrubber	Liquid flow rate	Continuous
b.	23414 glycol condenser	Glycol return temperature	Once per shift
c.	5-510 glycol condenser	Glycol return temperature	Continuous

For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of the event. This record shall also include actions taken to correct and prevent a reoccurrence of the event.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

3. The permittee shall calculate the VOC emission rate from EU505-04 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV505-003 (Exhaust from Manhole Vents) ^a	21 ²	49 ²	R 336.1225, 40 CFR 52.21(c)&(d)
2. SV505-008 (Tank Farm Vent Condenser) ^a	1 ²	23 ²	R 336.1225, 40 CFR 52.21(c)&(d)
3. SV505-011 (Drum Off Vent) ^a	15 ²	44 ²	R 336.1225, 40 CFR 52.21(c)&(d)
4. SV505-025 (Tank Vent North) ^a	1 ²	17 ²	R 336.1225, 40 CFR 52.21(c)&(d)
5. SV505-026 (Tank Vent South) ^a	1 ²	18 ²	R 336.1225, 40 CFR 52.21(c)&(d)
6. SV505-027 Fluid Kettle Scrubber Vent) ^a	2 ²	48 ²	R 336.1225, 40 CFR 52.21(c)&(d)

^a This vent is not required to discharge unobstructed vertically upwards.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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PTI No: MI-PTI-A4043-2019b

**EU505-11
EMISSION UNIT CONDITIONS**

DESCRIPTION

Batch resin process with emissions controlled by condenser 6553 and either the site scrubbers or FGTHROX. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts A and FFFF, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU, as well as to the requirements of 40 CFR Part 61, Subparts A, J, and V.

The most recent PTI for this emission unit is PTI No. 162-20.

Flexible Group ID: FGLEAKDETECTION, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Chilled condenser 6553
- FGTHROX
- FGSITESCRUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	14.5 pph ² *	Hourly	EU505-11	SC V.1, VI.2	R 336.1702(a)
2. VOC	1.3 tpy ² *	12-month rolling time period as determined at the end of each calendar month	EU505-11	SC VI.2, VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Unless the exception in SC III.2 applies, the permittee shall not operate equipment in EU505-11 that exhausts to chilled condenser 6553 unless the coolant exit temperature of the condenser is 7°C or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee may operate equipment in EU505-11 that exhausts to chilled condenser 6553 when the chilled condenser is not operating in a satisfactory manner, as long as all of the following conditions are true.² (**R 336.1224, R 336.1225, R 336.1702, R 336.1910**)
 - a. The equipment exhaust is routed to FGTHROX or FGSITESCRUBBERS.
 - b. FGTHROX or FGSITESCRUBBERS (whichever is receiving exhaust from EU505-11) is installed, maintained, and operated in a satisfactory manner.

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IV. DESIGN/EQUIPMENT PARAMETER(S)

1. Except as allowed in SC III.2, the permittee shall not operate equipment in EU505-11 that exhausts to chilled condenser 6553 unless the chilled condenser is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 that apply to the condenser.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall equip and maintain chilled condenser 6553 with a device to continuously monitor and record the condenser coolant exit temperature. The permittee shall calibrate the coolant exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify VOC emission rates from EU505-11 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1702(a), R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the coolant exit temperature of chilled condenser 6553 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU505-11 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))

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2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV505-002 ^A (6553 condenser vent)	1 ²	21 ²	R 336.1225 40 CFR 52.21(c)&(d)
2. SV505-011 (Drum off vent)	15 ²	44 ²	R 336.1225 40 CFR 52.21(c)&(d)
3. SV505-032 ^A (THROX blower atmospheric bypass vent)	3 ²	46 ²	R 336.1225 40 CFR 52.21(c)&(d)
4. SV2514-006 (FGTHROX)	54 ²	89.5 ²	R 336.1225 40 CFR 52.21(c)&(d)
5. SV2512-001	6 ²	65 ²	R 336.1225 40 CFR 52.21(c)&(d)
6. SV2512-002	6 ²	65 ²	R 336.1225 40 CFR 52.21(c)&(d)

^A This stack is not required to discharge unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU508-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

Phenyltrichlorosilane (PhSiCl₃) and diphenyldichlorosilane (Ph₂SiCl₂) processes, which include production, storage, and transfer activities. Emissions are controlled by FGTHROX (as well as FGSITESCUBBERS or FG337SCRUBBER during periods where FGTHROX is out of operation or when total or partial diversion is necessary for any safety-related or operational scenarios). This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 84-08D.

Flexible Group ID: FG337SCRUBBER, FGTHROX, FGSITESCUBBERS, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- FGTHROX - Thermal oxidizer with heat recovery (THROX) unit consisting of a burner, quencher, absorber, and two two-stage ionizing wet scrubbers (IWS) in series; or
- FG337SCRUBBER - 337 wet scrubber (9950, 9960 – scrubbers typically alternate in operation, but can operate in-parallel and vent to SV337-001/002, respectively); or
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	20.3 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU508-01	SC VI.2	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU508-01 unless FGTHROX is operated in accordance with the requirements of FGTHROX, except as described in SC III.2.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee may operate EU508-01 when FGTHROX is not operating in a satisfactory manner, as long as all of the following conditions are true.² (R 336.1224, R 336.1225, R 336.1702, R 336.1910)
 - a. The equipment exhaust is routed to FGSITESCUBBERS or FG337SCRUBBER.
 - b. FGSITESCUBBERS and/or FG337SCRUBBER (whichever is receiving exhaust from EU508-01) is installed, maintained, and operated in a satisfactory manner.

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IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU508-01, except as described in SC III.2, unless FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a))
2. The permittee shall calculate the VOC emission rate from EU508-01 monthly, including the emission rate from the operational scenario as described in SC III.2, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV2517-001 ^a (TOX)	30 ²	102 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV2512-001 (Site Scrubber No. 1)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV2512-002 (Site Scrubber No. 2)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV337-001 (Scrubber 9950)	10 ²	33 ²	R 336.1225, 40 CFR 52.21(c) & (d)

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Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
6. SV337-002 (Scrubber 9960)	10 ²	33 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This EU may exhaust from SV2517-001 after that stack has been installed.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU515-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

The emission unit involves all activities associated with production, storage and transfer of Phenylmethyldichlorosilane (PhMeSiCl₂) and Diphenylmethylchlorosilane (Ph₂MeSiCl). The unit can vent as follows:

456 MgCl₂ Bin: This unit vents through a baghouse via SV515-002 as MgCl₂ powder is transferred to the bin from the 515 MgCl₂ Drying unit.

515 Toluene Scrubber: Multiple units vent to the 515 Toluene Scrubber (10530). These vents are pre-treated by glycol condenser HX-10541. The Reactors, 513 Tank Farm, 516 Distillation, 515 MgCl₂ Filtration and 515 MgCl₂ Drying units all vent to the 515 Toluene Scrubber. 655 column within 516 Distillation utilizes HX-10657 if FGTHROX burner is unavailable. The Toluene Scrubber vent is normally sent to FGTHROX and vented via SV2512-001, SV2512-002 or SV2514-006. If FGTHROX is unavailable emissions will vent through the 515 Toluene Scrubber and out SV515-003 while the process is shutting down.

515 MgCl₂ Quenching: MgCl₂ powder from 456 bin can be sent to the 515 MgCl₂ Quenching unit and vented via SV515-006.

515 MgCl₂ Trailer Loading: MgCl₂ powder from 456 bin can be sent to the 515 MgCl₂ Trailer Loading unit and vented via SV515-004.

Reactors: The reactors can vent N₂ from Mg chip transfer operations via SV515-007 and SV515-008.

[EU515-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.](#)

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The most recent PTI for this emission unit is PTI No. 812-91D.

Flexible Group ID: FGLDFACILITY, FGLEAKDETECTION, FGTHROX, FGSITESCUBBERS, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- 456 MgCl₂ Bin Baghouse (10457)
- Toluene Scrubber (10530) This CAM subject device for VOC.
- Condenser (HX-10453) This is a CAM subject device for VOC.
- Condenser (HX-10541) This is a CAM subject device for VOC.
- Condenser (HX-10657) This is a CAM subject device for VOC.
- Bag filters (22979, 22981)
- MgCl₂ Carbon Drums (Banks #1 and #2)
- FGTHROX
- FGSITESCUBBERS

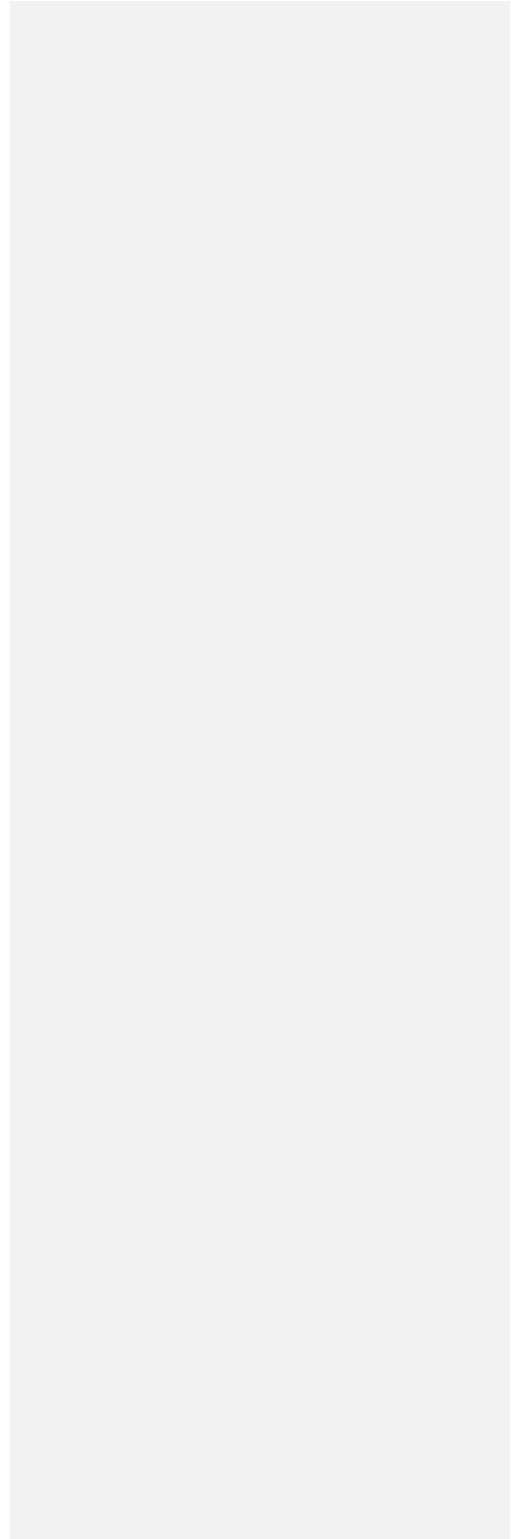
I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	4.6 pph ^{A,2}	Hourly	EU515-01	SC V.1	R 336.1702(a)
2. VOC	20.16 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU515-01	SC VI.3, VI.4, VI.5, VI.6, VI.8	R 336.1702(a)

^A This limit does not apply when venting to SV515-003 or FGSITESCUBBERS when FGTHROX is not available.

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General Business



II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU515-01 unless the emission control devices listed below are installed, maintained, and operated in a satisfactory manner. Satisfactory operation of each emission control device includes meeting the operating parameters listed below for the device.² (R 336.1225, R 336.1702(a), R 336.1910)

	Required control device	Operating Parameter
a.	DV22979 Bag Filter	Pressure drop is between 0.5 and 75 inches of water
b.	DV22981 Bag Filter	Pressure drop is between 0.5 and 75 inches of water
c.	HX-10453 Condenser	Coolant supply temperature is -5°C or less
d.	HX-10541 Condenser	Coolant supply temperature is -5°C or less
e.	HX-10657 Condenser	Liquid flow rate is 100 gpm or more ^A
f.	DV10530 Toluene Scrubber	Exhaust air temperature is -5°C or less
g.	FGTHROX	As specified in FGTHROX
h.	MgCl ₂ Carbon Drum	Carbon bed weight gain is not more than 80 kg per carbon drum bank

^A Compliance with this parameter is not required while EU515-01 is venting to FGTHROX.

2. If the exit air temperature of packed tower scrubber 10530 exceeds -5°C while the scrubber exhaust is not routed to the THROX, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. An excursion of the exit air temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the exit air temperature limit, the permittee shall restore operation of scrubber 10530 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))
3. If the liquid flow rate of condenser HX-10657 is less than 100 gallons per minute while the scrubber exhaust is not routed to the THROX, the permittee shall implement corrective action and maintain a record of action take to prevent recurrence. An excursion is a liquid flow rate less than 100 gallons per minute defined in this condition, or demonstrated during testing. Upon detecting an excursion of the liquid flow rate limit, the permittee shall restore operation of condenser HX-10657 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))
4. If the main coolant supply temperature for condensers 10453 and 10541 exceeds -5°C, respectively, while the condenser exhaust is not routed to the THROX, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. An excursion of the main coolant supply temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the main coolant supply temperature limit, the permittee shall restore operation of condensers 10453 and 10541 to their normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))
5. The permittee shall calibrate the temperature gauge for scrubber 10530 and condensers 10453 and 10541 in a satisfactory manner. (40 CFR 64.6(c)(1)(iii))

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate the reactors; 456 MgCl₂ Bin Baghouse (10457); all distillation columns; all raw/crude material tanks; and all dryers in EU515-01 unless the emissions are routed to the DV22979 Bag Filter, DV22981 Bag Filter, HX-10453 Condenser, HX-10541 Condenser, HX-10657 Condenser, DV10530 Toluene

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Scrubber, and FGTHROX unless these control devices are installed, maintained, and operated in a satisfactory manner, as specified in SC III.1.² **(R 336.1225, R 336.1702(a), R 336.1910)**

2. The permittee shall not operate the 456 MgCl₂ Bin unless the 456 MgCl₂ Bin Baghouse (10457) is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall not operate the 515 MgCl₂ Quenching unless the MgCl₂ Carbon Drums are installed, maintained, and operated in a satisfactory manner, as specified in SC III.1.² **(R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall equip and maintain DV22979 and DV22981 Bag Filters with devices to continuously monitor and record the pressure drop across each filter. The permittee shall calibrate each device in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1225, R 336.1702(a), R 336.1910)**
5. The permittee shall equip and maintain Condensers HX-10453 and HX-10541 with devices to continuously monitor and record each condenser's coolant supply temperature. The permittee shall calibrate each device in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1225, R 336.1702(a), R 336.1910)**
6. The permittee shall equip and maintain Toluene Scrubber DV10530 with a device to continuously monitor and record the scrubber's exhaust air temperature. The permittee shall calibrate the device in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1225, R 336.1702(a), R 336.1910)**
7. The permittee shall equip and maintain the MgCl₂ Carbon Drum with devices to continuously monitor and record the weight of each carbon drum bank. The permittee shall calibrate each device in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Upon request of the AQD District Supervisor, the permittee shall verify the VOC emission rates from EU515-01 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60, Subpart A. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² **(R 336.1702(a), R 336.2001, R 336.2003, R 336.2004)**
2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. **(R 336.1213(3))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall monitor and record, on a continuous basis, the pressure drop across DV22979 and DV22981 Bag Filters with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a), R 336.1910)**

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3. The permittee shall monitor and record, on a continuous basis, the coolant supply temperature of Condensers HX-10453 and HX-10541 with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of Condenser HX-10657, when EU515-01 is not venting to FGTHROX, with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a), R 336.1910)**
5. The permittee shall monitor and record, on a continuous basis, the exhaust air temperature of Toluene Scrubber DV10530 with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a), R 336.1910)**
6. The permittee shall monitor and record, on a continuous basis, the weight of each MgCl₂ Carbon Drum carbon drum bank with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a), R 336.1910)**
7. The permittee shall perform, and record the results of, a monthly visible emission observation of SV515-002 during routine operating conditions as an indicator of satisfactory operation. This observation need not be performed using Method 9. If visible emissions are observed, the permittee shall take corrective actions as necessary to ensure the 456 MgCl₂ Bin Baghouse (10457) is operating in a satisfactory manner. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1910)**
8. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU515-01 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
9. For scrubber 10530, and condensers 10453, 10541, HX-10657, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). **(40 CFR 64.7(d))**
10. For scrubber 10530, and condensers 10453, 10541, HX-10657, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the

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monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**

11. For scrubber 10530, and condensers 10453, 10541, HX-10657, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
12. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**
5. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**
6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**
7. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

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VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV515-002 ^A (456 Bin Vent)	3 ²	42 ²	R 336.1225 40 CFR 52.21(c) & (d)
2. SV515-003 ^A (Toluene Scrubber)	2 ²	88 ²	R 336.1225 40 CFR 52.21(c) & (d)
3. SV515-004 ^A (MgCL2 Trailer Loading)	2 ²	3 ²	R 336.1225 40 CFR 52.21(c) & (d)
4. SV515-006 ^A (MgCl2 Quencher Vent)	2 ²	44 ²	R 336.1225 40 CFR 52.21(c) & (d)
5. SV515-007 ^A (Mg Hopper Purge)	1 ²	54 ²	R 336.1225 40 CFR 52.21(c) & (d)
6. SV515-008 ^A (Mg Hopper Purge)	1 ²	54 ²	R 336.1225 40 CFR 52.21(c) & (d)
7. SV2512-001 (Site Scrubber #1)	6 ²	67 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
8. SV2512-002 (Site Scrubber #2)	6 ²	67 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
9. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225 40 CFR 52.21 (c) & (d)
10. SV2517-001 ^B (TOX vent)	30 ²	102 ²	R 336.1225 40 CFR 52.21(c) & (d)

^A This stack is not required to be discharged unobstructed vertically upwards to the ambient air

^B This EU may exhaust from SV2517-001 after that stack has been installed.

IX. OTHER REQUIREMENT(S)

1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU601-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

Alkoxylation process including kettle, condensers, storage tanks, distillation columns, bulk container filling equipment, scrubbers, and other related equipment. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart UU. EU601-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 534-77H.

Flexible Group ID: FGTHROX, FGSITEBLOWER, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Venturi scrubber 24683. This is a CAM subject device for VOC and Methyl Chloride.
- Emergency vent scrubber 5309. This is a CAM subject device for VOC and Methyl Chloride.
- FGTHROX

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOCs	23.9 tpy* ²	12-month rolling time period as determined at the end of each calendar month	EU601-01	SC VI.2, SC VI.3, SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU601-01 unless one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
 - a. When exhausting to scrubber 24683, the upper liquid flow rate of scrubber 24683 is 8 gallons per minute or more and the lower liquid flow rate of scrubber 24683 is 3 gallons per minute or more.
 - b. When exhausting to scrubber 5309, the liquid flow rate of scrubber 5309 is 18 gallons per minute or more.
 - c. When exhausting to FGTHROX, FGTHROX is operated in accordance with the requirements of FGTHROX.
2. The upper liquid flow rate of scrubber 24683 shall be at least 8 gallons per minute and the lower liquid flow rate of scrubber 24683 shall be at least 3 gallons per minute. An excursion is a liquid flow rate less than the parameters defined in this condition or demonstrated during testing. Upon detecting an excursion of the liquid flow rates limits, the permittee shall restore operation of scrubber 24683 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (**40 CFR 64.6(c)(2), 40 CFR 64.7(d)**)

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3. The liquid flow rate of scrubber 5309 shall be at least 18.0 gallons per minute during startup, shutdown, or emergency shutdown episodes. An excursion is a liquid flow rate less than 18.0 gallons per minute defined in this condition, or demonstrated during testing. Upon detecting an excursion of the liquid flow rate limit, the permittee shall restore operation of scrubber 5309 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU601-01 unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. When exhausting to scrubber 24683, scrubber 24683 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(a).
 - b. When exhausting to scrubber 5309, scrubber 5309 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(b).
 - c. When exhausting to FGTHROX, FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of FGTHROX.
2. The permittee shall equip and maintain scrubbers 24683 and 5309 with liquid flow indicators. The permittee shall calibrate the liquid flow indicators in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall equip and maintain scrubbers 24683 and 5309 with a liquid flow indication device.² **(40 CFR 64.6(c)(1)(i), (ii))**
4. The permittee shall calibrate the liquid flow indicator for scrubbers 24683 and 5309 in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. When exhausting to scrubber 24683, the permittee shall monitor and record, on a continuous basis, the upper and lower liquid flow rates of scrubber 24683 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(1))**
3. When exhausting to scrubber 5309, the permittee shall monitor and record, on a continuous basis, the scrubber liquid flow rate of scrubber 5309 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(1))**

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4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU601-01 using production records, operating records, maintenance records, emergency shutdowns (including dates and duration), and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
5. For scrubbers 24683 and 5309, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). **(40 CFR 64.7(d))**
6. For scrubbers 24683 and 5309, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
7. For scrubbers 24683 and 5309, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
8. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**
5. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**

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6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV601-005 (Emergency Scrubber 5309)	6 ²	27 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV601-026 (Scrubber 24683)	4 ²	30 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENT(S)

1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU602-07
EMISSION UNIT CONDITIONS**

DESCRIPTION

The 63 Unit is a continuous process making silicone gum. Condensers 6186 and 6168 control emissions from the reactor and from product stripping. This emission unit is subject to the miscellaneous organic chemical manufacturing NESHAP in 40 CFR Part 63, Subparts A and FFFF, and to the equipment leak provisions of Subpart UU.

The most recent PTI for this emission unit is PTI No. 151-20.

Flexible Group ID: FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Condenser 6186 (East IR Final Vent)
- Condenser 6168 (West IR Final Vent)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	260 lbs/yr ² . *	12-month rolling time period as determined at the end of each calendar month	EU602-07	SC VI.2, VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU602-07 with products requiring vacuum stripping unless the exit gas temperature of condenser 6186 is 36°C or less.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall not operate EU602-07 with products that do not require vacuum stripping unless the exit gas temperatures of condenser 6168 and condenser 6186 are both 36°C or less.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU602-07 with products requiring vacuum stripping unless condenser 6186 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall not operate EU602-07 with products that do not require vacuum stripping unless condenser 6168 and condenser 6186 are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

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3. The permittee shall equip and maintain the condenser 6186 and condenser 6168 with exit gas temperature indicators. The permittee shall calibrate the exit temperature indicators in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperatures of condenser 6186 and condenser 6168 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall keep a record of the time periods during which EU602-07 operates with products requiring vacuum stripping and during which EU602-07 operates with products that do not require vacuum stripping. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU602-07 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

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VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV602-021 (63 Unit Dimethyl Cyclics Day Tank Vent) ^a	1 ²	43 ²	R 336.1225, 40 CFR 52.21(c)&(d)
2. SV602-026 (Condenser DV6186 - East IR Final Vent) ^a	4 ²	43 ²	R 336.1225, 40 CFR 52.21(c)&(d)
3. SV602-027 (Condenser DV6168 - West IR Final Vent) ^a	4 ²	43 ²	R 336.1225, 40 CFR 52.21(c)&(d)

^a This vent is not required to discharge unobstructed vertically upwards.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EU604-08
EMISSION UNIT CONDITIONS

DESCRIPTION

Fluoro Cyclics Process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU604-08 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 466-73E.

Flexible Group ID: FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Freon-cooled condenser (7791). This is a CAM subject device for VOC.
- Spray tower scrubber (22753)
- Service water condenser (22713). This is a CAM subject device for VOC.
- Vent vapor equalization during railcar unloading operations when not venting to atmosphere through condenser 7791

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	16.7 pph ²	Hourly	EU604-08	SC VI.1, VI.2, VI.3, VI.4, & VI.5	R 336.1702(a), R 336.1201
2. VOC	11.8 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month.	EU604-08	SC VI.1, VI.2, VI.3, VI.4, & VI.5	R 336.1702(a), R 336.1201
3. Hydrogen Chloride	0.3 pph ¹	Hourly	EU604-08	SC VI.1, VI.2, VI.3, VI.4, & VI.5	R 336.1225

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. During railcar unloading operations if venting to the atmosphere, the condensate temperature from condenser 7791 shall not exceed 40.6°F. An excursion of the condensate temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the condensate temperature limit, the permittee shall restore operation of condenser 7791 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1702(a), R 336.1201)**
2. The liquid flow rate of the spray tower scrubber (22753) shall be at least 3.0 gallons per minute. Exceeding this parameter is an excursion.¹ **(R 336.1224)**
3. If the service water return temperature for condenser 22713 exceeds 105°F, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. An excursion of the service water return temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the service water return temperature

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limit, the permittee shall restore operation of condenser 22713 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1213(3))**

4. The permittee shall not conduct unloading operations from Emission Group EU604-08 which vent to atmosphere unless the freon-cooled condenser (7791) is installed and operating properly.² **(R 336.1702(a), R 336.1201)**
5. The permittee shall not operate the Emission Group EU604-08 unless the spray tower scrubber (22753) is installed and operating properly.¹ **(R 336.1224)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the freon-cooled condenser (7791) with an indication device for measuring the temperature of the condenser condensate.² **(R 336.1910, R 336.1201, 40 CFR 64.6(c)(1)(i), (ii))**
2. The permittee shall equip and maintain the spray tower scrubber (22753) with a liquid flow indicator.² **(R 336.1910, R 336.1201)**
3. The permittee shall equip and maintain the service water condenser (22713) with an indication device for measuring the service water return temperature. **(40 CFR 64.6(c)(1)(i), (ii))**
4. The permittee shall calibrate the temperature indicator for condensers 7791 and 22713 in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Within 360 days or ROP reissuance, the permittee shall verify VOC and hydrogen chloride emission rates from EU604-08 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A
Hydrogen Chloride	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

2. The permittee shall verify the VOC and hydrogen chloride emission rates from EU604-08 at a minimum, every five years from the date of the last test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**
3. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted. **(R 336.1213(3))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. During railcar unloading, the permittee shall monitor and record, on a continuous basis, the condensate temperature of Freon-cooled condenser 7791 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.² **(40 CFR 64.6(c)(1), R 336.1702(a), R 336.1201)**

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2. The permittee shall monitor and record, on a per shift basis, the spray tower scrubber (22753) liquid flow rate with instrumentation acceptable to the AQD.¹ **(R 336.1224)**
3. The permittee shall monitor and record, on a per shift basis, the service water return temperature of condenser 22713 with instrumentation acceptable to the AQD. **(40 CFR 64.6(c)(1), R 336.1213(3))**
4. The permittee shall keep records as required to demonstrate compliance with the emission limits specified in this table. Emission totals shall be calculated using the method described in Appendix 7, Section 7.11. A monthly summary of these emissions shall be made available to the AQD upon request. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission totals specified in this table.² **(R 336.1224, R 336.1702(a), R 336.1201)**
5. The permittee shall maintain a record of all railcar unloading operations. At a minimum, this record shall include the date, time and duration of all railcar unloading operations. **(R 336.1213(3))**
6. For condensers 7791 and 22713, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). **(40 CFR 64.7(d))**
7. For condensers 7791 and 22713, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
8. For condensers 7791 and 22713, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
9. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

See Appendix 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

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3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**
5. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**
6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

Exhaust gases shall be discharged unobstructed vertically upwards unless otherwise noted. SV604-014 and SV604-020 vent downward. SV604-015 vents horizontally. SV604-012, SV604-016, SV604-045, SV604-046, SV604-047, SV604-017, SV604-049, and SV604-053 vent upward with a kettle cap.

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV604-012	1.5 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
2. SV604-043	2.0 ²	80 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
3. SV604-013	3.0 ²	11.0 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
4. SV604-014	2.0 ²	0 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
5. SV604-015	2.0 ²	51 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
6. SV604-016	2.0 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
7. SV604-044	6.0 ²	12.0 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
8. SV604-045	2.0 ²	41.5 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
9. SV604-046	2.0 ²	41.5 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
10. SV604-047	2.0 ²	41.5 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
11. SV604-017	4.0 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
12. SV604-020	2.0 ²	55 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
13. SV604-049	4.0 ²	41.5 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
14. SV604-053	2.0 ²	41.5 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201

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IX. OTHER REQUIREMENT(S)

1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU800-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

800 block tank farm consisting of storage and transfer operations for on-site waste liquids. Emissions are controlled by a nitrogen blanket.

The most recent PTI for this emission unit is PTI No. 334-88E.

Flexible Group ID: FGMONMACT

POLLUTION CONTROL EQUIPMENT

Nitrogen (N₂) blanket

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	0.76 tpy* ²	12-month rolling time period as determined at the end of each calendar month	EU800-01	SC VI.3, SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU800-01 unless the pressure of the N₂ pressure blanket is greater than or equal to 3 psig.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU800-01 unless the N₂ pressure blanket is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirement of SC III.1.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (**R 336.1213(3)(b)(ii)**)

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (**R 336.1213(3)(b)(ii)**)

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

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2. The permittee shall monitor and record, on a daily basis, the pressure of the N₂ pressure blanket with instrumentation acceptable to the AQD. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall record the date, amount of liquid waste transferred, and the type of transfer (e.g. dempster, tank truck, drum, vacuum transfer, etc.) for each transfer of liquid waste to and from each storage tank and for each dempster depressurization. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1702(a), R 336.1201)**
4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU800-01 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV800-001 (Solvent Tanks)	3 ²	30 ²	R 336.1225 40 CFR 52.21(c) & (d)
2. SV800-002 (Code B Tank)	3 ²	29 ²	R 336.1225 40 CFR 52.21(c) & (d)
3. SV800-003 (Methoxysilane Tank)	3 ²	30 ²	R 336.1225 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EUBOILER2515
EMISSION UNIT CONDITIONS**

DESCRIPTION

~~25.1 MMBTU/hr boiler capable of burning natural gas, synthesis gas, or a blended mixture of both. This boiler is located in 2515 building and decommissioned but not dismantled. 40 CFR Part 63, Subpart DDDDD may be applicable to EUBOILER2515 if EUBOILER2515 is operated.~~

~~Flexible Group ID: FGPEM&BLR~~

POLLUTION CONTROL EQUIPMENT

~~NA~~

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	7.0 pph²	Hourly	EUBOILER2515	SC-V.1	R 336.1205, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
2. CO	2.8 pph²	Hourly	EUBOILER2515	SC-V.1	R 336.1205

II. MATERIAL LIMIT(S)

~~1. The permittee shall burn only synthesis gas and/or natural gas in EUBOILER2515. The permittee shall burn the synthesis/natural gas blended fuel only up to the maximum synthesis to natural gas percentage blend tested for during the most recent validated performance (stack) test.² (R 336.1201(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(e) & (d))~~

III. PROCESS/OPERATIONAL RESTRICTION(S)

~~1. The permittee shall operate EUBOILER2515 in accordance with manufacturer's recommendations for safe and proper operation to minimize emissions during periods of startup, shutdown and malfunction.² (R 336.1912)~~

~~2. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and Dc, as they apply to EUBOILER2515.² (40 CFR Part 60, Subparts A & Dc)~~

IV. DESIGN/EQUIPMENT PARAMETER(S)

~~1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device/devices to monitor and record both the synthesis gas and natural gas fuel use for EUBOILER2515 on a daily basis.² (R 336.1201)~~

V. TESTING/SAMPLING

~~Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))~~

~~1. Within 180 days after commencement of trial operation, verification of NOx and CO emission rates from EUBOILER2515, by testing at owner's expense, in accordance with Department requirements, will be required. The permittee must complete the test once every five years of operation. No less than 60 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must describe the normal operating range for the boiler and must be approved by the AQD prior to testing. Verification of emission rates includes the submittal~~

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of a complete report of the test results to the AQD within 60 days following the last date of the test.² ~~(R 336.1201, R 336.2001, R 336.2003, R 336.2004)~~

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. ~~(R 336.1213(3)(b)(ii))~~

- ~~1. The permittee shall keep, in a satisfactory manner, daily, monthly and 12-month rolling time period synthesis and natural gas fuel use records for EUBOILER2515. All records shall be kept on file at the facility and made available to the Department upon request.² (R 336.1201)~~

See Appendix 7

VII. REPORTING

- ~~1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))~~
- ~~2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))~~
- ~~3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))~~

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. EUBOILER2515	26 ²	50 ²	R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EU2515-01
EMISSION UNIT CONDITIONS

DESCRIPTION

An electrically powered plasma arc gasifier known as a "plasma enhanced melter (PEM)" with ancillary equipment.

The most recent PTI for this emission unit is PTI No. 175-09A.

Flexible Group ID: FGPEM&BLR, FGTHROX

POLLUTION CONTROL EQUIPMENT

- ~~FGTHROX~~
- ~~Flare~~
- ~~Control train consisting of a partial quench column (Q-0630)~~
- ~~Baghouse (F-0640)~~
- ~~HCl production system~~
- ~~Synthesis gas polishing system including a recirculating scrubber (S-0650), a carbon filter (F-0680), and a high efficiency filter (F-0683).~~

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. ~~The permittee shall immediately cease the input feed to EU2515-01, consistent with safe operating procedures, if the flare, FGTHROX, and boiler are not available. Input feed to EU2515-01 shall not restart until one of the devices is available to burn the synthesis gas.² (R 336.1224, R 336.1205(3))~~
2. ~~The permittee shall not process materials in EU2515-01 other than the following: Q8-6011 (waste chlorosilane), Q8-6017 (waste solvent / siloxane), Q8-6061 (waste SiH siloxane), Q8-6064 (waste tetramethoxysilane), Q8-6116 (waste ethylenediamine monohydrochloride), Q8-6118 (waste vinylchlorosilanes), Q8-6227 (waste methyl chloride), Q8-6228 (waste propene chlorosilane), Q8-6062 (waste alkoxy silane), and any additional waste stream(s), provided the permittee meets both of the following provisions:² (R 336.1207(1)(a), R 336.1224, R 336.1225, R 336.285(b), R 336.1702(a), R 336.1901)~~
 - a. ~~The synthesis gas produced by the permittee satisfies the "exclusion criteria" of Rule 230 of State of Michigan Part 111 Administrative Rules, specifically R 299.9230(2);~~
 - b. ~~Processing the additional waste stream(s) does not cause a meaningful change in the quality and nature or a meaningful increase in the quantity of emissions from FGTHROX, or any other unit permitted by the Department to use synthesis gas.~~
3. ~~The permittee shall not burn synthesis gas in the flare for more than 5,000 hours per 12-month rolling time period as determined at the end of each calendar month.² (R 336.1205(3))~~

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. ~~The permittee shall not operate EU2515-01 unless the flare is installed, maintained, and operated in a satisfactory manner.² (R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.1910)~~

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- ~~The permittee shall equip and maintain the flare with a device for continuously monitoring whether or not the pilot flame is operating.² (R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.1910)~~
- ~~The permittee shall operate a continuously burning pilot flame at the flare when inputting waste feed to EU2515-01.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.1910)~~

V. TESTING/SAMPLING

~~Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))~~

NA

VI. MONITORING/RECORDKEEPING

~~Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))~~

- ~~The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1201(3))~~
- ~~The permittee shall keep, in a satisfactory manner, a record of the identity of the wastes processed in EU2515-01 each year. For each waste processed, the record shall also include the reason that the waste is acceptable under SC III.2, with supporting documentation for any waste added pursuant to SC III.2.a and III.2b. The permittee shall keep all records on file at the facility for a period of at least five years after the waste is last processed and make them available to the Department upon request.² (R 336.1205(3), R 336.1225)~~
- ~~The permittee shall keep, in a satisfactory manner, records of the hours the flare is operated on synthesis gas on a monthly basis and 12-month rolling time period basis, as determined at the end of each calendar month. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1205(3))~~

See Appendix 7

VII. REPORTING

- ~~Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))~~
- ~~Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))~~
- ~~Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))~~

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2515-01	48 ²	36 ²	R 336.1225, R 336.1201

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IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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D. FLEXIBLE GROUP CONDITIONS

Part D outlines the terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGLEAKDETECTION	Emission units subject to the requirements of 40 CFR Part 61, Subpart A, Subpart J (National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene), and Subpart V (National Emission Standard for Equipment Leaks (Fugitive Emission Sources)).	EU303-11, EU340-01, EU505-01, EU505-04, EU505-11, EU515-01, EU800-01, EURULE290, FG337SCRUBBER, FGSITESCRUBBERS
FG304VENTRECOVERY	304 vent recovery system comprised of two interchangers (HX1 2040 and HX2 2040) and two condensers (HX1 2044 and HX2 2044) which operate in series to remove air contaminants from process exhaust. The 304 vent recovery system receives process exhaust from several emission units on-site. Emissions are controlled by the THROX, the 337 wet scrubber, or the site scrubbers. FG304VENTRECOVERY is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The condensers are CAM subject devices for VOC. The most recent PTI for this emission unit is PTI No. 84-08B.	EU502-01, EU502-07, EURULE290
FG337SCRUBBER	337 spray tower water scrubber used to remove HCl and chlorosilanes from process exhaust prior to discharge to atmosphere. The 304 vent recovery system vents to the 337 scrubber. The 337 scrubber receives process exhaust from several emission units on site. The 337 scrubber is comprised of two scrubbers (i.e., scrubber nos. 9950 and 9960) which typically alternate in operation but can operate in parallel. The 337 scrubber utilizes water from the venturi scrubbers at EU325-01 (TCS vent recovery system) and city water as makeup. The most recent PTI for this emission unit is PTI No. 84-08.	EU325-01, EU502-01, EU502-07, EU502-11, EU508-01, FGSITESCRUBBERS, FGTHROX, FGLEAKDETECTION

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Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGRULE290	Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278, 278a and 290. Emission units installed/modified before December 20, 2016, may show compliance with Rule 290 in effect at the time of installation/modification.	EURULE290, EU340-03, FGMONMACT, FGOLDFACILITY, FGGLEAKDETECTION
FGCOLDCLEANERS	Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, 278a and Rule 281(2)(h) or Rule 285(2)(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.	EUCOLDCLEANER
FGRULE604	Any existing or future storage vessels subject to the requirements of R 336.1604 (Rule 604). Storage vessels subject to AQD Rule 604 are those which store any organic compound having a true vapor pressure of more than 1.5 psia, but less than 11 psia, at actual storage conditions in any fixed roof stationary vessel of more than 40,000 gallon capacity.	EURULE604
FGRULE605	Any existing or future storage vessels subject to the requirements of R 336.1605 (Rule 605). Storage vessels subject to AQD Rule 605 are those which store any organic compound having a true vapor pressure of 11 or more psia at actual storage conditions in any stationary vessel of more than 40,000 gallon capacity.	EURULE605
FGRULE703	Any new or future storage vessels subject to the requirements of R 336.1703 (Rule 703). Storage vessels subject to AQD Rule 703 are those which receive gasoline from a delivery vessel into any new stationary vessel of more than 2000 gallon capacity located at any gasoline dispensing facility.	EURULE703
FG325-01	Carbon bed and venturi scrubber system used to control emissions from EU325-01, EU502-01, and EU502-07. The 337 scrubber acts as a backup to the venturi scrubber system. The most recent PTI for this emission unit is PTI No. 44-06B.	EU325-01, EU502-01, EU502-07
FG432BOILERS	Three natural gas-fired boilers: EUBOILER12, EUBOILER13, and EUBOILER14; each rated at 103 MMBTU/hr with low-NOx burners. This flexible group is subject to the requirements of 40 CFR Part 63, Subpart DDDDD. The most recent PTI for this emission unit is PTI No. 92-21.	EUBOILER12, EUBOILER13, EUBOILER14, FGBOILERMACT-NG
FGSITEBLOWER	Site vent consolidation and blower system that collects vapor streams from numerous emission units and vents throughout the facility and routes them to either the on-site thermal oxidizer with heat recovery (FGTHROX) or to a site-wide water scrubber system. There are two parts to the site	These emission units include, but are not limited to, the following: EU303-06, EU303-09, EU303-11, EU304-02, EU321-01, EU321-02, EU321-11, EU325-01, EU502-01, EU502-04, EU502-07, EU502-09,

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Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
	<p>vent consolidation and blower system: a dry vent header system for water reactive vents and a wet vent header system for vents that can contain water.</p> <p>The most recent PTI for this emission unit is PTI No. 91-07E.</p>	<p>EU505-01, EU505-11, EU601-01, EU2703-01, EU2703-03, EU2703-08, EU2703-17, EURULE290, FGTHROX, FGSITESCUBBERS</p>
FGSITESCUBBERS	<p>Site-wide water scrubber system. FGSITESCUBBERS will remove HCl and chlorosilanes from the FGSITEBLOWER consolidated vents system prior to discharge to atmosphere when the site-wide thermal oxidizer system is not operating properly.</p> <p>The most recent PTI for this emission unit is PTI No. 91-07E.</p>	<p>These emission units include, but are not limited to, the following: EU303-01, EU303-02, EU303-06, EU303-09, EU303-11, EU303-15, EU303-16, EU303-19, EU304-02, EU321-01, EU321-02, EU321-07, EU321-11, EU321-12, EU325-01, EU502-01, EU502-07, EU502-09, EU502-11, EU505-01, EU505-11, EU508-01, EU515-01, EURULE290, FGHAP2012A2A, FGSITEBLOWER, FG304VENTRECOVERY, FG337SCRUBBER, FGLEAKDETECTION</p>
FGTHROX	<p>Site-wide thermal oxidizer system. The THROX will remove VOC, HAPs, PM10, Hydrogen Chloride, and other toxic air contaminants from the FGSITEBLOWER consolidated vents system prior to discharge to atmosphere. This flexible group is subject to the requirements of 40 CFR Part 63, Subpart FFFF. FGTHROX is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 92-21.</p>	<p>These emission units include, but are not limited to, the following: EU303-01, EU303-02, EU303-06, EU303-09, EU303-11, EU303-15, EU303-16, EU303-19, EU304-02, EU321-01, EU321-02, EU321-07, EU321-11, EU321-12, EU322-02, EU322-04, EU325-01, EU502-01, EU502-02, EU502-04, EU502-07, EU502-09, EU502-11, EU505-01, EU505-11, EU508-01, EU515-01, EU601-01, EU2515-01, EU2703-01, EU2703-03, EU2703-08, EU2703-09, EU2703-13, EU2703-17, EURULE290, FGHAP2012A2A, FGSITEBLOWER, FG304VENTRECOVERY, FG337SCRUBBER</p>
FGOLDFACILITY	<p>The affected source is each new, reconstructed, or existing Organic Liquid Distribution (OLD) (non-gasoline) operation that is located at, or is part of, a major source of hazardous air pollutant (HAP) emissions. The affected source is comprised of storage tanks, transfer racks, equipment leak components associated with storage tanks, transfer racks and pipelines, transport vehicles, and all containers while loading or unloading at transfer racks subject to this subpart. Equipment that is part of an affected source under another NESHAP is excluded from the affected source. See 40 CFR 63.2338(c).</p>	<p>EU515-01, EU340-03, EURULE290</p>
FGHCLMACT	<p>HCl production facility: the collection of unit operations and equipment associated with the production of liquid HCl product at a concentration</p>	<p>EU356-01, EU356-02</p>

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Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
	of 30 weight percent or greater during normal operations that is located at, or is part of, a major source of hazardous air pollutant emissions. See 40 CFR 63.8985(a).	
FGHAP2012A2A	<p>This flexible group consists of all the listed emission units. The listed emission units are the emission units at the facility as of the effective date of Permit to Install 91-07C (November 19, 2012) that emit hazardous air pollutants and emission units that support HAP emitting emission units, such as boilers and the InEntec plasma enhanced melter (EU2515-01). This flexible group will apply to all the listed emission units even if they are reconstructed as defined in the Michigan Rules R-336.1418, modified, renamed, or re-permitted. This flexible group was established for purposes of keeping records for the actual to projected actual PSD applicability determination.</p> <p>The most recent PTI for this emission unit is PTI No. 91-07E.</p>	<p>EU106-01, EU106-02, EU106-05, EU106-06, EU106-07, EU106-12, EU108-01, EU108-02, EU109-01, EU109-02, EU109-04, EU109-05, EU109-06, EU109-07, EU109-09, EU207-04, EU207-13, EU207-14, EU207-15, EU207-16, EU207-17, EU207-18, EU207-19, EU212-01, EU212-02, EU212-03, EU212-04, EU212-05, EU212-06, EU212-07, EU212-08, EU212-10, EU212-11, EU212-12, EU2404-01, EU2409-01, EU2409-02, EU2515-01, EU2703-01, EU2703-02, EU2703-03, EU2703-04, EU2703-05, EU2703-06, EU2703-07, EU2703-08, EU2703-09, EU2703-10, EU2703-12, EU2703-13, EU2703-14, EU2901-02, EU2901-04, EU2901-05, EU2901-14, EU2901-15, EU2901-16, EU303-01, EU303-02, EU303-03, EU303-04, EU303-06, EU303-09, EU303-10, EU303-11, EU303-13, EU303-19, EU304-01, EU3101-01, EU3102-02, EU3102-05, EU3102-09, EU3104-06, EU3104-08, EU3104-09, EU3104-14, EU3111-01, EU321-01, EU321-02, EU321-05, EU321-07, EU321-08, EU321-10, EU321-11, EU321-13, EU321-14, EU321-16, EU321-17, EU322-01, EU322-02, EU322-03, EU322-04, EU322-05, EU322-09, EU322-10, EU322-11, EU324-01, EU324-02, EU324-03, EU324-05, EU324-06, EU325-04, EU340-01, EU340-03, EU501-01, EU501-02, EU501-03, EU501-11, EU501-12, EU501-13, EU501-15, EU501-17, EU501-24, EU501-32, EU501-34, EU501-40, EU501-49, EU502-01, EU505-01, EU505-04, EU505-05, EU505-11, EU508-01, EU508-03, EU515-01, EU601-01, EU602-01, EU604-10, EUSITE-05, EUSITE-08, FGSITESCRUBBERS, FGTHROX</p>
FGEMERGENCIRICE <500HP	Each existing or new compression ignition emergency stationary reciprocating internal	EUEMERGENCIRICE<500HP

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Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
	combustion engines (RICE) located at a major source of HAP emissions as identified within 40 CFR Part 63, Subpart ZZZZ, 63.6590(a)(1), less than or equal to 500 brake hp and is exempt from the requirements of Rule 201 pursuant to Rules 282(2)(b) or 285(2)(g)	
FGPEM&BLR	Plasma enhanced melter (PEM) and 25.1 MMBTU/hour boiler.	EU2515-01, EUBOILER2515
FGBOILERMACT-NG	Emission units subject to the requirements of 40 CFR Part 63, Subpart A (General Provisions) and Subpart DDDDD (National Emission Standard for Hazardous Air Pollutants: Industrial, Commercial and Institutional Boilers and Process Heaters – Major Sources) that burn only natural gas.	EU303-04, EU325-04, EU501-40, EU508-02, EU508-03, EU604-10, FG432BOILERS
FGMONMACT	Emission units subject to the requirements of 40 CFR Part 63, Subpart A (General Provisions) and Subpart FFFF (National Emission Standard for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing).	EU108-01, EU109-02, EU109-04, EU207-03, EU207-13, EU207-14, EU207-15, EU207-16, EU207-17, EU207-18, EU207-19, EU212-01, EU212-02, EU212-03, EU212-05, EU212-12, EU2504-14, EU2504-15, EU2504-16, EU2504-17, EU2504-18, EU2504-19, EU2505-06, EU2505-07, EU2703-01, EU2703-03, EU2703-08, EU2703-09, EU2703-13, EU2703-17, EU2901-16, EU303-01, EU303-02, EU303-03, EU303-06, EU303-09, EU303-15, EU303-16, EU303-19, EU304-02, EU311-01, EU321-01, EU321-02, EU321-07, EU321-11, EU321-12, EU322-01, EU322-02, EU322-03, EU322-04, EU322-11, EU324-01, EU324-08, EU324-11, EU324-18, EU340-01, EU340-03, EU501-01, EU501-02, EU501-12, EU501-49, EU502-04, EU505-01, EU505-04, EU505-11, EU508-01, EU515-01, EU601-01, EU602-07, EU604-08, EU800-01, EURULE290, FGTHROX

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**FGLEAKDETECTION
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Emission units subject to the requirements of 40 CFR Part 61, Subpart A (General Provisions), Subpart J (National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene), and Subpart V (National Emission Standard for Equipment Leaks (Fugitive Emission Sources)).

Emission Units: EU303-11, EU340-01, EU505-01, EU505-04, EU505-11, EU515-01, EURULE290, EU800-01

Flexible Group ID: FG337SCRUBBER, FGSITESCUBBERS

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall comply with the applicable requirements of 40 CFR Part 61, Subpart V (National Emission Standard for Equipment Leaks (Fugitive Emission Sources)), Section 61.246 (Recordkeeping requirements). (40 CFR Part 61, Subpart V)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))

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3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall comply with the applicable requirements of 40 CFR Part 61, Subpart V, Section 61.247 (Reporting Requirements). **(40 CFR Part 61, Subpart V)**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the applicable requirements of 40 CFR Part 61, Subparts A (General Provisions). **(40 CFR Part 61, Subpart A)**
2. The permittee shall comply with the applicable requirements of 40 CFR Part 61, Subpart J (National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene). The applicable sections of Subpart J include, but are not necessarily limited to: 61.112 (Standards). **(40 CFR Part 61, Subpart J)**
3. The permittee shall comply with the applicable requirements of 40 CFR Part 61, Subpart V. The applicable sections of Subpart V include, but are not necessarily limited to: **(40 CFR Part 61, Subpart V)**
 - a. 61.242-1 (Standards: General)
 - b. 61.242-2 (Standard: Pumps)
 - c. 61.242-4 (Standards: Pressure relief devices in gas/vapor service)
 - d. 61.242-7 (Standards: Valves)
 - e. 61.242-8 (Standards: Pressure relief devices in liquid service and flanges and other connectors)
 - f. 61.242-10 (Standards: Delay of repair)
 - g. 61.243-1 (Alternative standards for valves in VHAP service – allowable percentage of valves leaking)
 - h. 61.245 (Test methods and procedures)

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FG304VENTRECOVERY
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

304 Vent Recovery System comprised of two interchangers (HX1 2040 and HX2 2040) and two condensers (HX1 2044 and HX2 2044) which operate in series to remove air contaminants from process exhaust. The 304 vent recovery system receives process exhaust from several emission units on-site. FG304VENTRECOVERY is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The condensers are CAM subject devices for VOC.

The most recent PTI for this emission unit is PTI No. 84-08b.

Emission Units: EU502-01, EU502-07, EURULE290

Flexible Group ID: FG337SCRUBBER, FGTHROX, FGSITESCUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

- FGTHROX: Thermal oxidizer with heat recovery (THROX) unit consisting of a burner, quencher, absorber, and two two-stage ionizing wet scrubbers (IWS) in series; or
- FG337SCRUBBER: 337 wet scrubber (9950, 9960-scrubbers typically alternate in operation, but can operate in parallel and vent to SV337-001/002, respectively); or
- FGSITESCUBBERS: Site wide water scrubber system that removes HCl and chlorosilanes from the FGSITEBLOWER consolidated vent system prior to discharge to atmosphere when the site wide thermal oxidizer system is not operating properly.
- Condensers HX1 2044 and HX2 2044

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC ^a	30.0 pph ²	Hourly	FG304VENTRECOVERY	SC VI.1	R 336.1702(a), R 336.1225
2. VOC ^a	22.5 tpy ²	12-month rolling time period as determined at the end of each calendar month	FG304VENTRECOVERY	SC VI.1	R 336.1702(a), R 336.1225
3. Benzene ^a	0.46 pph ¹	Hourly	FG304VENTRECOVERY	SC VI.1	R 336.1225

^aNote these emission limits apply to the outlet of the 304 vent recovery system prior to mixing with any other vent streams. Emission testing would be conducted in the vent header rather than at an exhaust stack.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Except as allowed by FGSITEBLOWER, SC IV.1.a, the permittee shall not operate any emission unit vented to the 304 vent recovery system if the exit gas temperature of the refrigerated vent condensers (HX1 2044 and HX2 2044) exceeds -76°C. Exceeding this parameter is an excursion. An excursion of the HX1 2044 and HX2 2044 condensers exit gas temperature is exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the HX1 2044 and HX2 2044

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condensers exit gas temperature, the permittee shall restore operation of 304 Vent Recovery System to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² (40 CFR 64.6(c), 40 CFR 64.7(d), R 336.1225, R 336.1702, R 336.1910, 40 CFR 64.6(c)(2))

2. The permittee shall install and calibrate a temperature indicator for condensers HX1 2044 and HX2 2044 in a satisfactory manner. (40 CFR 64.6(c)(1)(ii), (iii))

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Within 240 days or ROP reissuance, the permittee shall verify VOC and benzene emission rates from FG304VENTRECOVERY by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A
Benzene	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. (R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall verify the VOC and benzene emission rates from, at a minimum, every five years from the date of the last test. (R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)
3. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted. (R 336.1213(3))
4. No later than April 30, 2013, the permittee shall verify the VOC and benzene emission rates from FG304VENTRECOVERY by testing at owner's expense, in accordance with department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD technical programs unit and district office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD technical programs unit and district office within 60 days following the last date of the test.² (R 336.1225, R 336.1702)

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of the refrigerated vent condensers (HX1 2044 and HX2 2044) with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. (R 336.1225, R 336.1910, 40 CFR 64.6(c)(1), R 336.1213(3))
2. For FG304VENTRECOVERY, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely

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recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). **(40 CFR 64.7(d))**

3. For FG304VENTRECOVERY, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
4. For FG304VENTRECOVERY, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
5. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Each semiannual report of monitoring and deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no excursions and/or exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**
5. Each semiannual report of monitoring and deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**
6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

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IX. OTHER REQUIREMENT(S)

1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**FG337SCRUBBER
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

337 spray tower water scrubber used to remove HCl and chlorosilanes from process exhaust prior to discharge to atmosphere. The 304 vent recovery system vents to the 337 scrubber. The 337 scrubber receives process exhaust from several emission units on site. The 337 scrubber is comprised of two scrubbers (i.e., scrubbers 9950 and 9960) which typically alternate in operation but can operate in parallel. The 337 scrubber utilizes water from the venturi scrubbers at EU325-01 (TCS vent recovery system) and city water as makeup.

The most recent PTIs for this flexible group are PTI Nos. 131-15 and 185-07B.

Emission Units: EU325-01, EU502-01, EU502-07, EU502-11, EU508-01

Flexible Group ID: FGSITESCRRUBBERS, FGTHROX, FGLEAKDETECTION

POLLUTION CONTROL EQUIPMENT

- Water Scrubbers.9950 and 9960
- FGTHROX (Backup)
- FGSITESCRRUBBERS (Backup)

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Prior to discharge of process emissions through vent no. SV337-001, process emissions shall pass through scrubber 9950. If the liquid flow rate of scrubber 9950 is less than 45 gallons per minute while process gas is passing through it, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. **(R 336.1213(3))**
2. Prior to discharge of process emissions through vent SV337-002, process emissions shall pass through scrubber 9960. If the liquid flow rate of scrubber 9960 is less than 45 gallons per minute while process gas is passing through it, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of scrubber 9950 and 9960 with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event. (R 336.1213(3))
2. The permittee shall install and maintain a color camera and monitor system to monitor the visual emissions from the 337 wet scrubber. (R 336.1213(3))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV337-001 (scrubber 9950)	10 ²	30 ²	R 336.1201(3)
2. SV337-002 (scrubber 9960)	10 ²	30 ²	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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FGRULE290
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278, 278a and 290. Emission units installed/modified before December 20, 2016, may show compliance with Rule 290 in effect at the time of installation/modification.

Emission Units: EURULE290, ~~EU340-03~~

Flexible Group ID: FGMONMACT, FGOLDFACILITY, FGLEAKDETECTION

Current Rule 290 emission units at this facility are listed in the table below:

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<u>Emission Unit Identification</u>	<u>Plant/Process</u>	<u>Control device</u>	<u>NESHAP Subject Flexible Group</u>
<u>EG106-02</u>	<u>Resins - 100 Block</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG106-04</u>	<u>Resins - 100 Block</u>	<u>N/A</u>	<u>FGMONMACT</u>
<u>EG106-05</u>	<u>Resins - 100 Block</u>	<u>DV4016 Scrubber</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG106-06</u>	<u>Resins - 100 Block</u>	<u>DV4016 Scrubber</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG106-08</u>	<u>Resins - 100 Block</u>	<u>DV4016 Scrubber</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG106-09</u>	<u>Resins - 100 Block</u>	<u>N/A</u>	<u>FGMONMACT</u>
<u>EG106-10</u>	<u>Resins - 100 Block</u>	<u>N/A</u>	<u>FGMONMACT</u>
<u>EG106-11</u>	<u>Resins - 100 Block</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG106-12</u>	<u>Resins - 100 Block</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG106-13</u>	<u>Resins - 100 Block</u>	<u>N/A</u>	<u>FGMONMACT</u>
<u>EG108-02</u>	<u>Resins - 100 Block</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG109-01</u>	<u>Resins - 100 Block</u>	<u>DV2210 Scrubber</u> <u>DV24472 Condenser</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG109-03</u>	<u>Resins - 100 Block</u>	<u>N/A</u>	<u>FGMONMACT</u>
<u>EG109-05</u>	<u>Resins - 100 Block</u>	<u>N/A</u>	<u>FGMONMACT</u>
<u>EG109-06</u>	<u>Resins - 100 Block</u>	<u>DV2299 Scrubber</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG109-07</u>	<u>Resins - 100 Block</u>	<u>DV24472 Condenser</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG109-09</u>	<u>Resins - 100 Block</u>	<u>DV4443 Condenser</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG207-04</u>	<u>Elastomers - 207 Bldg</u>	<u>Dust Collector</u>	<u>N/A</u>
<u>EG207-07</u>	<u>Elastomers - 207 Bldg</u>	<u>Dust Collector</u>	<u>N/A</u>
<u>EG207-08</u>	<u>Elastomers - 207 Bldg</u>	<u>Dust Collector</u>	<u>N/A</u>
<u>EG207-09</u>	<u>Elastomers - 207 Bldg</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG212-04</u>	<u>Elastomers - 212 Bldg</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG212-06</u>	<u>Elastomers - 212 Bldg</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG212-07</u>	<u>Elastomers - 212 Bldg</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG212-08</u>	<u>Elastomers - 212 Bldg</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG212-09</u>	<u>Elastomers - 212 Bldg</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG212-10</u>	<u>Elastomers - 212 Bldg</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>

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EG212-11	Elastomers - 212 Bldg	N/A	FGLEAKDETECTION FGMONMACT
EG212-19	Elastomers - 212 Bldg	N/A	FGLEAKDETECTION FGMONMACT
EG212-20	Elastomers - 212 Bldg	N/A	N/A
EG2504-09	Emulsions - 2504 Bldg	DV25028 Condenser	FGMONMACT
EG2505-02	Emulsions - 2505 Bldg	N/A	FGMONMACT
EG2505-10	Emulsions - 2505 Bldg	DV25714 Condenser	FGMONMACT
EG2505-12	Emulsions - 2505 Bldg	DV22494 Condenser	N/A
EG2505-13	Emulsions - 2505 Bldg	Baghouse	N/A
EG2602-01	Infrastructure - 2602 Bldg	N/A	N/A
EG2602-03	Infrastructure - 2602 Bldg	N/A	FGLEAKDETECTION FGMONMACT
EG2703-02	OSS - 2703 Bldg	DV9103 Emergency Scrubber	FGLEAKDETECTION FGMONMACT
EG2703-05	OSS - 2703 Bldg	DV9254 Scrubber DV9255 Scrubber DV9285 Amine Scrubber	FGLEAKDETECTION FGMONMACT
EG2703-06	OSS - 2703 Bldg	DV9254 Scrubber DV9255 Scrubber FGTHROX	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX
EG2703-10	OSS - 2703 Bldg	N/A	FGLEAKDETECTION FGMONMACT
EG2703-12	OSS - 2703 Bldg	DV9285 Scrubber	FGLEAKDETECTION FGMONMACT
EG2703-14	OSS - 2703 Bldg	DV9254 Scrubber DV9255 CPTC Scrubber DV9390 A/B Scrubber DV9163 PP S/D Scrubber DV9208 Scrubber	FGLEAKDETECTION FGMONMACT
EG2703-15	OSS - 2703 Bldg	DV25959 Scrubber DV24660 Condenser FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EG2901-02	Finishings - 2901 Bldg	DV19734 Scrubber DV19735 Condenser	FGLEAKDETECTION FGMONMACT
EG2901-05	Finishings - 2901 Bldg	DV16564 Condenser DV16573 Condenser	FGMONMACT
EG2901-06	Finishings - 2901 Bldg	DV16583B Condenser DV16585 Condenser	FGLEAKDETECTION FGMONMACT
EG2901-17	Finishings - 2901 Bldg	DV19735 Condenser DV25541 Condenser	FGLEAKDETECTION FGMONMACT

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<u>EG303-13</u>	<u>Resins - 303 Bldg</u>	<u>DV24905 Condenser</u> <u>FGTHROX</u> <u>FGSITESCRUBBERS</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u> <u>FGSITEBLOWER</u> <u>FGTHROX</u> <u>FGSITESCRUBBERS</u>
<u>EG303-14</u>	<u>Resins - 303 Bldg</u>	<u>FGTHROX</u> <u>FGSITESCRUBBERS</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u> <u>FGSITEBLOWER</u> <u>FGTHROX</u> <u>FGSITESCRUBBERS</u>
<u>EG303-17</u>	<u>Resins - 303 Bldg</u>	<u>DV1637 Condenser</u> <u>DV3458 Condenser</u> <u>FGTHROX</u> <u>FGSITESCRUBBERS</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u> <u>FGSITEBLOWER</u> <u>FGTHROX</u> <u>FGSITESCRUBBERS</u>
<u>EG303-18</u>	<u>Resins - 303 Bldg</u>	<u>DV1637 Condenser</u> <u>DV3458 Condenser</u> <u>FGTHROX</u> <u>FGSITESCRUBBERS</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u> <u>FGSITEBLOWER</u> <u>FGTHROX</u> <u>FGSITESCRUBBERS</u>
<u>EG304-01</u>	<u>HVS - 304 Bldg</u>	<u>N/A</u>	<u>N/A</u>
<u>EG305-01</u>	<u>HVS - 305 Bldg</u>	<u>Scrubber 5224</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG3102-02</u>	<u>Finishings - 3102 Bldg</u>	<u>DV16311 Condenser</u> <u>DV16312 Condenser</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG3102-05</u>	<u>Finishings - 3102 Bldg</u>	<u>DV16311 Condenser</u> <u>DV16312 Condenser</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG3104-06</u>	<u>Finishings - 3104 Bldg</u>	<u>DV16311 Condenser</u> <u>DV16312 Condenser</u> <u>DV25270 Scrubber</u> <u>DV23610 Scrubber</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG3104-09</u>	<u>Finishings - 3104 Bldg</u>	<u>DV16311 Condenser</u> <u>DV16312 Condenser</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG3104-19</u>	<u>Finishings - 3104 Bldg</u>	<u>DV25265 Condenser</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG321-05</u>	<u>Resins - 321 Bldg</u>	<u>DV5106 Scrubber</u> <u>DV7170 Scrubber</u> <u>DV11476 Scrubber</u> <u>DV4776 Scrubber</u> <u>Carbon Beds</u> <u>FGTHROX</u> <u>FGSITESCRUBBERS</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u> <u>FGSITEBLOWER</u> <u>FGTHROX</u> <u>FGSITESCRUBBERS</u>

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<u>EG321-06</u>	<u>Resins - 321 Bldg</u>	<u>DV7159 Scrubber</u> <u>DV7158 Scrubber</u> <u>DV7170 Scrubber</u> <u>DV4776 Scrubber</u> <u>DV5141 Condenser</u> <u>Carbon Bed</u> <u>FGTHROX</u> <u>FGSITESCRUBBERS</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u> <u>FGSITEBLOWER</u> <u>FGTHROX</u> <u>FGSITESCRUBBERS</u>
<u>EG321-09</u>	<u>Resins - 321 Bldg</u>	<u>DV7158 Scrubber</u> <u>DV7170 Scrubber</u> <u>DV4776 Scrubber</u> <u>DV5141 Condenser</u> <u>FGTHROX</u> <u>FGSITESCRUBBERS</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u> <u>FGSITEBLOWER</u> <u>FGTHROX</u> <u>FGSITESCRUBBERS</u>
<u>EG321-10</u>	<u>Resins - 321 Bldg</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG321-14</u>	<u>Resins - 321 Bldg</u>	<u>DV5143 Condenser</u> <u>Carbon Bed</u> <u>FGTHROX</u> <u>FGSITESCRUBBERS</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u> <u>FGSITEBLOWER</u> <u>FGTHROX</u> <u>FGSITESCRUBBERS</u>
<u>EG321-17</u>	<u>Resins - 321 Bldg</u>	<u>DV11476 Scrubber</u> <u>DV7170 Scrubber</u> <u>DV4776 Scrubber</u> <u>Carbon Beds</u> <u>FGTHROX</u> <u>FGSITESCRUBBERS</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u> <u>FGSITEBLOWER</u> <u>FGTHROX</u> <u>FGSITESCRUBBERS</u>
<u>EG321-18</u>	<u>Resins - 321 Bldg</u>	<u>Carbon Beds</u> <u>FGTHROX</u> <u>FGSITESCRUBBERS</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u> <u>FGSITEBLOWER</u> <u>FGTHROX</u> <u>FGSITESCRUBBERS</u>
<u>EG322-05</u>	<u>OSS - 322 Bldg</u>	<u>DV19673 Condenser</u> <u>FGTHROX</u> <u>FGSITESCRUBBERS</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u> <u>FGTHROX</u> <u>FGSITEBLOWER</u> <u>FGSITESCRUBBERS</u>
<u>EG322-08</u>	<u>OSS - 322 Bldg</u>	<u>N/A</u>	<u>N/A</u>
<u>EG322-09</u>	<u>OSS - 322 Bldg</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG322-10</u>	<u>OSS - 322 Bldg</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG322-14</u>	<u>OSS - 322 Bldg</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG322-15</u>	<u>OSS - 322 Bldg</u>	<u>DV22452 Scrubber</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG324-02</u>	<u>OSS - 324 Bldg</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>

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EG324-03	OSS - 324 Bldg	N/A	FGLEAKDETECTION FGMONMACT
EG324-04	OSS - 324 Bldg	N/A	N/A
EG324-09	OSS - 324 Bldg	DV4804 Condenser DV4807 Condenser	FGLEAKDETECTION FGMONMACT
EG324-10	OSS - 324 Bldg	DV4804 Condenser DV4807 Condenser	FGLEAKDETECTION FGMONMACT
EG324-12	OSS - 324 Bldg	DV25169 Scrubber	FGLEAKDETECTION FGMONMACT
EG324-13	OSS - 324 Bldg	DV5609 Condenser DV25169 Scrubber	FGLEAKDETECTION FGMONMACT
EG324-14	OSS - 324 Bldg	DV25169 Scrubber	FGLEAKDETECTION
EG324-16	OSS - 324 Bldg	N/A	FGLEAKDETECTION FGMONMACT
EG324-17	OSS - 324 Bldg	N/A	FGLEAKDETECTION FGMONMACT
EG324-19	OSS - 324 Bldg	DV4813 Scrubber	FGLEAKDETECTION FGMONMACT
EG325-02	HVS - 325 Bldg	N/A	N/A
EG340-03	HVS - 340 Bldg	N/A	N/A
EG340-04	HVS - 340 Bldg	N/A	N/A
EG501-03	Emulsions - 501 Bldg	DV1808 Condenser DV24877 Condenser	N/A
EG501-07	Emulsions - 501 Bldg	N/A	FGLEAKDETECTION FGMONMACT
EG501-08	Emulsions - 501 Bldg	DV7533 Scrubber	N/A
EG501-23	Emulsions - 501 Bldg	N/A	FGLEAKDETECTION FGMONMACT
EG501-31	Emulsions - 501 Bldg	DV15091 Condenser	N/A
EG501-47	Emulsions - 501 Bldg	DV4358 Condenser	N/A
EG501-50	Emulsions - 501 Bldg	N/A	N/A
EG501-51	Emulsions - 501 Bldg	N/A	N/A
EG501-52	Emulsions - 501 Bldg	N/A	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EG502-02	HVS - 502 Bldg	FGTHROX Site Scrubbers #1 and #2	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EG505-05	Resins - 505 Bldg	DV510 Condenser DV6553 Condenser DV16092 Condenser DV25094 Condenser FGTHROX Site Scrubbers #1 and #2	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS

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EG505-07	Resins - 505 Bldg	DV6547 Scrubber FGTHROX Site Scrubbers #1 and #2	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EG505-08	Resins - 505 Bldg	DV16092 Condenser DV25094 Condenser DV26176 Condenser FGTHROX Site Scrubbers #1 and #2	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EG505-09	Resins - 505 Bldg	FGTHROX Site Scrubbers #1 and #2	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EG505-10	Resins - 505 Bldg	Carbon Drums	FGLEAKDETECTION FGMONMACT
EG505-13	Resins - 505 Bldg	DV5-510 FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EG602-01	Elastomers - 602 Bldg	DV23967 Condenser	N/A
EG602-02	Elastomers - 602 Bldg	DV16489 Condenser	FGMONMACT
EG602-03	Elastomers - 602 Bldg	DV6168 Condenser DV23633 Condenser	FGMONMACT
EG602-04	Elastomers - 602 Bldg	DV8890 Condenser DV6168 Condenser	FGMONMACT
EG602-05	Elastomers - 602 Bldg	DV8837 Condenser	FGMONMACT
EG602-06	Elastomers - 602 Bldg	DV6679 Condenser	FGMONMACT
EG602-12	Elastomers - 602 Bldg	DV22968 Condenser	FGMONMACT
EG602-13	Elastomers - 602 Bldg	DV22852 Condenser	N/A
EG602-14	Elastomers - 602 Bldg	N/A	N/A
EG800-02	Infrastructure - 800 Bldg	N/A	FGMONMACT

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

- Each emission unit that emits only noncarcinogenic volatile organic compounds or noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, if the total uncontrolled or controlled emissions of air contaminants are not more than 1,000 or 500 pounds per month, respectively. **(R 336.1290(2)(a)(i))**
- Any emission unit for which CO2 equivalent emissions are not more than 6,250 tons per month and for which the total uncontrolled or controlled emissions of all other air contaminants are not more than 1,000 or 500 pounds per month, respectively, and all the following criteria listed below are met: **(R 336.1290(2)(a)(ii))**

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- a. For toxic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 0.04 micrograms per cubic meter and less than 2.0 micrograms per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively; **(R 336.1290(2)(a)(ii)(A))**
 - b. For toxic air contaminants with initial risk screening levels greater than or equal to 0.04 microgram per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively; **(R 336.1290(2)(a)(ii)(B))**
 - c. The emission unit shall not emit any toxic air contaminants, excluding non-carcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with an initial threshold screening level or initial risk screening level less than 0.04 microgram per cubic meter; **(R 336.1290(2)(a)(ii)(C))**
 - d. For total mercury, the uncontrolled or controlled emissions shall not exceed 0.01 pounds per month from emission units installed on or after December 20, 2016; **(R 336.1290(2)(a)(ii)(D))**
 - e. For lead, the uncontrolled or controlled emissions shall not exceed 16.7 pounds per month from emission units installed on or after December 20, 2016. **(R 336.1290(2)(a)(ii)(E))**
3. Any emission unit that emits only particulate air contaminants without initial risk screening levels and other air contaminants that are exempted under Rule 290(2)(a)(i) or Rule 290(2)(a)(ii), if all the following provisions are met: **(R 336.1290(2)(a)(iii))**
- a. The particulate emissions are controlled by an appropriately designed and operated fabric filter collector or an equivalent control system which is designed to control particulate matter to a concentration of less than or equal to 0.01 pound of particulate per 1,000 pounds of exhaust gases and which does not have exhaust gas flow rate more than 30,000 actual cubic feet per minute; **(R 336.1290(2)(a)(iii)(A))**
 - b. The visible emissions from the emission unit are not more than 5% opacity in accordance with the methods contained in Rule 303; **(R 336.1290(2)(a)(iii)(B))**
 - c. The initial threshold screening level for each particulate toxic air contaminant, excluding nuisance particulate, is more than 2.0 micrograms per cubic meter. **(R 336.1290(2)(a)(iii)(C))**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The provisions of Rule 290 apply to each emission unit that is operating pursuant to Rule 290. **(R 336.1290)**
2. The following requirements apply to emission units installed on or after December 20, 2016, utilizing control equipment:
 - a. An air cleaning device for volatile organic compounds shall be installed, maintained, and operated in accordance with the manufacturer's specifications. Examples include the following: **(R 336.1290(2)(b)(i), R 336.1910)**
 - i. Oxidizers and condensers equipped with a continuously displayed temperature indication device;
 - ii. Wet scrubbers equipped with a liquid flow rate monitor;
 - iii. Dual stage carbon absorption where the first canister is monitored for breakthrough and replaced if breakthrough is detected.
 - b. An air cleaning device for particulate matter shall be installed, maintained, and operated in accordance with the manufacturer's specifications or the permittee shall develop a plan that provides to the extent practicable for the maintenance and operation of the equipment in the manner consistent with good air pollution control practices for minimizing emissions. It shall also be equipped to monitor appropriate indicators of performance, for example, static pressure drop, water pressure, and water flow rate. **(R 336.1290(2)(b)(ii), R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall maintain records of the following information for each emission unit for each calendar month using the methods outlined in the DEQ, AQD Rule 290; Permit to Install Exemption Record form (EQP 3558) or in a format that is acceptable to the AQD District Supervisor: (R 336.1213(3))
 - a. Records identifying each air contaminant that is emitted; (R 336.1213(3))
 - b. Records identifying if each air contaminant is controlled or uncontrolled; (R 336.1213(3))
 - c. Records identifying if each air contaminant is either carcinogenic or non-carcinogenic; (R 336.1213(3))
 - d. Records identifying the ITSL and IRSL, if established, of each air contaminant that is being emitted under the provisions of Rules 290(2)(a)(ii) and (iii); (R 336.1213(3))
 - e. Records of material use and calculations identifying the quality, nature, and quantity of the air contaminant emissions in sufficient detail to demonstrate that the actual emissions of the emission unit meet the emission limits outlined in this table and Rule 290. Volatile organic compound emissions from units installed on or after December 20, 2016, shall be calculated using mass balance, generally accepted engineering calculations, or another method acceptable to the AQD District Supervisor; (R 336.1213(3), R 336.1290(2)(d))
 - f. Records are maintained on file for the most recent two-year period and are made available to the department upon request. (R 336.1213(3), R 336.1290(2)(e))
2. The permittee shall maintain an inventory of each emission unit that is exempt pursuant to Rule 290. This inventory shall include the following information: (R 336.1213(3))
 - a. The permittee shall maintain a written description of each emission unit as it is maintained and operated throughout the life of the emission unit; (R 336.1290(2)(c), R 336.1213(3))
 - b. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(2)(a)(iii), the permittee shall maintain a written description of the control device, including the designed control efficiency and the designed exhaust gas flow rate. (R 336.1213(3))
3. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(2)(a)(iii), the permittee shall perform a monthly visible emission observation of each stack or vent during routine operating conditions. This observation need not be performed using Method 9. The permittee shall keep a written record of the results of each observation. (R 336.1213(3))

See Appendix 4

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

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NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FGCOLDCLEANERS
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, 278a and Rule 281(2)(h) or Rule 285(2)(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.

Emission Unit: EUCOLDCLEANER

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall not use cleaning solvents containing more than five percent by weight of the following halogenated compounds: methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chloroform, or any combination thereof. **(R 336.1213(2))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Cleaned parts shall be drained for no less than 15 seconds or until dripping ceases. **(R 336.1611(2)(b), R 336.1707(3)(b))**
2. The permittee shall perform routine maintenance on each cold cleaner as recommended by the manufacturer. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The cold cleaner must meet one of the following design requirements:
 - a. The air/vapor interface of the cold cleaner is no more than ten square feet. **(R 336.1281(2)(h))**
 - b. The cold cleaner is used for cleaning metal parts and the emissions are released to the general in-plant environment. **(R 336.1285(2)(r)(iv))**
2. The cold cleaner shall be equipped with a device for draining cleaned parts. **(R 336.1611(2)(b), R 336.1707(3)(b))**
3. All new and existing cold cleaners shall be equipped with a cover and the cover shall be closed whenever parts are not being handled in the cold cleaner. **(R 336.1611(2)(a), R 336.1707(3)(a))**
4. The cover of a new cold cleaner shall be mechanically assisted if the Reid vapor pressure of the solvent is more than 0.3 psia or if the solvent is agitated or heated. **(R 336.1707(3)(a))**
5. If the Reid vapor pressure of any solvent used in a new cold cleaner is greater than 0.6 psia; or, if any solvent used in a new cold cleaner is heated above 120 degrees Fahrenheit, then the cold cleaner must comply with at least one of the following provisions:
 - a. The cold cleaner must be designed such that the ratio of the freeboard height to the width of the cleaner is equal to or greater than 0.7; **(R 336.1707(2)(a))**

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- b. The solvent bath must be covered with water if the solvent is insoluble and has a specific gravity of more than 1.0; **(R 336.1707(2)(b))**
- c. The cold cleaner must be controlled by a carbon adsorption system, condensation system, or other method of equivalent control approved by the AQD. **(R 336.1707(2)(c))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. For each new cold cleaner in which the solvent is heated, the solvent temperature shall be monitored and recorded at least once each calendar week during routine operating conditions. **(R 336.1213(3))**
2. The permittee shall maintain the following information on file for each cold cleaner: **(R 336.1213(3))**
 - a. A serial number, model number, or other unique identifier for each cold cleaner.
 - b. The date the unit was installed, manufactured or that it commenced operation.
 - c. The air/vapor interface area for any unit claimed to be exempt under Rule 281(h).
 - d. The applicable Rule 201 exemption.
 - e. The Reid vapor pressure of each solvent used.
 - f. If applicable, the option chosen to comply with Rule 707(2).
3. The permittee shall maintain written operating procedures for each cold cleaner. These written procedures shall be posted in an accessible, conspicuous location near each cold cleaner. **(R 336.1611(3), R 336.1707(4))**
4. As noted in Rule 611(2)(c) and Rule 707(3)(c), if applicable, an initial demonstration that the waste solvent is a safety hazard shall be made prior to storage in non-closed containers. If the waste solvent is a safety hazard and is stored in non-closed containers, verification that the waste solvent is disposed of so that not more than 20 percent, by weight, is allowed to evaporate into the atmosphere shall be made on a monthly basis. **(R 336.1213(3), R 336.1611(2)(c), R 336.1707(3)(c))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

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IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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FGRULE604
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any existing or future storage vessels subject to the requirements of R 336.1604 (Rule 604). Storage vessels subject to AQD Rule 604 are those which store any organic compound having a true vapor pressure of more than 1.5 psia, but less than 11 psia, at actual storage conditions in any fixed roof stationary vessel of more than 40,000 gallon capacity.

Emission Unit: EURULE604

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall maintain an up-to-date record of all storage vessels subject to the requirements of AQD Rule 604. (R 336.1213(3))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))

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3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall not operate storage vessels subject to AQD Rule 604 unless one of the following conditions is met: **(R 336.1604(1)(a), (b) & (c), R 336.1702(d))**
 - a. The vessel is a pressure tank capable of maintaining working pressures sufficient to prevent organic vapor or gas loss to the atmosphere at all times, except under emergency conditions;
 - b. The vessel is equipped and maintained with a floating cover or roof which rests upon, and is supported by, the liquid being contained and has a closure seal or seals to reduce the space between the cover or roof edge and the vessel wall. The seal or any seal fabric shall have no visible holes, tears, or other nonfunctional openings;
 - c. The vessel is equipped and maintained with a vapor recovery system, or other control system approved by the Director of the AQD or the Assistant Director of the AQD, which recovers not less than 90% by weight of the uncontrolled organic vapor that would otherwise be emitted to the atmosphere.
2. All openings, except stub drains, in any stationary vessel subject to AQD Rule 604 shall be equipped with covers, lids, or seals such that all of the following conditions are met: **(R 336.1604(2)(a), (b) and (c), R 336.1702(d))**
 - a. The cover, lid, or seal is in the closed position at all times, except when in actual use;
 - b. Automatic bleeder vents are closed at all times, except when the roof is floated off, or landed on, the roof leg supports;
 - c. Rim vents, if provided are set at the manufacturer's recommended setting or are set to open when the roof is being floated of the roof leg supports.

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FGRULE605
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Any existing or future storage vessels subject to the requirements of R 336.1605 (Rule 605). Storage vessels subject to AQD Rule 605 are those which store any organic compound having a true vapor pressure of 11 or more psia at actual storage conditions in any stationary vessel of more than 40,000 gallon capacity.

Emission Unit: EURULE605

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall maintain an up-to-date record of all storage vessels subject to the requirements of AQD Rule 605. (R 336.1213(3))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

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VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall not operate storage vessels subject to AQD Rule 605 unless one of the following conditions is met: **(R 336.1605(1)(a) & (b), R 336.1702(d))**
 - a. The vessel is a pressure tank capable of maintaining working pressures sufficient to prevent organic vapor or gas loss to the atmosphere at all times, except under emergency conditions;
 - b. The vessel is equipped and maintained with a vapor recovery system, or other control system approved by the Director of the AQD or the Assistant Director of the AQD, which recovers not less than 90% by weight of the uncontrolled organic vapor that would otherwise be emitted into the atmosphere.
2. All openings in any stationary vessel subject to the provisions of AQD Rule 605 shall be equipped with covers, lids, or seals such that the covers, lids, or seals are in a closed position at all times, except when in actual use. **(R 336.1605(2), R 336.1702(d))**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FGRULE703
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Any new or future storage vessels subject to the requirements of R 336.1703 (Rule 703). Storage vessels subject to AQD Rule 703 are those which receive gasoline from a delivery vessel into any new stationary vessel of more than 2000-gallon capacity located at any gasoline dispensing facility.

Emission Unit: EURULE703

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall maintain an up-to-date record of all storage vessels subject to the requirements of AQD Rule 703. (R 336.1213(3))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

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VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall not load or allow the loading of gasoline from a delivery vessel into any new stationary vessel or more than 2000-gallon capacity located at any gasoline dispensing facility, unless such stationary vessel is equipped with a permanent submerged fill pipe. **(R 336.1703(1))**
2. A new stationary vessel at a gasoline dispensing facility shall be constructed in a manner that will allow the vessel to be retrofitted according to AQD Rule 703(2) and (3). **(R 336.1703(5))**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FG325-01
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Carbon bed and venturi scrubber system used to control emissions from EU325-01, EU502-01, and EU502-07. The 337 scrubber acts as a backup to the venturi scrubber system.

The most recent PTI for this emission unit is PTI No. 44-06B.

Emission Units: EU325-01, EU502-01, EU502-07

POLLUTION CONTROL EQUIPMENT

- Carbon bed bank No. 1 (regenerative) comprised of carbon beds 20587, 20588, and 20589. Carbon bed bank No. 1 vents to either venturi scrubber bank No. 1, venturi scrubber bank No. 2, or the 337 scrubber. The typical mode of operation for carbon bed bank No. 1 is: one bed receives process exhaust, one bed is regenerating, and one bed is on standby with an alternating schedule every 6 hours.
- Carbon bed bank No. 2 (regenerative) comprised of carbon beds 22200, 22205, and 22210. Carbon bed bank No. 2 vents to either venturi scrubber bank No. 1, venturi scrubber bank No. 2, or the 337 scrubber. The typical mode of operation for carbon bed bank No. 2 is: one bed receives process exhaust, one bed is regenerating, and one bed is on standby with an alternating schedule every 6 hours.
- Venturi scrubber bank No. 1 comprised of venturi scrubbers 9956, 9957, and 9958 (operate in series). Venturi scrubber bank No. 1 vents to vent No. SV337-003.
- Venturi scrubber bank No. 2 comprised of venturi scrubbers 22245-1, 22245-2, and 22245-3 (operate in series). Venturi scrubber bank No. 2 vents to vent No. SV337-004.
- 337 wet scrubber (9950, 9960 – scrubbers typically alternate in operation but can operate in parallel and vent to SV337-001/002, respectively). NOTE: 337 scrubber acts as a backup to venturi scrubber bank Nos. 1 and 2.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. If the concentration of chlorosilanes from carbon bed bank No. 1 and 2 exceeds 100 ppm by volume, respectively, except during startup or shutdown periods, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. **(R 336.1213(3))**
2. While venting to venturi scrubber bank No. 1, if the combined liquid flow rate of venturi scrubber Nos. 9956, 9957 and 9958 is less than 30 gallons per minute, or the individual liquid flow rate of No. 9958 is less than 10 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. **(R 336.1213(3))**
3. While venting to venturi scrubber bank No. 2, if the combined liquid flow rate of venturi scrubber Nos. 22245-1, 22245-2 and 22245-3 is less than 30 gallons per minute, or the individual liquid flow rate of No. 22245-3 is less than 10 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. **(R 336.1213(3))**
4. The concentration of HCl in the outlet water from venturi scrubber Nos. 9958 and 22245-3 shall not exceed 10 percent by weight, respectively.² **(R 336.1910)**

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5. In the event of a malfunction of venturi scrubber bank Nos. 1 and 2, emissions from the process (after the carbon bed system) shall be controlled by the 337 main scrubber. The HCl emission rate from the process before entering the 337 main scrubber shall not exceed 1,490 pounds per hour. Applicant shall not operate the process in this mode for more than 48 hours per calendar month, nor 144 hours per 12-month rolling time period as determined at the end of each calendar month.² (R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the carbon bed system (carbon bed bank Nos. 1 and 2) with a monitor capable of detecting carbon breakthrough, which has been defined as greater than 100 ppm. The monitor shall be calibrated according to the manufacturer's specifications. If breakthrough is detected, except during startup or shutdown periods, permittee shall record the date, time, duration, corrective action taken, and actions taken to prevent reoccurrence. These records shall be kept on file and made available to the AQD upon request.² (R 336.1910, R 336.1201)
2. The permittee shall equip and maintain each venturi scrubber (venturi scrubber Nos. 9956, 9957, 9958, 22245-1, 22245-2, and 22245-3) with a liquid flow indicator.² (R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. While venting to carbon bed bank No. 1, permittee shall monitor and record, on a continuous basis, the concentration of chlorosilanes from carbon bed bank No. 1 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. With the exception of calibration, quality assurance, and maintenance activities, this record shall also include actions taken to correct and prevent a reoccurrence of each event. (R 336.1213(3))
2. While venting to carbon bed bank No. 2, permittee shall monitor and record, on a continuous basis, the concentration of chlorosilanes from carbon bed bank No. 2 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. With the exception of calibration, quality assurance, and maintenance activities, this record shall also include actions taken to correct and prevent a reoccurrence of each event. (R 336.1213(3))
3. While venting to venturi scrubber bank No. 1, permittee shall monitor and record, on a continuous basis, the following operational parameters with instrumentation acceptable to the AQD:
 - a. The liquid flow rate for venturi scrubber Nos. 9956, 9957 and 9958, respectively;
 - b. The concentration of HCl in the outlet water from venturi scrubber No. 9958.

For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and

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recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. With the exception of calibration, quality assurance, and maintenance activities, this record shall also include actions taken to correct and prevent a reoccurrence of each event. **(R 336.1213(3))**

4. While venting to venturi scrubber bank No. 2, permittee shall monitor and record, on a continuous basis, the following operational parameters with instrumentation acceptable to the AQD.
 - a. The liquid flow rate for venturi scrubber Nos. 22245-1, 22245-2 and 22245-3, respectively;
 - b. The concentration of HCl in the outlet water from venturi scrubber No. 22245-3.

For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. With the exception of calibration, quality assurance, and maintenance activities, this record shall also include actions taken to correct and prevent a reoccurrence of each event. **(R 336.1213(3))**

5. The permittee shall maintain the following records and make them available to the AQD upon request: **(R 336.1213(3))**
 - a. A record of process streams vented to the 337 scrubber during malfunction of the venturi scrubbers (venturi scrubber Nos. 9956, 9957, 9958, 22245-1, 22245-2 and 22245-3);
 - b. For each calendar month, the number of hours process exhaust gas steams vent to the 337 scrubber;
 - c. For the 12-month rolling time period, as determined at the end of each calendar month, the total number of hours process exhaust gas streams vent to the 337 scrubber.

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV337-003	10 ¹	30 ¹	R 336.1224, R 336.1225
2. SV337-004	10 ¹	30 ¹	R 336.1224, R 336.1225
3. SV337-001	10 ¹	30 ¹	R 336.1224, R 336.1225
4. SV337-002	10 ¹	30 ¹	R 336.1224, R 336.1225

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IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FG432BOILERS
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Three natural gas-fired boilers, EUBOILER12, EUBOILER13, and EUBOILER14; each rated at 103 MMBTU/hr with low-NOx burners. This flexible group is also subject to the requirements of 40 CFR Part 63, Subpart A (General Provisions) and Subpart DDDDD (National Emission Standard for Hazardous Air Pollutants: Industrial, Commercial and Institutional Boilers and Process Heaters – Major Sources).

The most recent PTI for this emission unit is PTI No. 92-21.

Emission Units: EUBOILER12, EUBOILER13, EUBOILER14

Flexible Group ID: FGBOILERMACT-NG

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	0.041 lb/MMBTU ²	24-hour rolling average as determined each hour	Each boiler included in FG432BOILERS	SC VI.3 & VI.5, and measurements obtained by the certified CEM, as specified in VI.2	R 336.1205(1), 40 CFR 52.21(j), 40 CFR 60.44b(a)(1)
2. CO	81.2 tpy ²	12-month rolling time period as determined at the end of each calendar month	FG432BOILERS	SC V.1, VI.6, and See "Compliance Method" below	R 336.1205(3)

Compliance Method: Test results from the most recent test for CO shall be used to develop an emission factor in terms of pounds of pollutant per million cubic feet of natural gas for the three normal operating load scenarios for the boilers. The permittee shall use the worst-case emission factor from the most recent stack test. The emission factors shall be applied to the monthly fuel use to ensure compliance with the 12-month rolling average.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate FG432BOILERS unless a plan that describes how emissions will be minimized during startup(s), shutdown(s) and malfunction(s) has been approved by the AQD District Supervisor. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices. Modifications to this plan may be made by the permittee and must be submitted to the AQD District Supervisor for approval. A copy of the current plan must also be maintained at the facility. Unless notified by the District Supervisor within 30 business days, the original plan and any future modified plans shall be deemed approved.² **(R 336.1912)**

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IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain each boiler included in FG432BOILERS with a low-NOx burner.² (R 336.1205(1), R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(j))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the fuel usage for each of the three boilers included in FG432BOILERS on a continuous basis.² (R 336.1205(1))
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the NOx emissions for each of the three boilers included in FG432BOILERS on a continuous basis and according to the procedures outlined in Appendix 3 attached and 40 CFR 60.48b(b)(1), (c), (d), (e), (f).² (R 336.1205(1), 40 CFR 52.21(j), 40 CFR 60.48b)
3. The permittee shall keep, in a satisfactory manner the following records for each boiler included in FG432BOILERS, for each calendar day pursuant to the requirements of 40 CFR 60.49b:
 - a. Calendar date;
 - b. Average hourly NOx emission rate in lb/MMBTU heat input;
 - c. 30-day average NOx emission rate in lb/MMBTU heat input, calculated at the end of each operating day from the hourly NOx emission rates for the preceding 30-days;
 - d. Excess emissions, reasons for excess emissions, and description for corrective actions taken;
 - e. Identification of the operating days for which NOx data has not been obtained, reasons for not obtaining the data and description of corrective actions taken;
 - f. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding the data;
 - g. Identification of the "F" factor used for calculations, method of determining the "F" factor and type of fuel combusted;
 - h. Identification of the times when the NOx concentration exceeds full span of the continuous emission monitoring system;
 - i. Description of any modifications to the continuous emission monitoring system that could affect the ability of the continuous emission monitor to comply with Performance Specification 2.

All records shall be kept on file for a period of at least five years and made available to the Department upon request. Reports of the above information shall be submitted to the EPA Administrator and the AQD District Supervisor every six months in accordance with 40 CFR 60.49b(v) and (w).² (40 CFR 60.49b(g), (i), (o), (v), (w))

4. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling average fuel use records and the annual capacity factor for each boiler included in FG432BOILERS. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each month. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request.² (R 336.1205(3), 40 CFR 60.49b(d))
5. The permittee shall keep, in a satisfactory manner, 24-hour rolling average NOx emission records for each boiler included in FG432BOILERS, as required by SC I.1. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request.² (R 336.1205(1), 40 CFR 52.21(j), 40 CFR Part 60, Subpart Db)

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6. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling average CO calculation records for FG432BOILERS, as required by SC I.2. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request.² **(R 336.1205(3))**
7. The permittee shall keep, in a satisfactory manner, annual records of the normal operating range for each of the three boilers included in FG432BOILERS. All records shall be kept on file for a period of at least five years and made available to the Department upon request.² **(R 336.1205(3))**

See Appendix 3

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall notify the Department if a change in land use occurs for property classified as industrial or as a public roadway, where this classification was relied upon to demonstrate compliance with Rule 225(1). The permittee shall submit the notification to the AQD District Supervisor, within 30 days of the actual land use change. Within 60 days of the land use change, the permittee shall submit to the AQD District Supervisor a plan for complying with the requirements of Rule 225(1). The plan shall require compliance with Rule 225(1) no later than one year after the due date of the plan submittal.¹ **(R 336.1225(4))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBOILER12	42 ²	50 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVBOILER13	42 ²	50 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SVBOILER14	42 ²	50 ²	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources for Industrial-Commercial-Institutional Steam Generating Units as specified in 40 CFR Part 60, Subparts A and Db, as they apply to the equipment in FG432BOILERS.² **(40 CFR Part 60, Subparts A and Db)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**FGSITEBLOWER
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Site vent consolidation and blower system that collects vapor streams from numerous emission units and vents throughout the facility and routes them to either the on-site thermal oxidizer with heat recovery (FGTHROX) or to a site-wide water scrubber system. There are two parts to the site vent consolidation and blower system: a dry vent header system for water reactive vents and wet vent header system for vents that can contain water.

The most recent PTI for this emission unit is PTI No. 91-07E.

Emission Units: Include, but are not limited to, the following: EU2703-01, EU2703-03, EU2703-08, EU2703-17, EU303-01, EU303-02, EU303-06, EU303-09, EU303-11, EU303-19, EU304-02, EU321-01, EU321-02, EU321-11, EU325-01, EU502-01, EU502-04, EU502-07, EU502-09, EU505-01, EU505-11, EU601-01, EURULE290

Flexible Group ID: FGTHROX, FGSITESCRUBBERS

POLLUTION CONTROL EQUIPMENT

Site wide thermal oxidizer system (THROX) or site-wide water scrubber system.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate the emission units in FGSITEBLOWER unless they are routed to FGTHROX or the site wide water scrubbers, except as provided below, and the control device is installed, maintained and operated in a satisfactory manner or the system is operated in accordance with the malfunction abatement plan (MAP) described in SC III.1 of FGFACILITY section of this permit.² **(R 336.1205(2), R 336.1910, R 336.1225, R 336.1911, R 336.1912)**
 - a. When FGTHROX is operating properly, any emission vents at Midland Plant that are part of FGSITEBLOWER, which is routed to FGTHROX, and that have air pollution control equipment in addition to FGTHROX, shall have the ability to bypass the additional air pollution control equipment or operate the additional air pollution control equipment with parameters at levels or ranges outside of the specified parametric ranges or levels in their individual ROP tables. When FGTHROX is not operating or is not operating properly as defined in the MAP, any emission vents at Midland Plant that are part of FGSITEBLOWER and that have air pollution control equipment in addition to FGTHROX shall be handled as described in the MAP.

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

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VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall record the time and duration of each bypass episode wherein the vents comprising FGSITEBLOWER are not routed to FGTHROX. The permittee shall keep all records of these bypass episodes on file at the Dow Corning facility for a period of five years and make them available to the Department upon request.² (R 336.1205(1)(a))

See Appendix 3

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**FGSITESCROBBERS
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Site-wide water scrubber system. FGSITESCROBBERS will remove HCl and chlorosilanes from the FGSITEBLOWER consolidated vent system prior to discharge to atmosphere when the site wide Thermal Oxidizer system is not operating properly.

The most recent PTI for this emission unit is 91-07E.

Emission Units: Include, but are not limited to, the following: EU303-01, EU303-02, EU303-06, EU303-09, EU303-11, EU303-15, EU303-16, EU303-19, EU304-02, EU321-01, EU321-11, EU321-12, EU325-01, EU502-01, EU502-07, EU502-09, EU502-11, EU505-01, EU508-01, EU515-01, EURULE290, FGSITEBLOWER, FG304VENTRECOVERY, FG337SCROBBER

Flexible Group ID: [FGHAP2012A2A](#), FGLEAKDETECTION,

POLLUTION CONTROL EQUIPMENT

Site-wide water scrubber system

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period	Equipment	Testing/ Monitoring Method	Underlying Applicable Requirements
1. Benzene	7.1 pph ¹	Per testing protocol and/or the Benzene Emissions Management and Monitoring Plan (BEMMP)	FGSITESCROBBERS emission units vented through the site wide water scrubber system	SC VI.1, VI.2, & VI.3	R 336.1225, R 336.1901

¹This emissions limit only applies when FGTHROX is not operating and the site wide water scrubber system is serving as the back-up control device.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The permittee shall not operate FGSITESCROBBERS unless the approved Benzene Emissions Management and Monitoring Plan (BEMMP) for demonstrating compliance with the emission limit for FGSITESCROBBERS or an alternate plan approved by the AQD district supervisor is implemented and maintained.¹ **(R 336.1225, R 336.1901)**
- The permittee shall not bypass FGTHROX unless the following vents are routed to either the site wide water scrubbers or the control equipment specified in these vents emission unit tables in ROP No. MI-ROP-A4043-2008 (or any subsequent revisions) and the control equipment is installed, maintained, and operating in a satisfactory manner:²

SV515-001	SV303-011	SV303-002	SV321-024	SV321-059
SV515-003	SV303-016	SV303-004	SV321-031	
SV337-001	SV303-017	SV303-007	SV321-038	
SV337-002	SV303-019	SV321-018	SV321-052	

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SV303-001	SV303-046	SV321-021	SV321-053
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(R 336.1205(2), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

3. The permittee shall not bypass FGTHROX when operating SV2703-011 unless SV2703-011 is routed to the control equipment specified in EU2703-03 and the control equipment is installed, maintained, and operated in a satisfactory manner.² (R 336.1205(2), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall not bypass FGTHROX when operating SV303-050 unless SV303-050 is routed to the control equipment specified in EU303-06 and the control equipment is installed, maintained, and operated in a satisfactory manner.² (R 336.1205(2), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
5. Proper operation of the site wide water scrubbers includes the total scrubber water flow rate shall not be less than the minimum flow rate specified in the MAP.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the site wide water scrubbers with water flow meters. (R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Whenever the vents comprising FGSITEBLOWER are not routed to the THROX, the permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the water flow rates for the site wide water scrubbers on a continuous basis. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.² (R 336.1910)
2. The permittee shall keep, in a satisfactory manner, continuous records of scrubber flow rates for the site wide water scrubbers. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.² (R 336.1910)
3. The permittee shall keep, in a satisfactory manner, records demonstrating that the BEMMP is being implemented and maintained as required by SC III.1. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.¹ (R 336.1225, R 336.1901)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

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VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2512-001	6 ¹	65 ¹	R 336.1225
2. SV2512-002	6 ¹	65 ¹	R 336.1225

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FGTHROX
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Site wide thermal oxidizer system. The THROX will remove VOC, HAPs, PM10, hydrogen chloride, and other toxic air contaminants from the FGSITEBLOWER consolidated vent system prior to discharge to atmosphere. This flexible group is subject to the requirements of 40 CFR Part 63, Subpart FFFF. FGTHROX is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

Emission Units: Include, but are not limited to, the following: ~~EU2515-01~~, EU2703-01, EU2703-03, EU2703-08, EU2703-09, EU2703-13, EU2703-17, EU303-01, EU303-02, EU303-06, EU303-09, EU303-11, EU303-15, EU303-16, EU303-19, EU304-02, EU321-01, EU321-02, EU321-11, EU321-12, EU322-02, EU322-04, EU325-01, EU502-01, EU502-04, EU502-07, EU502-09, EU502-11, EU505-01, EU505-11, EU508-01, EU515-01, EU601-01, EURULE290, FGSITEBLOWER, FG304VENTRECOVERY, FG337SCRUBBER

Flexible Group ID: [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

Thermal oxidizer with heat recovery (THROX) unit consisting of a burner, quencher, absorber, 2 stage ionizing wet scrubbers (IWS) in series, and stack. This device is a CAM subject unit for VOCs and PM10.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	36 tpy ²	12-month rolling time period as determined at the end of each calendar month.	FGTHROX emissions vented through FGTHROX	SC VI.2, VI.10	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21(c)&(d)
2. CO	90 tpy ²	12-month rolling time period as determined at the end of each calendar month.	FGTHROX emissions vented through FGTHROX	SC V.1, VI.11	R 336.1205(1), R 336.2804, 40 CFR 52.21(d)
3. PM10	13.4 tpy ²	12-month rolling time period as determined at the end of each calendar month.	FGTHROX emissions vented through FGTHROX	SC V.2, VI.12	R 336.1205(3)
4. PM10	3.5 pph ²	720 hour rolling average ^a	FGTHROX emissions vented through FGTHROX	SC V.2, VI.12	R 336.1205(3)
5. VOC	6.6 pph ²	Hourly	FGTHROX emissions vented through FGTHROX	SC V.1, VI.1, VI.9, VI.11	R 336.1205(1), R 336.1702(a), R 336.1901
6. PM10	100 lbs/month ²	Calendar month ^b	FGTHROX emissions vented through FGTHROX resulting from EU2703-06, EU2703-07, EU2703-08, EU2703-09, and EU2703-13	SC VI.12	R 336.1205(3)

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^a PM10 emissions are due to silicon that is measure by the on-line Gas Chromatographs are based on a 720-hour rolling average (see SC VI.12(f)). Note that emission testing done per SC V.2 will detect all PM10 emissions, not just PM10 emissions due to silicon that has been measured by the on-line Gas Chromatographs.

^b PM10 emissions due to EU2703-06, EU2703-07, EU2703-08, EU2703-09, and EU2703-13 are calculated on a monthly basis (see SC VI.12(g)). These emission units vent directly to the THROX so the silicon is not measured by the on-line Gas Chromatographs.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not route process vents to FGTHROX unless the burner, quencher, absorber, and two 2-stage ionizing wet scrubbers (IWS) in series are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining the IWS and thermal oxidizer according to the MAP and maintaining a minimum THROX combustion chamber temperature of 1800°F and maintaining a residence time in the combustion chamber of greater than 1.0 second at any time when process vents are routed to FGTHROX. Satisfactory operation of the IWS includes maintaining the following parameters at or above the specified minimum values over the specified averaging period.² (R 336.1205(1), R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

Parameter	Units	Minimum Value	Averaging Period
1 st stage ^a secondary voltage	Kilovolts (kV)	10	1 hour
2 nd stage ^a secondary voltage	Kilovolts (kV)	15	1 hour
Secondary current	Milliamps (mA)	50	1 hour
Packing recycle rate per stage	Gallons per minute (gpm)	324	1 hour
^a Stage 1 refers to the first stage of each IWS and stage 2 refers to the second stage of each IWS			

2. An excursion is a combustion chamber temperature less than 1800°F, a residence time in the combustion chamber of one second or less, and operation of the IWS below the minimum values in the table below as defined in this condition, or demonstrated during testing. Upon detecting an excursion of FGTHROX combustion chamber temperature, residence time in the combustion chamber, or failing to maintain satisfactory operation of the IWS limit, the permittee shall restore operation of FGTHROX to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. At least once every 12 months, verification of PM10, CO, and VOC emission rates from FGTHROX, by testing at owner's expense, in accordance with Department requirements, will be required. No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. The permittee shall notify the AQD no less than 7 days prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following completion of testing.² (R 336.1205(1), R 336.1205(3), R 336.1702(a), R 336.1901, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

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2. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM10/PM2.5	40 CFR Part 51, Appendix M
CO	40 CFR Part 60, Appendix A
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.2001, R 336.2003, R 336.2004)

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record on a continuous basis the combustion chamber temperature of FGTHROX. The temperature monitoring device shall be calibrated once per calendar year. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.² (R 336.1205(1), R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.1910, 40 CFR 64.6(c)(1)(i), (ii), (iii))
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the NOx emissions for FGTHROX on a continuous basis and according to the procedures outlined in Appendix 3 and 40 CFR Part 60.48b(b)(1), (c), (d), (e), (f).² (R 336.1205(1))
3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the flue gas oxygen or carbon dioxide (CO₂) concentration for FGTHROX on a continuous basis and according to the procedures outlined in Appendix 3 and 40 CFR Part 60.48.² (R 336.1205(1))
4. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner online gas chromatographs to monitor and record the concentrations of compounds containing the silicon atom in the wet and dry vent headers to FGTHROX on a continuous basis. For the purposes of this condition, "on a continuous basis" is defined as one measurement every 60 minutes. For the purposes of this condition, "in a satisfactory manner" includes calibrating and maintaining the gas chromatographs according to the MAP. While the gas chromatographs are being used to analyze individual vents routed to FGTHROX, the requirement to continuously measure the concentrations of compounds containing the silicon atom in the wet and dry vent headers to FGTHROX does not apply for a maximum of 5 hours per day and 72 hours per 12-month rolling time period, as determined at the end of each calendar month.² (R 336.1205(3))
5. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner, devices to monitor and record the gas flow rates in the wet and dry vent headers to FGTHROX on a continuous basis. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.² (R 336.1205(3))
6. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record the gas flow rate from FGTHROX on a continuous basis and according to the procedures outlined in Appendix 3.A.² (R 336.1205(3), 40 CFR 60.48c)
7. All required calculations shall be completed in a format acceptable to the AQD District Supervisor and made available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition.² (R 336.1205(1), R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

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8. The permittee shall keep, in a satisfactory manner, daily, monthly and 12-month rolling time period average fuel use records for FGTHROX. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request.² **(R 336.1205(1))**
9. The permittee shall keep, in a satisfactory manner, continuous records of FGTHROX combustion chamber temperature. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request.² **(R 336.1205(1), R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.1910)**
10. The permittee shall keep, in a satisfactory manner the following records for FGTHROX for each calendar day:
 - a. Calendar date that FGTHROX was in operation;
 - b. Identification of the operating days for which NOx data has not been obtained, reasons for not obtaining the data and description of corrective actions taken;
 - c. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding the data;
 - d. Identification of the "F" factor used for calculations, method of determining the "F" factor and type of fuel combusted;
 - e. Identification of the times when the NOx concentration exceeds full span of the continuous emission monitoring system;
 - f. Description of any modifications to the continuous emission monitoring system that could affect the ability of the continuous emission monitor to comply with Performance Specification 2.

The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request.² **(R 336.1205(1))**

- 11 The permittee shall keep, in a satisfactory manner, records necessary to demonstrate that the following pollutants are in compliance with the emission limits listed in the corresponding special conditions. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.²

Pollutant	Emission Limit Special Condition	Applicable Requirement
a. NOx	I.1	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
b. CO	I.2	R 336.1205(1), R 336.2804, 40 CFR 52.21(d)
c. VOC	I.5	R 336.1205(3), R 336.1702(a)

12. The permittee shall keep, in a satisfactory manner, records necessary to demonstrate compliance with the PM10 emission limits in SC I.3, I.4, and I.6. These records shall include the following:
 - a. Dates and times that FGTHROX was combusting vent gas containing silicon;
 - b. Silicon loading to the IWS based on the online gas chromatographs;
 - c. Dates and times that the silicon loading to the IWS was not measured, as allowed by SC VI.4, including hours per day and hours per 12-month rolling time period, as determined at the end of each calendar month;
 - d. The exhaust flow rate through the IWS;
 - e. Calculation of the PM10 emission rate in pounds per hour using the Verantis equation, as described in the "Parametric Monitoring Plan and Verification of IWS Particulate Removal Efficiency from FGTHROX";
 - f. 720 hour average PM10 emission rate in pounds per hour, based on data from emission testing or the online gas chromatographs, calculated at the end of each hour from the PM10 emitted during the preceding 720 hours and the hours that FGTHROX was combusting vent gas containing silicon during the preceding 720 hours. This calculation shall be completed by the last day of the calendar month, for the pervious calendar month, for each hour in the previous month;
 - g. PM10 emission rate in lb/month due to EU2703-06, EU2703-07, EU2703-08, EU2703-09, and EU2703-13 shall be calculated. This calculation shall be completed by the last day of the calendar month for the pervious calendar month;
 - h. Twelve month rolling time period PM10 emission rate in tons per year, calculated at the end of each calendar month.

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The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request.² **(R 336.1205(3))**

13. The permittee shall keep, in a satisfactory manner, records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of FGTHROX; or any periods during which a continuous monitoring system or monitoring device in FGTHROX is inoperable. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request. **(40 CFR 60.7)**
14. The permittee shall submit notification to the AQD District Supervisor of the design heat input capacity, the identification of fuels to be combusted and the annual capacity factor for FGTHROX as required by 40 CFR 60.7 and 40 CFR 60.48c(a). **(40 CFR 60.48c(a))**
15. The permittee shall comply with the operation and maintenance plan provisions specified in Appendix 3.B and make it available to the Department upon request. The permittee shall operate and the THROX automated alert system requirements specified in accordance with Appendix 3.C, as they apply to FGTHROX.^{2,3} **(Act 451 Section 324.5503(b))**
16. The permittee shall keep, in a manner satisfactory to the AQD District Supervisor, and up to date list of all emission units routed to FGTHROX. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1205, R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**
17. For FGTHROX, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). **(40 CFR 64.7(d))**
18. For FGTHROX, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
19. For FGTHROX, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
20. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

See Appendix 3

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Each semiannual report of monitoring and deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no excursions and/or exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**
5. Each semiannual report of monitoring and deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**
6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2514-006	54 ²	89.5 ²	R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21(c)&(d), R 336.1901

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources for Small Industrial-Commercial-Institutional Steam Generating Units as specified in 40 CFR Part 60, Subparts A and Dc, as they apply to the equipment in FGTHROX.² **(40 CFR Part 60, Subparts A and Dc)**
2. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**

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3. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

³ This condition is federally enforceable ~~and was originally established in the consent decree settling, "U.S. v Company, Civil Action No. 19-11880"~~ and also pursuant to Act 451, Section 324.5503(b), ~~and will remain in effect after termination of the consent decree.~~

**FGOLDFACILITY
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

The affected source is each new, reconstructed, or existing Organic Liquid Distribution (OLD) (non-gasoline) operation that is located at, or is part of, a major source of hazardous air pollutant (HAP) emissions. The affected source is comprised of storage tanks, transfer racks, equipment leak components associated with storage tanks, transfer racks and pipelines, transport vehicles, and all containers while loading or unloading at transfer racks subject to this subpart. Equipment that is part of an affected source under another NESHAP is excluded from the affected source. See 40 CFR 63.2338(c).

Emission Units: EU340-03, EU515-01, EURULE290

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Total organic HAP	Reduce emissions by 95 wt% OR ≤ 20 ppmv* exhaust concentration	Hourly	Storage Tanks See Table 2 of 40 CFR Part 63, Subpart EEEE	SC V.1 - 8	40 CFR 63.2346(a)

* Corrected to 3% oxygen for combustion devices using supplemental combustion air.

2. The permittee shall comply with the applicable requirements for storage tanks and transfer racks specified in 40 CFR Part 63, Subpart SS for meeting emission limits, substituting the term storage tank at each occurrence of the term storage vessel in Subpart SS. **(40 CFR 63.2346(a)(1))**
3. The permittee must be in compliance with the emission limitations at all times when the equipment identified in 40 CFR 63.2338(b)(1) through (4) is in OLD operation. The emission limitations apply during periods of Startup, Shutdown and Malfunction (SSM) except as provided in 40 CFR 63.2378(b)(2) and (3). **(40 CFR 63.2350(a), 40 CFR 63.2378(b)(1))**

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. For each storage tank identified in Table 2 of 40 CFR Part 63, Subpart EEEE, items 1 through 5, the permittee shall reduce the emissions of organic HAP using one of the following work practice standards:
 - a. Route emissions to a fuel gas system, to a non-fuel gas system, or back into a process as specified in 40 CFR Part 63, Subpart SS; **(40 CFR 63.2346(a)(2))**
 - b. Use a vapor balancing system that complies with 63.2346(a)4(i) through (vii) and with the recordkeeping requirements in 40 CFR 63.2390(e). **(40 CFR 63.2346(a)(4))**
2. For each pump, valve, and sampling connection that operates in organic liquids service for at least 300 hours per year at an affected source that has at least one storage tank or transfer rack that meets the applicability criteria for control in Table 2 of 40 CFR Part 63, Subpart EEEE, the permittee must comply with 40 CFR Part 63,

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Subpart TT (control level 1); 40 CFR Part 63, Subpart UU (control level 2); or 40 CFR Part 63, Subpart H. **(40 CFR 63.2346(c))**

3. For each storage tank and low throughput transfer rack, the permittee shall comply with the respective requirements for monitored parameters as specified in 40 CFR Part 63, Subpart SS. Alternatively, the permittee may comply with the operating limits in Table 3 of 40 CFR Part 63, Subpart EEEE. **(40 CFR 63.2346(e))**
4. The permittee shall develop a written SSM plan according to the provisions in 40 CFR 63.6(e)(3), except for sources not required to be controlled as specified in 40 CFR 63.2343. The permittee must follow the requirements in 40 CFR 63.6(e)(1) and (3) during periods of startup, shutdown, malfunction, or nonoperation of the affected source or any part thereof. In addition, the provisions of 40 CFR 63.2378(b)(1) through (3) apply. **(40 CFR 63.2350(c), 40 CFR 63.2378(b))**
5. The permittee must be in compliance with the operating limits at all times when the equipment identified in 40 CFR 63.2338(b)(1) through (4) is in OLD operation. **(40 CFR 63.2350(a))**
6. The permittee shall operate and maintain the affected source, including air pollution control and monitoring equipment, according to the provisions in 40 CFR 63.6(E)(l)(i). **(40 CFR 63.2350(b))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall demonstrate initial compliance with each applicable emission limitation and work practice standard as specified in Tables 6 and 7 of 40 CFR Part 63, Subpart EEEE. **(40 CFR 63.2370(a))**
2. The permittee shall demonstrate continuous compliance with each applicable emission limitation, operating limit, and work practice standard in Tables 2 through 4 of 40 CFR Part 63, Subpart EEEE according to the methods specified in 40 CFR Part 63, Subpart SS and in Tables 8 through 10 of 40 CFR Part 63, Subpart EEEE, as applicable. **(40 CFR 63.2378(a))**
3. For each performance test, design evaluation, and/or compliance determination conducted, the permittee shall use the following procedures:
 - a. Design evaluations according to the procedures in 40 CFR Part 63, Subpart SS; **(40 CFR 63.2354(a)(2))**
 - b. Compliance determine of the HAP content of organic liquids according to either EPA Method 311 of 40 CFR Part 63, Appendix A or other method approved by the Administrator. **(40 CFR 63.2354(c))**
4. The permittee shall conduct initial performance tests and design evaluations by the following dates, whichever is earlier: **(40 CFR 63.2358(a))**
 - a. According to the schedule in 40 CFR 63.7(a)(2); or
 - b. The compliance date specified in any applicable State or Federal new source review construction permit.
5. For storage tanks and transfer racks choosing to comply with the emission limits in Table 2 of 40 CFR Part 63, Subpart EEEE, the permittee shall demonstrate initial compliance according to the following schedule:
 - a. For existing sources, by August 4, 2007. **(40 CFR 63.2358(b)(1))**
6. For each owned transport vehicle that is equipped with vapor collection equipment that is loaded with organic liquids at transfer racks subject to control based on the criteria in Table 2 of 40 CFR Part 63, Subpart EEEE, items 7 through 10, the permittee shall perform the vapor tightness testing required in Table 5 of 40 CFR Part 63, Subpart EEEE, item 2 at least once per year. **(40 CFR 63.2362(b)(1))**
7. For each owned transport vehicle that does not have vapor collection equipment, the permittee shall maintain current certification in accordance with the U.S. DOT pressure test requirements in 49 CFR Part 180 for cargo tanks or 49 CFR 173.31 for tank cars. **(40 CFR 63.2362(b)(2))**

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VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii), 40 CFR 63.2394)**

1. For each storage tank using a vapor balancing system per 40 CFR 63.2346(a)(4), the permittee shall keep the following records:
 - a. Current certification in accordance with the U.S. DOT pressure test requirements of 49 CFR Part 180 – cargo tanks; **(40 CFR 63.2390(e)(1))**
 - b. Current certification in accordance with the U.S. DOT pressure test requirements of 49 CFR 173.31 – tank cars; **(40 CFR 63.2390(e)(1))**
 - c. Pressure relief vent setting specified in 40 CFR 63.2346(a)(4)(v); **(40 CFR 63.2390(e)(2))**
 - d. A record of the equipment to be used and procedures to be followed when reloading cargo tanks or tank cars and displacing vapors back to the storage tank from which the liquid originates; **(40 CFR 63.2390(e)(3)(i))**
 - e. A record of each time the vapor balancing system is used to comply with 40 CFR 63.2346(a)(4)(vi)(B). **(40 CFR 63.2390(e)(3)(ii))**
2. The permittee shall keep records of the total actual annual facility-level organic liquid loading volume as defined in 40 CFR 63.2406 through transfer racks to document the applicability, or lack thereof, of the emission limitations in Table 2 of 40 CFR Part 63, Subpart EEEE, items 7 through 10. **(40 CFR 63.2390(d))**
3. For nonflare control devices controlling storage tanks and low throughput transfer racks, the permittee shall submit a monitoring plan according to the requirements in 40 CFR Part 63, Subpart SS. **(40 CFR 63.2366(b))**
4. The permittee shall keep records in a form suitable and readily available for expeditious inspection and review according to 40 CFR 63.10(b)(1) including records stored in electronic form at a separate location. **(40 CFR 63.2394(a))**
5. The permittee shall keep records of all information for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report or record as specified in 40 CFR 63.10(b)(1). **(40 CFR 63.2394(b))**
6. The permittee shall keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report or record as specified in 40 CFR 63.10(b)(1). These same records may be kept off site for the remaining 3 years. **(40 CFR 63.2394(c))**
7. The permittee shall keep all records required by 40 CFR 63.2343 for each emission source that does not require control under 40 CFR Part 63, Subpart EEEE. **(40 CFR 63.2390(a))**
8. The permittee shall keep all of the following records for each emission source that requires control under 40 CFR Part 63, Subpart EEEE:
 - a. All records in 40 CFR, Part 63, Subpart SS; **(40 CFR 63.2390(b))**
 - b. All records in Table 12 of 40 CFR Part 63, Subpart EEEE; **(40 CFR 63.2390(b))**
 - c. All records required to show continuous compliance as required in 40 CFR Part 63, Subpart SS and in Tables 8 through 10 of 40 CFR Part 63, Subpart EEEE. **(40 CFR 63.2390(b))**

VII. REPORTING

1. The permittee shall submit the following notifications according to the schedule in Table 12 of 40 CFR Part 63, Subpart EEEE:
 - a. Each notification in 40 CFR Part 63, Subpart SS; **(40 CFR 63.2382(a))**
 - b. Each notification in Table 12 of 40 CFR Part 63, Subpart EEEE; **(40 CFR 63.2382(a))**
 - c. Initial notification according to the schedule specified in 40 CFR 63.2382(b); **(40 CFR 63.2382(b))**
 - d. Notification of Intent to conduct a performance test as required in 40 CFR 63.7(b)(1); **(40 CFR 63.2382(c))**
 - e. Notification of Compliance Status including the information required in 40 CFR 63.999(b) and 40 CFR 63.2382(d)(2)(i) through (viii). **(40 CFR 63.2382(d))**

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These notifications must be submitted according to the schedule in Table 12 of 40 CFR Part 63, Subpart EEEE and as specified in paragraphs (b) through (d) of 40 CFR 63.2382.

2. The permittee shall submit all applicable reports in 40 CFR 63.2386 according to the schedule in Table 11 of 40 CFR Part 63, Subpart EEEE and by the dates specified in 40 CFR 63.2386(b)(1) through (3). These reports include, but are not limited to, the following:
 - a. Each report in 40 CFR Part 63, Subpart SS; **(40 CFR 63.2386(a))**
 - b. Each report in Table 11 of 40 CFR Part 63, Subpart EEEE; **(40 CFR 63.2386(a))**
 - c. Each report in Table 12 of 40 CFR Part 63, Subpart EEEE; **(40 CFR 63.2386(a))**
 - d. First Compliance Report containing the information specified in 40 CFR 63.2386(c)(1) through (10); **(40 CFR 63.2386(c))**
 - e. Subsequent Compliance Reports containing the information specified in 40 CFR 63.2386(c)(1) through (9) and 40 CFR 63.2386(d)(1) through (4) where applicable; **(40 CFR 63.2386(d))**
 - f. Report of all deviations for each affected source that has obtained a Renewable Operating Permit. **(40 CFR 63.2386(e))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart EEEE for Organic Liquid Distribution by the initial compliance date. **(40 CFR Part 63, Subparts A and EEEE)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FGHCLMACT
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

HCl production facility: the collection of unit operations and equipment associated with the production of liquid HCl product at a concentration of 30 weight percent or greater during normal operations that is located at, or is part of, a major source of hazardous air pollutant emissions. See 40 CFR 63.8985(a).

Emission Units: EU356-01, EU356-02

POLLUTION CONTROL EQUIPMENT

- Packed bed scrubber (24388)
- Packed bed scrubber (24401)

I. EMISSION LIMITS

Pollutant	Limit ^a	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Hydrogen Chloride (HCl)	12 ppmv or at least 99.4 percent reduction ²	Hourly	Emission stream from each HCl process vent in FGHCLMACT	SC V.1 & V.2	40 CFR 63.9000(a)
2. HCl	12 ppmv or at least 99.9 percent reduction ²	Hourly	Emission stream from each HCl storage tank in FGHCLMACT	SC V.1 & V.2	40 CFR 63.9000(a)
3. HCl	120 ppmv or at least 99 percent reduction ²	Hourly	Emission stream from each HCl transfer operation in FGHCLMACT	SC V.1, V.2, & V.3	40 CFR 63.9000(a)

^a The emission limits in SC 1.1 through SC 1.3 apply while producing liquid HCl product at a concentration of 30 weight percent or greater during normal operations in FGHCLMACT.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not produce liquid HCl product at a concentration of 30 weight percent or greater during normal operations in FGHCLMACT unless the leak detection and repair (LDAR) plan required by 40 CFR 63.9000 is implemented and maintained.² (**40 CFR 63.9000(a)**)
2. The permittee shall not produce liquid HCl product at a concentration of 30 weight percent or greater during normal operations in FGHCLMACT unless the monitoring plan required by 40 CFR 63.9025 is implemented and maintained.² (**40 CFR 63.8, 40 CFR 63.9025**)

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IV. DESIGN/EQUIPMENT PARAMETERS

Special Conditions IV.1, IV.2, and IV.3 apply while producing liquid HCl product at a concentration of 30 weight percent or greater during normal operations in FGHCMACT.

1. The permittee shall equip and maintain scrubber 24388 and scrubber 24401 with the equipment listed below.² **(40 CFR 63.9000(b))**
 - a. For each scrubber, a device to monitor the liquid flow rate to the packed bed;
 - b. For each scrubber, a device to monitor the scrubber effluent pH, unless an alternative is approved pursuant to 40 CFR 63.8(f).
2. The permittee shall not produce liquid HCl product at a concentration of 30 weight percent or greater during normal operations in FGHCMACT unless scrubber 24388 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining the liquid flow rate to the packed bed and the scrubber effluent pH in the ranges identified in the monitoring plan as constituting satisfactory operation. Scrubber effluent pH monitoring is not required if an alternative is approved pursuant to 40 CFR 63.8(f).² **(40 CFR 63.9000(b))**
3. The permittee shall not load rail cars with liquid HCl product at a concentration of 30 weight percent or greater during normal operations in FGHCMACT unless scrubber 24401 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining the liquid flow rate to the packed bed and the scrubber effluent pH in the ranges identified in the monitoring plan as constituting satisfactory operation. Scrubber effluent pH monitoring is not required if an alternative is approved pursuant to 40 CFR 63.8(f).² **(40 CFR 63.9000(b))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Within 180 days after initial startup of production of liquid HCl product at a concentration of 30 weight percent or greater during normal operations in equipment in FGHCMACT, the permittee shall verify HCl emission rates from FGHCMACT, by testing at owner's expense, in accordance with 40 CFR Part 63, Subpart A and NNNNN. The permittee shall notify the AQD District Supervisor in writing of the intention to conduct a performance test, at least 60 calendar days before the testing is scheduled to begin, in accordance with 40 CFR 63.9045(d). Stack testing procedures and the location of stack testing ports shall be in accordance with the applicable federal Reference Methods, 40 CFR Part 63, Appendix A. No less than 30 days prior to testing, the permittee shall submit a complete plan to the AQD Technical Programs Unit and the District Office. The AQD must approve the final plan prior to testing. The permittee shall submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² **(40 CFR Part 63, Subpart NNNNN)**
2. The permittee shall conduct periodic performance tests while producing liquid HCl product at a concentration of 30 weight percent or greater during normal operations in equipment in FGHCMACT, as required in 40 CFR 63.9015. Advance notification and reporting of results shall be as required in SC V.1 and in 40 CFR Part 63, Subparts A and NNNNN.² **(40 CFR Part 63, Subparts A and NNNNN)**
3. For an emission stream from an HCl transfer operation in FGHCMACT that meets the requirements of 40 CFR 63.9020(c), the permittee may submit a design evaluation to the AQD in lieu of any performance test required by SC V.1 or V.2. The design evaluation will meet the requirements of 40 CFR 63.9020(c). The permittee shall submit the design evaluation to the AQD District Supervisor no later than the date by which the performance test is required to be complete.² **(40 CFR 63.9020(c))**
4. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. **(R 336.1213(3))**

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VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

Special Conditions VI.1 and VI.2 apply while producing liquid HCl at a concentration of 30 weight percent or greater during normal operations in FGHLMACT.

1. The permittee shall keep a record, in a satisfactory manner, of the time periods during which liquid HCl product at a concentration of 30 weight percent or greater during normal operations in FGHLMACT. The permittee shall keep the record on a daily basis.² **(40 CFR Part 63, Subparts A and NNNNN)**
2. The permittee shall monitor and record, in a satisfactory manner and on a daily basis, all of the operating parameters listed below:² **(40 CFR 63.9000(b), 40 CFR 63.9025)**
 - a. The daily average liquid flow rate to the packed bed;
 - b. The daily average scrubber effluent pH for scrubber 24388 and scrubber 24401, unless an alternative is approved pursuant to 40 CFR 63.8(f).

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. No later than 7 calendar days after startup of production of liquid HCl at concentrations of 30 weight percent or greater during normal operations in FGHLMACT, the permittee shall notify the AQD District Supervisor in writing of the startup date.² **(40 CFR Part 63, Subparts A and NNNNN)**
5. With each Notification of Compliance Status required for equipment in FGHLMACT, the permittee shall submit the following plans to the AQD District Supervisor:² **(40 CFR 63.9(h)(3))**
 - a. An updated LDAR plan for FGHLMACT, for comment, as required by 40 CFR 63.9000(a).
 - b. An updated monitoring plan for FGHLMACT, as required by 40 CFR 63.9025.

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENTS

1. While producing liquid HCl product at a concentration of 30 weight percent or greater during normal operations in equipment in FGHLMACT the permittee shall comply with all provisions of the National Emissions Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and NNNNN, as they apply to FGHLMACT.² **(40 CFR Part 63, Subparts A and NNNNN)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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PTI No: MI-PTI-A4043-2019b

FGHAP2012A2A FLEXIBLE GROUP CONDITIONS

DESCRIPTION

~~This flexible group consists of all the listed emission units. The listed emission units are the emission units at the facility as of the effective date of Permit to Install No. 91-07C (November 19, 2012) that emit hazardous air pollutants and emission units that support HAP emitting emission units, such as boilers and the InEnTec plasma enhanced melter (EU2515-01). This flexible group will apply to all the listed emission units even if they are reconstructed as defined in the Michigan Rules (R 336.1118), modified, renamed, or re-permitted. This flexible group was established for the purposes of keeping records for the actual to projected actual PSD applicability determination.~~

~~The most recent PTI for this emission unit is PTI No. 91-07E.~~

~~**Emission Units:** EU106-01, EU106-02, EU106-05, EU106-06, EU106-07, EU106-12, EU108-01, EU108-02, EU109-01, EU109-02, EU109-04, EU109-05, EU109-06, EU109-07, EU109-09, EU207-04, EU207-13, EU207-14, EU207-15, EU207-16, EU207-17, EU207-18, EU207-19, EU212-01, EU212-02, EU212-03, EU212-04, EU212-05, EU212-06, EU212-07, EU212-08, EU212-10, EU212-11, EU212-12, EU2404-01, EU2409-01, EU2409-02, EU2515-01, EU2701-01, EU2703-01, EU2703-02, EU2703-03, EU2703-04, EU2703-05, EU2703-06, EU2703-07, EU2703-08, EU2703-09, EU2703-10, EU2703-12, EU2703-13, EU2703-14, EU2901-02, EU2901-04, EU2901-05, EU2901-14, EU2901-15, EU2901-16, EU303-01, EU303-02, EU303-03, EU303-04, EU303-06, EU303-09, EU303-10, EU303-11, EU303-13, EU303-15, EU303-16, EU303-17, EU303-18, EU303-19, EU304-01, EU3101-01, EU3102-02, EU3102-05, EU3102-09, EU3104-06, EU3104-08, EU3104-09, EU3104-14, EU311-01, EU321-01, EU321-02, EU321-05, EU321-07, EU321-08, EU321-10, EU321-11, EU321-13, EU321-14, EU321-16, EU321-17, EU322-01, EU322-02, EU322-03, EU322-04, EU322-05, EU322-09, EU322-10, EU322-11, EU324-01, EU324-02, EU324-03, EU324-05, EU324-06, EU325-04, EU340-01, EU340-03, EU501-01, EU501-02, EU501-03, EU501-11, EU501-12, EU501-13, EU501-15, EU501-17, EU501-24, EU501-32, EU501-34, EU501-40, EU501-49, EU502-01, EU505-01, EU505-04, EU505-05, EU505-11, EU508-01, EU508-03, EU515-01, EU601-01, EU602-01, EU604-10, EUSITE-05, EUSITE-08~~

~~**Flexible Group ID:** FGSITESCRUBBERS, FGTHROX~~

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

NA

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. ~~(R 336.1213(3)(b)(iii))~~

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. ~~(R 336.1213(3)(b)(iii))~~

- ~~1. The permittee shall calculate and keep records of the annual emissions of VOC and NOx from FGHP2012A2A described in Appendix 7, Section 7.13, in tons per calendar year. Calculations and record keeping shall begin upon issuance of Permit to Install No. 01-07C (November 19, 2012) and shall continue for ten (10) years.² (R 336.2818, 40 CFR 52.21(r)(6)(c)(iii))~~

See Appendix 7

VII. REPORTING

- ~~1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))~~
- ~~2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))~~
- ~~3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(e))~~
- ~~4. The permittee shall submit records of the annual emissions of VOC and NOx from FGHP2012A2A described in Appendix 7, in tons per calendar year, to the AQD Permit Section Supervisor within 60 days following the end of each reporting year if both the following occur:
 - ~~a. The calendar year actual emissions of VOC and NOx exceed the baseline actual emissions (BAE) listed in Appendix 7 by a significant amount, as defined in R 336.2801(qq)(i)(B) and (E), and~~
 - ~~b. The calendar year actual emissions differ from the pre-construction projections listed in Appendix 7, Section 7.13.~~The report shall contain the name, address, and telephone number of the facility (major stationary source); the annual emissions as calculated pursuant to SC VI.1, and any other information the owner or operator wishes to include (i.e., an explanation why emissions differ from the pre-construction projections).² (R 336.2818, 40 CFR 52.21(r)(6)(c)(iii))~~

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FGEMERGENCIRICE<500HP
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Each existing or new compression ignition emergency stationary reciprocating internal combustion engines (RICE) located at a major source of HAP emissions as identified within 40 CFR Part 63, Subpart ZZZZ, 63.6590(a)(1), less than or equal to 500 brake hp, and is exempt from the requirements of Rule 201 pursuant to Rules 282(2)(b) or 285(2)(g).

Emission Units: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. An affected source that meets any of the criteria in paragraphs 40 CFR 63.6590(c)(1) through (7) must meet the requirements of this part by meeting the requirements of 40 CFR Part 60, Subpart IIII, for compression ignition engines. No further requirements apply for such engines under this part. **(40 CFR 63.6590(c))**
2. The permittee shall limit operation of each stationary emergency RICE with a site rating of less than or equal to 500 brake HP or greater than 500 brake HP as follows:
 - a. There is no time limit on the use of emergency stationary RICE in emergency situations. **(40 CFR 63.6640(f))**
 - b. Emergency stationary RICE may be operated for the purposes of maintenance checks and readiness testing up to 100 hours per year. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year. **(40 CFR 63.6640(f))**
 - c. Emergency stationary RICE may be operated up to 50 hours per year in non-emergency situations, but those hours are to be counted towards the 100 hours per year for maintenance and readiness testing. These 50 hours per year for non-emergency situations cannot be used for peak-shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. Up to 15 hours per year can be used as part of a demand response program. **(40 CFR 63.6640(f))**
3. The permittee shall operate and maintain existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP according to the manufacturer's emission-related operation and maintenance instructions or a plan developed by the facility that provides for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 63.6625(e), 40 CFR 63.6640(a), Table 6(9)(a))**
4. For existing emergency CI RICE with a site rating of less than or equal to 500 brake HP, the permittee shall inspect the air cleaner every 1000 hours of operation or annually, whichever comes first. **(40 CFR 63.6603(a) and Table 2d (4)(b))**

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5. For existing emergency CI RICE with a site rating of less than or equal to 500 brake HP, the permittee shall change the oil and filter every 500 hours of operation or annually, whichever comes first. In lieu of changing the oil and filter, the permittee may implement an oil analysis program to have the oil analyzed at the same frequency specified for changing the oil as described in 40 CFR 63.6625(i). **(40 CFR 63.6603(a) and Table 2d (4)(a) and (5)(a))**
6. If implementing an oil analysis program and if the analytical results of the oil analysis program for emergency stationary CI engines with a site rating of less than or equal to 500 brake HP indicate any of the following limits are exceeded, the permittee shall change the oil within 2 days of receiving the results of the analysis. If the engine is not in operation when the results of the analysis are received, the permittee shall change the oil within 2 days or before commencing operation, whichever is later. **(40 CFR 63.6625(i))**
 - a. Total Base Number is less than 30 percent of the Total Base Number of the oil when new;
 - b. Viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new;
 - c. Percent water content (by volume) is greater than 0.5.
7. For existing emergency CI RICE with a site rating of less than or equal to 500 brake HP, the permittee shall inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. **(40 CFR 63.6603(a) and Table 2d (4)(c) & (5)(c))**
8. If an existing emergency CI RICE with a site rating of less than or equal to 500 brake HP is operating during an emergency and it is not possible to shut down to perform the management practice requirements (change oil and filter, inspect air cleaner, and inspect hoses and belts) on the required schedule, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice shall be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. **(40 CFR 63.6603(a) and Table 2d footnote 2)**
9. The permittee shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission standards apply. **(40 CFR 63.6625(h), 40 CFR 63.6640(a))**
10. Beginning January 1, 2015, an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in 40 CFR 63.6640(f)(4)(ii), the permittee must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted. **(40 CFR 63.6604(b))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. For existing emergency CI RICE with a site rating of 500 brake HP or less, the permittee shall install a nonresettable hour meter. **(40 CFR 63.6625(f))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii), 40 CFR 63.9360)**

1. If implementing an oil analysis program for emergency stationary CI engines with a site rating of less than or equal to 500 brake HP, the permittee shall at a minimum analyze the oil for the following three parameters: **(40 CFR 63.6625(i))**
 - a. Total Base Number;
 - b. Viscosity;
 - c. Percent water content (by volume).

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VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii), 40 CFR 63.9360)

1. The permittee shall maintain a copy of each notification and report submitted, including supporting documentation. (40 CFR 63.6655(a)(1))
2. The permittee shall maintain a record of the occurrence and duration of each malfunction of operation (i.e. process equipment) or the air pollution control and monitoring equipment. (40 CFR 63.6655(a)(2))
3. The permittee shall maintain a record of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. (40 CFR 63.6655(a)(5))
4. The permittee shall maintain records of the maintenance conducted on the stationary RICE in order to demonstrate that the stationary RICE was operated and maintained according to the facility maintenance plan. (40 CFR 63.6655(e)(2))
5. For existing emergency stationary RICE that do not meet the emission standards applicable to nonemergency stationary RICE, the permittee shall maintain records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The records must document how many hours are spent for emergency operation; including what classified the operation as emergency; and how many hours are spent for nonemergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response. (40 CFR 63.6655(f))
6. If implementing an oil analysis program, the permittee shall keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. (40 CFR 63.6625(i) and (j))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**FGPEM&BLR
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Plasma-enhanced melter (PEM) and 25.1 MMBTU/hour boiler.

The most recent PTI for this emission unit is 175-09A.

Emission Units: EU2515-01, EUBOILER2515

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	35.0 tpy ²	12-month rolling time period as determined at the end of each calendar month	FGPEM&BLR	SC-V.1	R-336.1205(3), R-336.2803, R-336.2804, 40 CFR 52.21(c)&(d)
2. CO	30.0 tpy ²	12-month rolling time period as determined at the end of each calendar month	FGPEM&BLR	SC-V.1	R-336.1205(3)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not route more than 9,540 MMBTU of synthesis gas to FGTHROX, per 12-month rolling time period as determined at the end of each calendar month.² **(R-336.1205, R-336.2803, R-336.2804, 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUBOILER2515 while using synthesis gas unless the following equipment associated with EU2515-01 (i.e. Plasma Enhanced Melter) is installed, maintained, and operated in a satisfactory manner: partial quench column (Q-0630), baghouse (F-0640), HCl production system, and a synthesis gas polishing system including a recirculating scrubber (S-0650), a carbon filter (F-0680), and a high efficiency filter (F-0683).² **(R-336.1201, R-336.1225, R-336.1702, R-336.1901, R-336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R-336.1213(3)(b)(ii))**

NA

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VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. ~~(R 336.1213(3)(b)(ii))~~

- ~~1. The permittee shall keep, in a satisfactory manner, daily, monthly and 12-month rolling time period records of the quantity of synthesis gas in MMBTU sent to FGTHROX. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1201, R 336.2803, R 336.2804, 40 CFR 52.21(c)&(d))~~
- ~~2. The permittee shall keep, in a satisfactory manner, calculations of the NOx and CO emission rates for each month and the 12-month rolling time period, as determined at the end of each calendar month, for FGPEM&BLR. All records shall be kept on file at the facility and made available to the Department upon request.² (R 336.1201, R 336.2803, R 336.2804, 40 CFR 52.21(c)&(d))~~
- ~~3. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1201(3))~~

VII. REPORTING

- ~~1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))~~
- ~~2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))~~
- ~~3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))~~

See Appendix B

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**FGBOILERMACT-NG
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Requirements for existing Gas 1 (Natural Gas only) for existing Boilers and Process Heaters at major sources of Hazardous Air Pollutants per 40 CFR Part 63, Subpart DDDDD. These existing boilers or process heaters must comply with this subpart no later than January 31, 2016, except as provided in 40 CFR 63.6(i).

Emission Units: EU303-04, EU325-04, EU501-40, EU508-02, EU508-03, EU604-10,

Flexible Group ID: FG432BOILERS

The collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within the units designed to burn gas 1 fuel subcategory as defined in 40 CFR 63.7575. At the time of permit renewal:

Less than 5 MMBTU/hr	EU508-02, EU604-10
Equal to or greater than 5 MMBTU/hr and less than 10 MMBTU/hr	EU325-04, 501-40
Equal to or greater than 10 MMBTU/hr	EU303-04, EU508-03, EUBOILER12, EUBOILER13, EUBOILER14

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall only burn natural gas as defined in 40 CFR 63.7575. **(40 CFR 63.7499(l))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee must meet the tune-up and Energy Assessment work practice standards for each applicable boiler or process heater at the source. **(40 CFR 63.7500(a)(1), 40 CFR Part 63, Subpart DDDDD, Table 3, Nos. 1-4)**
2. The permittee must operate and maintain affected sources in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. **(40 CFR 63.7500(a)(3))**
3. The permittee may obtain approval from the Administrator to use an alternative to the work practice standards noted in SC III.1 and/or SC III.2. **(40 CFR 63.7500(b))**
4. The permittee must:
 - a. Complete a tune-up every 5 years (61 months) for boilers/process heaters less than or equal to 5 million BTU per hour; **(40 CFR 63.7500(e), 40 CFR 63.7515(d))**
 - b. Complete a tune-up every 2 years (25 months) for boilers greater than 5 million BTU per hour and less than 10 million BTU per hour; **(40 CFR 63.7500(e), 40 CFR 63.7515(d))**

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- c. Complete a tune-up annually (13 months) for boilers greater than 10 million BTU per hour; **(40 CFR 63.7540(a)(10), 40 CFR 63.7515(d))**
 - d. Conduct the tune-up within 30 calendar days of startup, if the unit is not operating on the required date for a tune-up; **(40 CFR 63.7540(a)(13))**
 - e. Follow the procedures described in SC IX 4.a through 4.f for all initial and subsequent tune ups; **(40 CFR 63.7540(a)(10), 40 CFR Part 63, Subpart DDDDD, Table 3)**
 - f. Complete the Initial tune ups on all affected units no later than January 31, 2016, except as provided in 40 CFR 63.7510(j) and 40 CFR 63.7540(a)(13). **(40 CFR 63.7510(j), 40 CFR 63.7540(a)(13))**
5. The permittee must complete the one-time energy assessment no later than January 31, 2016. **(40 CFR 63.7510(e))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee must keep a copy of each notification and report submitted to comply with 40 CFR Part 63, Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that the permittee submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv). **(40 CFR 63.7555(a)(1))**
2. The permittee must keep each record on site, or they must be accessible from on-site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The permittee can keep the records off site for the remaining 3 years. **(40 CFR 63.7560(a), (b), and (c))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee must submit a Notification of Compliance Status that includes each boiler or process heater before the close of business on the 60th day following the completion of the initial compliance demonstrations for all boiler or process heaters at the facility. The Notification of Compliance Status report must contain the following information and must be submitted within 60 days of January 31, 2016. **(40 CFR 63.7545(e))**
 - a. A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a description of the add-on controls used on the unit to comply with 40 CFR Part 63, Subpart DDDDD, description of the fuel(s) burned. **(40 CFR 63.7545(e)(1))**
 - b. Certification(s) of compliance, as applicable, and signed by a responsible official: **(40 CFR 63.7545(e)(8))**
 - i. "This facility completed the required initial tune-up for all of the boilers and process heaters covered by 40 CFR Part 63, Subpart DDDDD at this site according to the procedures in 40 CFR 63.7540(a)(10)(i) through (vi)"; **(40 CFR 63.7545(e)(8)(i))**

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- ii. "This facility has had an energy assessment performed according to 40 CFR 63.7530(e)." **(40 CFR 63.7545(e)(8)(ii))**
5. Unless the EPA Administrator has approved a different schedule for submission of reports under 40 CFR 63.10(a), the permittee must submit each report, according to paragraph (h) of 40 CFR 63.7550, stated in SC VII.7, by the date in Table 9 of 40 CFR Part 63, Subpart DDDDD and according to the requirements in paragraphs (b)(1) through (4) of 40 CFR 63.7550, as listed below. For units that are subject only to a requirement to conduct an annual tune-up according to 40 CFR 63.7540(a)(10), stated in SC IX.4.a, biennial tune-up according to 40 CFR 63.7540(a)(11), stated in SC IX.4.b, or 5-year tune-up according to 40 CFR 63.7540(a)(12), stated in SC IX.4.c, and not subject to emission limits or operating limits, the permittee may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of 40 CFR 63.7550, as listed below, instead of a semi-annual compliance report: **(40 CFR 63.7550(b))**
 - a. The first semiannual compliance report must cover the period beginning on January 31, 2016 and ending on December 31. When submitting an annual, biennial, or 5-year compliance report, the first compliance report must cover the period beginning on January 31, 2016 and ending on December 31 within 1, 2, or 5 years, as applicable, after the compliance date that is specified in 40 CFR 63.7495; **(40 CFR 63.7550(b)(1))**
 - b. The first semiannual compliance report must be postmarked or submitted no later than September 15 or March 15, whichever date is the first date following the end of the first calendar half after January 31, 2016. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than March 15; **(40 CFR 63.7550(b)(2), 40 CFR 63.7550(b)(5))**
 - c. Each subsequent semiannual compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31; **(40 CFR 63.7550(b)(3))**
 - d. Each subsequent semiannual compliance report must be postmarked or submitted no later than September 15 or March 15, whichever date is the first date following the end of the semiannual reporting period. Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than March 15. **(40 CFR 63.7550(b)(4), 40 CFR 63.7550(b)(5))**
6. The permittee must include the following information in the compliance report: **(40 CFR 63.7550(c), 40 CFR 63.7550(c)(1))**
 - a. Company and Facility name and address; **(40 CFR 63.7550(c)(5)(i))**
 - b. Process unit information, emissions limitations, and operating parameter limitations; **(40 CFR 63.7550(c)(5)(ii))**
 - c. Date of report and beginning and ending dates of the reporting period; **(40 CFR 63.7550(c)(5)(iii))**
 - d. Include the date of the most recent tune-up for each unit. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown; **(40 CFR 63.7550(c)(5)(xiv))**
 - e. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report. **(40 CFR 63.7550(c)(5)(xvii))**
7. The permittee must submit the reports according to the procedures specified in paragraph (h)(3) of 40 CFR 63.7550, as listed below; **(40 CFR 63.7550(h))**
 - a. The permittee must submit all reports required by Table 9 of 40 CFR Part 63, Subpart DDDDD electronically to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). CEDRI can be accessed through the EPA's CDX. The permittee must use the appropriate electronic report in CEDRI for 40 CFR Part 63, Subpart DDDDD. Instead of using the electronic report in CEDRI for 40 CFR Part 63, Subpart DDDDD, the permittee may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (<http://www.epa.gov/ttn/chief/cedri/index.html>), once the XML schema is available. If the reporting form specific to 40 CFR Part 63, Subpart DDDDD is not available in CEDRI at the time that the report is due, the permittee must submit the report to the Administrator at the appropriate address listed in 40 CFR 63.13. The permittee must begin submitting reports via CEDRI no later than 90-days after the form becomes available in CEDRI. **(40 CFR 63.7550(h)(3))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

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The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The permittee must comply with 40 CFR Part 63, Subpart DDDDD no later than January 31, 2016, for existing boilers and process heaters, unless an extension has been granted per 40 CFR 63.6(i). **(40 CFR 63.7495(b))**
2. The permittee must be in compliance with the applicable work practice standards. **(40 CFR 63.7505(a))**
3. For affected sources (as defined in 40 CFR 63.7490) that have not operated since the previous compliance demonstration and more than one year has passed since the previous compliance demonstration, the permittee must complete a subsequent tune-up within 30 days of startup by following the procedures described in SC IX 4.a through 4.f. **(40 CFR 63.7515(g))**
4. The permittee must demonstrate continuous compliance with the tune-up requirement by completing the following: **(40 CFR 63.7540(a))**
 - a. Inspect the burner, and clean or replace any components of the burner as necessary (the permittee may perform the burner inspection any time prior to tune-up or delay the burner inspection until the next scheduled unit shutdown). At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment. **(40 CFR 63.7540(a)(10)(i))**
 - b. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available. **(40 CFR 63.7540(a)(10)(ii))**
 - c. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection. **(40 CFR 63.7540(a)(10)(iii))**
 - d. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOx requirement to which the unit is subject. **(40 CFR 63.7540(a)(10)(iv))**
 - e. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. **(40 CFR 63.7540(a)(10)(v))**
 - f. Maintain on-site and submit, if requested by the Administrator, the most recent periodic report containing the information as listed below: **(40 CFR 63.7540(a)(10)(vi))**
 - i. The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater; **(40 CFR 63.7540(a)(10)(vi)(A))**
 - ii. A description of any corrective actions taken as a part of the tune-up; **(40 CFR 63.7540(a)(10)(vi)(B))**
 - iii. The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit. **(40 CFR 63.7540(a)(10)(vi)(C))**
5. If the boiler or process heater has a heat input capacity of less than or equal to 5 million BTU per hour, the permittee may delay the burner inspection specified in SC IX 4.a until the next scheduled or unscheduled unit shutdown, but the permittee must inspect each burner at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, set the

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oxygen level no lower than the oxygen concentration measured during the most recent tune-up.
(40 CFR 63.7540(a)(12))

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FGMONMACT
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

These conditions apply to miscellaneous organic chemical manufacturing process units (MCPU) that are located at, or are part of, a major source as defined in section 112(a) of the Clean Air Act and that meet all the criteria specified in 40 CFR Part 63, Subpart FFFF (40 CFR 63.2435). Specified processes are further defined in 40 CFR 63.2440. For the purpose of the emission units listed below, several emission units may be associated with one MCPU or multiple MCPUs depending upon the products manufactured. The type of products manufactured within an emission unit will also influence whether or not the entire emission unit or a portion of the emission unit is subject to 40 CFR Part 63, Subpart FFFF (MON).

Emission Units: EU108-01, EU109-02, EU109-04, EU207-03, EU207-13, EU207-14, EU207-15, EU207-16, EU207-17, EU207-18, EU207-19, EU212-01, EU212-02, EU212-03, EU212-05, EU212-12, EU2504-14, EU2504-15, EU2504-16, EU2504-17, EU2504-18, EU2504-19, EU2505-06, EU2505-07, EU2703-01, EU2703-03, EU2703-08, EU2703-09, EU2703-13, EU2901-16, EU303-01, EU303-02, EU303-03, EU303-06, EU303-09, EU303-15, EU303-16, EU303-19, EU304-02, EU311-01, EU321-01, EU321-02, EU321-11, EU321-12, EU322-01, EU322-02, EU322-03, EU322-04, EU322-11, EU324-01, EU324-08, EU324-18, EU340-01, EU340-03, EU501-01, EU501-02, EU501-12, EU501-49, EU502-04, EU505-01, EU505-04, EU508-01, EU515-01, EU601-01, EU602-07, EU604-08, EU800-01, EURULE290

Flexible Group ID: FGTHROX

POLLUTION CONTROL EQUIPMENT

[See each Emission Unit](#)NA

I. EMISSION LIMITS

1. The permittee shall comply with the emission limits and work practice standards in Tables 1 through ~~7~~5 of Subpart FFFF at all times, ~~except during periods of startup, shutdown, and malfunction, and you must meet the requirements specified in 40 CFR 63.2455 through 63.2490~~ (or the alternative emission limits specified in 40 CFR 63.2495, 40 CFR 63.2500, or 40 CFR 63.2505), except as specified in 40 CFR 63.2450 (b) through ~~(sv)~~ of this section. You must meet the notification, reporting, and recordkeeping requirements specified in 40 CFR 63.2515, 63.2520, and 63.2525. **(40 CFR 63.2450(a))**
2. The permittee shall comply with each applicable emission limit in Table 1 of Subpart FFFF for continuous process vents. **(40 CFR 63.2455(a))**
3. The permittee shall comply with each applicable emission limit in Table 2 of Subpart FFFF for batch process vents. **(40 CFR 63.2460(a))**
4. The permittee shall comply with each applicable emission limit in Table 3 of Subpart FFFF for process vents that emit hydrogen halide and halogen HAP or HAP metals. **(40 CFR 63.2465(a))**
5. The permittee shall comply with each applicable emission limit in Table 4 of Subpart FFFF for storage tanks. **(40 CFR 63.2470(a))**
- ~~6. The emission limits in Table 4 to Subpart FFFF for control devices used to control emissions from storage tanks do not apply during periods of planned routine maintenance. **(40 CFR 63.2470(d))** Except for storage tanks in ethylene oxide service as defined in 40 CFR 63.2550, the emission limits in Table 4 to Subpart FFFF for control devices used to control emissions from storage tanks do not apply during periods of planned routine maintenance. **(40 CFR 63.2470(b), 40 CFR 63.2470(d))**~~

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6-7. As an alternative to the emission limits specified in Table 4 to Subpart FFFF, the permittee may elect to implement vapor balancing in accordance with 40 CFR 63.1253(f), except as specified in 40 CFR 63.2470(e)(1) through (3). The permittee may comply with the vapor balancing alternative in 40 CFR 63.1253(f) when the storage tank is filled from a barge. All requirements for tank trucks and railcars specified in 40 CFR 63.1253(f) also apply to barges, except when 40 CFR 63.1253(f)(2) refers to pressure testing certifications, the requirements in 40 CFR 61.304(f) apply for barges. (40 CFR 63.2470(e))

7-8. For each surge control vessel or bottoms receiver that meets the capacity and vapor pressure thresholds for a Group 1 storage tank, the permittee shall comply with the emission limits specified in Table 4 of Subpart FFFF. **(40 CFR 63.2450(r))**

8-9. The permittee shall comply with each applicable emission limit in Table 5 of Subpart FFFF for transfer racks. **(40 CFR 63.2475(a))**

9-10. The permittee may elect to comply with the pollution prevention alternative requirements specified below in lieu of the emission limitations and work practice standards contained in Tables 1 through 7 to Subpart FFFF for any MCPU for which initial startup occurred before April 4, 2002. The permittee may comply with the requirements of 40 CFR 63.2495(a)(1) for a series of processes, including situations where multiple processes are merged, if the permittee demonstrates to the satisfaction of the Administrator that the multiple processes were merged after the baseline period into an existing process or processes: **(40 CFR 63.2495(a))**

- a. The permittee must reduce the production-indexed HAP consumption factor (HAP factor) by at least 65% from a 3-year average baseline beginning no earlier than the 1994 through 1996 calendar years. For any reduction in the HAP factor achieved by reducing HAP that are also volatile organic compounds (VOC), the permittee must demonstrate an equivalent reduction in the production-indexed VOC consumption factor (VOC factor) on a mass basis. For any reduction in the HAP factor achieved by reducing a HAP that is not a VOC, the permittee may not increase the VOC factor. **(40 CFR 63.2495(a)(1))**
- b. Any MCPU for which the permittee seeks to comply by using the pollution prevention alternative must begin with the same starting material(s) and end with the same product(s). The permittee may not comply by eliminating any steps of a process by transferring the step offsite (to another manufacturing location). The permittee may also not merge a solvent recovery step conducted offsite to onsite and as part of an existing process as a method of reducing consumption. **(40 CFR 63.2495(a)(2))**
- c. The permittee may comply with the requirements of paragraph (a) above for a series of processes, including situations where multiple processes are merged, if the permittee demonstrates to the satisfaction of the Administrator that the multiple processes were merged after the baseline period into an existing process or processes. **(40 CFR 63.2495(a)(3))**
- d. The permittee must comply with the emission limitations and work practice standards contained in Tables 1 through 7 of Subpart FFFF for all HAP that are generated in the MCPU and that are not included in consumption, as defined in 40 CFR 63.2550. If any vent stream routed to the combustion control is a halogenated vent stream, as defined in 40 CFR 63.2550, then hydrogen halides that are generated as a result of combustion control must be controlled according to the requirements of 40 CFR 63.994 and the requirements referenced therein. The permittee may not merge nondedicated formulation or nondedicated solvent recovery processes with any other processes. **(40 CFR 63.2495(b))**
- e. To demonstrate initial compliance with the pollution prevention alternative requirements (40 CFR 63.2495(a)), the permittee must prepare a demonstration summary in accordance with 40 CFR 63.2495(c)(1) and calculate baseline and target annual HAP and VOC factors in accordance with 40 CFR 63.2495(c)(2) and (3). **(40 CFR 63.2495(c))**

10-11. For an existing source, the permittee may elect to comply with the percent reduction emission limitations in Tables 1, 2, 4, 5, and 7 to Subpart FFFF by complying with the emissions averaging provisions specified in 40 CFR 63.150, except as specified below: **(40 CFR 63.2500(a))**

- a. The batch process vents in an MCPU collectively are considered one individual emission point for the purposes of emissions averaging, except that only individual batch process vents must be excluded to meet the requirements of 40 CFR 63.150(d)(5). **(40 CFR 63.2500(b))**
- b. References in 40 CFR 63.150 to 40 CFR 63.112 through 40 CFR 63.130 mean the corresponding requirements in 40 CFR 63.2450 through 40 CFR 63.2490, including applicable monitoring, recordkeeping, and reporting. **(40 CFR 63.2500(c))**

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- c. References to "periodic reports" in 40 CFR 63.150 mean "compliance report" for the purposes of Subpart FFFF. **(40 CFR 63.2500(d))**
- d. For batch process vents, estimate uncontrolled emissions for a standard batch using the procedures in 40 CFR 63.1257(d)(2)(i) and (ii) instead of the procedures in 40 CFR 63.150(g)(2). Multiply the calculated emissions per batch by the number of batches per month when calculating the monthly emissions for use in calculating debits and credits. **(40 CFR 63.2500(e))**
- e. References to "storage vessels" in 40 CFR 63.150 mean "storage tank" as defined in 40 CFR 63.2550 for the purposes of Subpart FFFF. **(40 CFR 63.2500(f))**

11.12. As an alternative to complying with the emission limits and work practice standards for process vents and storage tanks in Tables 1 through 4 to Subpart FFFF and the requirements in 40 CFR 63.2455 through 40 CFR 63.2470, the permittee may comply with the emission limits below and demonstrate compliance in accordance with the requirements in 40 CFR 63.2505(b). **(40 CFR 63.2505)**

- a. The permittee must route vent streams through a closed-vent system to a control device that reduces HAP emissions as specified in either paragraph below: **(40 CFR 63.2505(a)(1))**
 - i. If the permittee uses a combustion control device, it must reduce HAP emissions to an outlet TOC concentration of 20 parts per million by volume (ppmv) or less and to an outlet concentration of hydrogen halide and halogen HAP of 20 ppmv or less, or as an alternative, if the permittee controls halogenated vent streams emitted from a combustion device followed by a scrubber, reduce the hydrogen halide and halogen HAP generated in the combustion device by greater than or equal to 95% by weight in the scrubber. **(40 CFR 63.2505(a)(1)(i))**
 - ii. If the permittee uses a noncombustion control device(s), it must reduce HAP emissions to an outlet total organic HAP concentration of 50 ppmv or less, and an outlet concentration of hydrogen halide and halogen HAP of 50 ppmv or less. **(40 CFR 63.2505(a)(1)(ii))**
- b. Any Group 1 process vents within a process that are not controlled according to this alternative standard must be controlled according to the emission limits in Tables 1 through 3 to Subpart FFFF. **(40 CFR 63.2505(a)(2))**

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

- 1. The permittee shall comply with the work practice standards in Tables 1 through 7 of Subpart FFFF at all times, ~~except during periods of startup, shutdown, and malfunction, and comply with and you must meet~~ the requirements ~~specified~~ in 40 CFR 63.2455 through 40 CFR 63.2490 (or the alternative means of compliance in 40 CFR 63.2495, 40 CFR 63.2500, or 40 CFR 63.2505), except as specified in 40 CFR 63.2450 (b) through (sv). You must meet the notification, reporting, and recordkeeping requirements specified in 40 CFR 63.2515, 63.2520, and 63.2525. **(40 CFR 63.2450(a))**
- 2. When organic HAP emissions from different emission types (e.g., continuous process vents, batch process vents, storage tanks, transfer operations, and waste management units) are combined, the permittee shall comply with the requirements of either 40 CFR 63.2450(c)(1) or 40 CFR 63.2450(c)(2). **(40 CFR 63.2450(c))**
- 3. The permittee shall not use a flare to control halogenated vent streams or hydrogen halide and halogen HAP emissions. **(40 CFR 63.2450(o))**
- ~~4. Opening a safety device, as defined in 40 CFR 63.2550, is allowed at any time conditions require it to avoid unsafe conditions. (40 CFR 63.2450(p))~~
- 5.4. For each surge control vessel or bottoms receiver that meets the capacity and vapor pressure thresholds for a Group 1 storage tank, the permittee shall comply with the work practice standards specified in Table 4 of Subpart FFFF. For each surge control vessel and bottoms receiver in ethylene oxide service as defined in 40 CFR 63.2550, you must also meet the applicable process vent requirements specified in 40 CFR 63.2492 and 63.2493(a) through (c). **(40 CFR 63.2450(r))**

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- 6.5. For the purposes of determining group status for continuous process vents, batch process vents, and storage tanks in 40 CFR 63.2455, 40 CFR 63.2460, and 40 CFR 63.2470, the permittee shall consider hydrazine to be an organic HAP. **(40 CFR 63.2450(s))**
- 7.6. Periods of planned routine maintenance of each control device used to control emissions from storage tanks, during which the control device does not meet the emission limit specified in Table 4 to Subpart FFFF, must not exceed 240 hours per year (hr/yr). The permittee may submit an application to the Administrator requesting an extension of this time limit to a total of 360 hr/yr. The application must explain why the extension is needed, it must indicate that no material will be added to the storage tank between the time the 240-hr limit is exceeded and the control device is again operational, and it must be submitted at least 60 days before the 240-hr limit will be exceeded. **(40 CFR 63.2470(d))**
- 8.7. The permittee must comply with each work practice standard in Table 5 to Subpart FFFF that applies to transfer racks, and the permittee must meet each applicable requirement in 40 CFR 63.2475(b) and (c). When the term "high throughput transfer rack" is used in 40 CFR Part 63, Subpart SS, the term "Group 1 transfer rack," as defined in 40 CFR 63.2550, applies for the purposes of Subpart FFFF. **(40 CFR 63.2475)**

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The requirements specified in 40 CFR 63.2450 (g)(1) through (5) apply instead of or in addition to the requirements specified in 40 CFR Part 63, Subpart SS. (40 CFR 63.2450(g))
2. To demonstrate compliance with the emission limit in Table 3 to Subpart FFFF for HAP metals at a new source, the permittee must conduct an initial performance test of each control device that is used to comply with the emission limit for HAP metals specified in Table 3 to Subpart FFFF. The permittee must conduct the performance test according to the procedures in 40 CFR 63.997. The permittee must use Method 29 of Appendix A of 40 CFR Part 60 to determine the HAP metals at the inlet and outlet of each control device, or use Method 5 of Appendix A of 40 CFR Part 60 to determine the total particulate matter (PM) at the inlet and outlet of each control device. The permittee has demonstrated initial compliance if the overall reduction of either HAP metals or total PM from the process is greater than or equal to 97% by weight. (40 CFR 63.2465(d)(2))

3. For storage tanks, you must measure the concentration of ethylene oxide of the fluid stored in the storage tanks. (40 CFR 63.2492(b))

4. For each batch process vent or continuous process vent, you must measure the flow rate and concentration of ethylene oxide of each process vent specified in 40 CFR 63.2492(a). (40 CFR 63.2492(a))

5. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall comply with the recordkeeping requirements specified in 40 CFR 63.2515, 40 CFR 63.2520, and 40 CFR 63.2525. (40 CFR 63.2450(a))
2. Each continuous emissions monitoring system (CEMS) must be installed, operated, and maintained according to the requirements in 40 CFR 63.8 and 40 CFR 63.2450(j)(1) through (5). (40 CFR 63.2450(j))
3. The provisions in 40 CFR 63.2450(k)(1) through (6) of this section apply in addition to the requirements for continuous parameter monitoring system (CPMS) in 40 CFR Part 63, Subpart SS. (40 CFR 63.2450(k))
4. 40 CFR 63.152(f)(7)(ii) through (iv) and 40 CFR 63.998(b)(2)(iii) and (b)(6)(i)(A), which apply to the exclusion of monitoring data collected during periods of startup, shutdown, and malfunction from daily averages, do not apply for the purposes of 40 CFR Part 63, Subpart FFFF. (40 CFR 63.2450(l))
5. To demonstrate compliance with the emission limit in Table 3 to Subpart FFFF for HAP metals at a new source, the permittee must comply with the monitoring requirements specified in 40 CFR 63.1366(b)(1)(xi) for each fabric filter used to control HAP metals. (40 CFR 63.2465(d)(3))
6. The permittee must keep records of HAP and VOC consumption, production, and the rolling annual HAP and VOC factors for each MCPU for which the permittee is complying with 40 CFR 63.2495(a), the pollution prevention standard. (40 CFR 63.2495(e))
7. The permittee shall keep each applicable record required by 40 CFR Part 63, Subpart A and in referenced subparts of 40 CFR Part 63, F, G, SS, UU, WW, and GGG and in referenced Subpart F of 40 CFR Part 63. (40 CFR 63.2525(a))
8. The permittee shall keep records of each operating scenario as specified below:

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- a. A description of the process and the type of process equipment used. **(40 CFR 63.2525(b)(1))**
 - b. An identification of related process vents, including their associated emissions episodes if not complying with the alternative standard in 40 CFR 63.2505; wastewater point of determination (POD); storage tanks; and transfer racks. **(40 CFR 63.2525(b)(2))**
 - c. The applicable control requirements of Subpart FFFF, including the level of required control, and for vents, the level of control for each vent. **(40 CFR 63.2525(b)(3))**
 - d. The control device or treatment process used, as applicable, including a description of operating and/or testing conditions for any associated control device. **(40 CFR 63.2525(b)(4))**
 - e. The process vents, wastewater POD, transfer racks, and storage tanks (including those from other processes) that are simultaneously routed to the control device or treatment process(s). **(40 CFR 63.2525(b)(5))**
 - f. The applicable monitoring requirements of Subpart FFFF and any parametric level that assures compliance for all emissions routed to the control device or treatment process. **(40 CFR 63.2525(b)(6))**
 - g. Calculations and engineering analyses required to demonstrate compliance. **(40 CFR 63.2525(b)(7))**
 - h. For reporting purposes, a change to any of these elements not previously reported, except for 40 CFR 63.2525(b)(5), constitutes a new operating scenario. **(40 CFR 63.2525(b)(8))**
9. The permittee shall keep a schedule or log of operating scenarios for processes with batch vents from batch operations updated each time a different operating scenario is put into effect. **(40 CFR 63.2525(c))**
10. The permittee shall keep records of the information specified below for Group 1 batch process vents in compliance with a percent reduction emission limit in Table 2 to Subpart FFFF if some of the vents are controlled to less the percent reduction requirement: **(40 CFR 63.2525(d))**
- a. Records of whether each batch operated was considered a standard batch; **(40 CFR 63.2525(d)(1))**
 - b. The estimated uncontrolled and controlled emissions for each batch that is considered to be a nonstandard batch. **(40 CFR 63.2525(d)(2))**
11. The permittee shall keep records of the information specified below, as applicable, for each process with Group 2 batch process vents or uncontrolled hydrogen halide and halogen HAP emissions from the sum of all batch and continuous process vents less than 1,000 lb/yr. No records are required if the permittee documented in the notification of compliance status report that the MCPU meets any of the situations described in 40 CFR 63.2525(e)(1)(i), (ii), or (iii). **(40 CFR 63.2525(e))**
- a. If the permittee documented in the notification of compliance status report that an MCPU has Group 2 batch process vents because the non-reactive organic HAP is the only HAP and usage is less than 10,000 lb/yr, as specified in 40 CFR 63.2460(b)(7), the permittee must keep records of the amount of HAP material used, and calculate the daily rolling annual sum of the amount used no less frequently than monthly. If a record indicates usage exceeds 10,000 lb/yr, the permittee must estimate emissions for the preceding 12 months based on the number of batches operated and the estimated emissions for a standard batch, and begin recordkeeping as specified in 40 CFR 63.2525(e)(4). After 1 year, the permittee may revert to recording only usage if the usage during the year is less than 10,000 lb. **(40 CFR 63.2525(e)(2))**
 - b. If the permittee documented in the notification of compliance status report that total uncontrolled organic HAP emissions from the batch process vents in an MCPU will be less than 1,000 lb/yr for the anticipated number of standard batches, then the permittee must keep records of the number of batches operated and calculate a daily rolling annual sum of batches operated no less frequently than monthly. If the number of batches operated results in organic HAP emissions that exceed 1,000 lb/yr, the permittee must estimate emissions for the preceding 12 months based on the number of batches operated and the estimated emissions for a standard batch, and begin recordkeeping as specified in 40 CFR 63.2525(e)(4). After one year, the permittee may revert to recording only the number of batches if the number of batches operated during the year results in less than 1,000 lb of organic HAP emissions. **(40 CFR 63.2525(e)(3))**
 - c. If none of the conditions specified in 40 CFR 63.2525(e)(1) through (3) are met, the permittee must keep records of the information specified below: **(40 CFR 63.2525(e)(4))**
 - i. A record of the day each batch was completed and/or the operating hours per day for continuous operations with hydrogen halide and halogen emissions; **(40 CFR 63.2525(e)(4)(i))**
 - ii. A record of whether each batch operated was considered a standard batch; **(40 CFR 63.2525(e)(4)(ii))**
 - iii. The estimated uncontrolled and controlled emissions for each batch that is considered to be a nonstandard batch; **(40 CFR 63.2525(e)(4)(iii))**

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- iv. Records of the daily 365-day rolling summations of emissions, or alternative records that correlate to the emissions (e.g., number of batches), calculated no less frequently than monthly. **(40 CFR 63.2525(e)(4)(iv))**
12. The permittee shall keep a record of each time a safety device is opened to avoid unsafe conditions in accordance with 40 CFR 63.2450(s). **(40 CFR 63.2525(f))**
13. The permittee shall keep record of the results of each CPMS calibration check and the maintenance performed, as specified in 40 CFR 63.2450(k)(1). **(40 CFR 63.2525(g))**
14. For each CEMS, the permittee must keep records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period. **(40 CFR 63.2525(h))**
15. For each PUG, the permittee must keep records specified below: **(40 CFR 63.2525(i))**
 - a. Descriptions of the MCPU and other process units in the initial PUG required by 40 CFR 63.2535(l)(1)(v); **(40 CFR 63.2525(i)(1))**
 - b. Rationale for including each MCPU and other process unit in the initial PUG (i.e., identify the overlapping equipment between process units) required by 40 CFR 63.2535(l)(1)(v); **(40 CFR 63.2525(i)(2))**
 - c. Calculations used to determine the primary product for the initial PUG required by 40 CFR 63.2535(l)(2)(iv); **(40 CFR 63.2525(i)(3))**
 - d. Descriptions of process units added to the PUG after the creation date and rationale for including the additional process units in the PUG as required by 40 CFR 63.2535(l)(1)(v); **(40 CFR 63.2525(i)(4))**
 - e. The calculation of each primary product redetermination required by 40 CFR 63.2535(l)(2)(iv). **(40 CFR 63.2525(i)(5))**
16. In the SSMP required by 40 CFR 63.6(e)(3), the permittee is not required to include Group 2 emission points, unless those emission points are used in an emissions average. For equipment leaks, the SSMP requirement is limited to control devices and is optional for other equipment. **(40 CFR 63.2525(j))**
17. For each bag leak detector used to monitor PM HAP emissions from a fabric filter, maintain records of any bag leak detection alarm, including the date and time, with a brief explanation of the cause of the alarm and the corrective action taken. **(40 CFR 63.2525(k))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall comply with the notification and reporting requirements specified in 40 CFR 63.2515, 40 CFR 63.2520, and 40 CFR 63.2525. **(40 CFR 63.2450(a))**
5. When 40 CFR 63.2455 through 63.2490 reference other subparts in 40 CFR 63 that use the term "periodic report," it means "compliance report" for the purposes of 40 CFR Part 63, Subpart FFFF. The compliance report must include the information specified in 40 CFR 63.2520(e), as well as the information specified in referenced subparts. **(40 CFR 63.2450(m)(1))**
6. When there are conflicts between 40 CFR Part 63, Subpart FFFF and referenced subparts for the due dates of reports required by 40 CFR Part 63, Subpart FFFF, reports must be submitted according to the due dates presented in 40 CFR Part 63, Subpart FFFF. **(40 CFR 63.2450(m)(2))**

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7. Excused excursions, as defined in 40 CFR Part 63, Subparts G and SS, are not allowed. **(40 CFR 63.2450(m)(3))**
8. If an emission stream contains energetics or organic peroxides that, for safety reasons, cannot meet an applicable emission limit specified in Tables 1 through 7 to Subpart FFFF, then the permittee must submit documentation in the precompliance report explaining why an undue safety hazard would be created if the air emission controls were installed, and the permittee must describe the procedures that will be implemented to minimize HAP emissions from these vent streams. **(40 CFR 63.2450(q))**
9. If complying with the pollution prevention standard, the permittee must include the pollution prevention demonstration plan in the precompliance report required by 40 CFR 63.2520(c). The permittee must identify all days when the annual factors were above the target factors in the compliance reports. **(40 CFR 63.2495(f))**
10. The permittee must submit each applicable report in Table 11 to Subpart FFFF. **(40 CFR 63.2520(a))**
11. Unless the Administrator has approved a different schedule for submission of reports under 40 CFR 63.10(a), the permittee must submit each report by the date in Table 11 to Subpart FFFF and according to 40 CFR 63.2520(b)(1) through (5). **(40 CFR 63.2520(b))**
12. The permittee must submit a precompliance report to request approval for any of the items in 40 CFR 63.2520(c)(1) through (7). The report will be approved or disapproved within 90 days after receipt. If it is disapproved, the permittee must still be in compliance with the emission limitations and work practice standards in Subpart FFFF by the compliance date. To change any of the information submitted in the report, the permittee must submit a notification 60 days before the planned change is to be implemented. **(40 CFR 63.2520(c))**
13. The permittee must submit a notification of compliance status report according to the schedule in 40 CFR 63.2520(d)(1), and the notification of compliance status report must contain the information specified in 40 CFR 63.2520(d)(2). **(40 CFR 63.2520(d))**
14. The compliance report must contain the information specified in 40 CFR 63.2520(e)(1) through (10). **(40 CFR 63.2520(e))**
15. The permittee must submit all of the notifications in 40 CFR 63.6(h)(4) and (5), 40 CFR 63.7(b) and (c), 40 CFR 63.8(e), (f)(4) and (6), and 40 CFR 63.9(b) through (h) that apply by the dates specified. **(40 CFR 63.2515(a))**
16. As specified in 40 CFR 63.9(b)(2), if the affected source starts-up before November 10, 2003, the permittee must submit an initial notification not later than 120 calendar days after November 10, 2003. **(40 CFR 63.2515(b)(1))**
17. As specified in 40 CFR 63.9(b)(3), if the new affected source starts-up on or after November 10, 2003, the permittee must submit an initial notification not later than 120 calendar days after becoming subject to Subpart FFFF. **(40 CFR 63.2515(b)(2))**
18. If required to conduct a performance test, the permittee must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required in 40 CFR 63.7(b)(1). For any performance test required as part of the initial compliance procedures for batch process vents in Table 2 to Subpart FFFF, the permittee must also submit the test plan required by 40 CFR 63.7(c) and the emission profile with the notification of the performance test. **(40 CFR 63.2515(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENTS

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1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart FFFF for Miscellaneous Organic Chemical Manufacturing. **(40 CFR Part 63, Subparts A and FFFF)**
2. The permittee shall determine if an emission stream is a halogenated vent stream, as defined in 40 CFR 63.2550, by calculating the mass emission rate of halogen atoms in accordance with 40 CFR 63.115(d)(2)(v). Alternatively, the permittee may elect to designate the emission stream as halogenated. **(40 CFR 63.2450(b))**
3. Except when complying with 40 CFR 63.2485, if the permittee reduces organic HAP emissions by venting emissions through a closed-vent system to any combination of control devices (except a flare) or recovery devices, the permittee shall meet the requirements of 40 CFR 63.982(c) and the requirements referenced therein. **(40 CFR 63.2450(e)(1))**
4. Except when complying with 40 CFR 63.2485, if the permittee reduces organic HAP emissions by venting emissions through a closed-vent system to a flare, the permittee shall meet the requirements of 40 CFR 63.982(b) and the requirements referenced therein. **(40 CFR 63.2450(e)(2))**
5. If the permittee uses a halogen reduction device to reduce hydrogen halide and halogen HAP emissions from halogenated vent streams, the permittee shall meet the requirements of 40 CFR 63.994 and the requirements referenced therein. If the permittee uses a halogen reduction device before a combustion device, the permittee shall determine the halogen atom emission rate prior to the combustion device according to the procedures in 40 CFR 63.115(d)(2)(v). **(40 CFR 63.2450(e)(3))**
6. As part of a flare compliance assessment required in 40 CFR 63.987(b), the permittee has the option of demonstrating compliance with the requirements of 40 CFR 63.11(b) by complying with the requirements in either 40 CFR 63.11(b)(6)(i) or 40 CFR 63.987(b)(3)(ii). If the permittee elects to meet the requirements in 40 CFR 63.11(b)(6)(i), the permittee shall keep flare compliance assessment records as specified in 40 CFR 63.2450(f)(2)(i) and (ii). **(40 CFR 63.2450(f))**
7. To determine the percent reduction of a small control device that is used to comply with an emission limit specified in Table 1, 2, 3, or 5, the permittee may elect to conduct a design evaluation as specified in 40 CFR 63.1257(a)(1) instead of a performance test as specified in 40 CFR Part 63, Subpart SS. The permittee shall establish the value(s) and basis for the operating limits as part of the design evaluation. For continuous process vents, the design evaluation must be conducted at maximum representative operating conditions for the process, unless the Administrator specifies or approves alternate operating conditions. For transfer racks, the design evaluation must demonstrate that the control device achieves the required control efficiency during the reasonably expected maximum transfer loading rate. **(40 CFR 63.2450(h))**
8. When 40 CFR 63.997(e)(2)(iii)(C) requires correcting the measured concentration at the outlet of a combustion device to 3% oxygen if supplemental combustion air is added, the requirements in either (a) or (b) below apply for the purposes of 40 CFR Part 63, Subpart FFFF:
 - a. The permittee shall correct the concentration in the gas stream at the outlet of the combustion device to 3% oxygen if supplemental gases are added, as defined in 40 CFR 63.2550, to the vent stream; or **(40 CFR 63.2450(i)(1))**
 - b. The permittee shall correct the measured concentration for supplemental gases using Equation 1 of 40 CFR 63.2460; the permittee may use process knowledge and representative operating data to determine the fraction of the total flow due to supplemental gas. **(40 CFR 63.2450(i)(2))**
9. For each continuous process vent, the permittee shall either designate the vent as a Group 1 continuous process vent or determine the total resource effectiveness (TRE) index value as specified in 40 CFR 63.115(d), except as specified in 40 CFR 63.2455(b)(1) through (3). **(40 CFR 63.2455(b))**
10. If the permittee uses a recovery device to maintain the TRE above a specified threshold, the permittee shall meet the requirements of 40 CFR 63.982(e) and the requirements referenced therein, except as specified in 40 CFR 63.2450 and 40 CFR 63.2455(c)(1). **(40 CFR 63.2455(c))**

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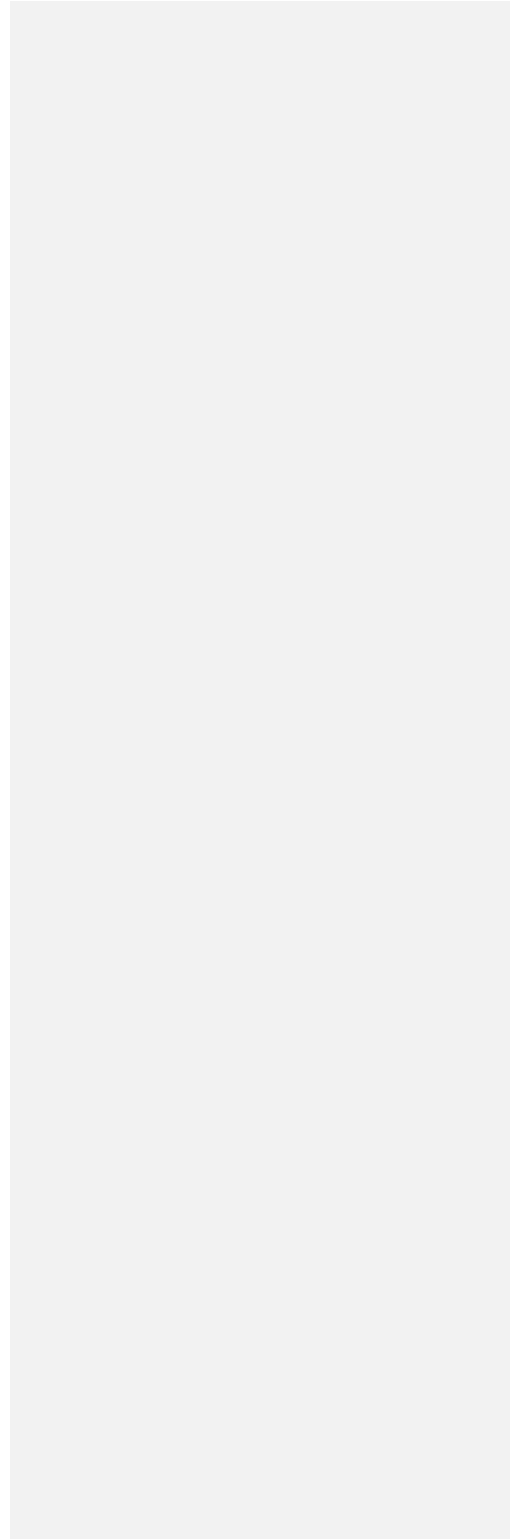
11. If a process has batch process vents, as defined in 40 CR 63.2550, the permittee must determine the group status of the batch process vents by determining and summing the uncontrolled organic HAP emissions from each of the batch process vents within the process using the procedures specified in 40 CFR 63.1257(d)(2)(i) and (ii), except as specified in 40 CFR 63.2460(b)(1) through (7). **(40 CFR 63.2460(b))**
12. Exceptions to the requirements for batch process vents in 40 CFR Part 63, Subparts SS and WW are specified in 40 CFR 66.2460(c)(1) through (9). **(40 CFR 63.2460(c))**
13. If any process vents within a process emit hydrogen halide and halogen HAP, the permittee must determine and sum the uncontrolled hydrogen halide and halogen HAP emissions from each of the process vents within the process using the procedures specified in 40 CFR 63.1257(d)(2)(i) and/or (ii), as appropriate. When 40 CFR 63.1257(d)(2)(ii)(E) requires documentation to be submitted in the precompliance report, it means the notification of compliance status report for the purposes of 40 CFR 63.2465(b). **(40 CFR 63.2465(b))**
14. If collective uncontrolled hydrogen halide and halogen HAP emissions from the process vents within a process are greater than or equal to 1,000 pounds per year (lb/yr), the permittee must comply with 40 CFR 63.994 and the requirements referenced therein, except as specified in 40 CFR 63.2465(c)(1) through (3). **(40 CFR 63.2465(c))**
15. To demonstrate compliance with the emission limit in Table 3 to Subpart FFFF for HAP metals at a new source, the permittee must determine the mass emission rate of HAP metals based on process knowledge, engineering assessment, or test data. **(40 CFR 63.2465(d)(1))**
16. If the permittee conducts a performance test or design evaluation for a control device used to control emissions only from storage tanks, the permittee must establish operating limits, conduct monitoring, and keep records using the same procedures as required in 40 CFR Part 63, Subpart SS for control devices used to reduce emissions from process vents instead of the procedures specified in 40 CFR 63.985(c), 40 CFR 63.998(d)(2)(i), and 40 CFR 63.999(b)(2). **(40 CFR 63.2470(c)(1))**
17. When the term "storage vessel" is used in 40 CFR Part 63, Subparts SS and WW, the term "storage tank," as defined in 40 CFR 63.2550 applies for the purposes of Subpart FFFF. **(40 CFR 63.2470(c)(2))**
18. The permittee must meet each requirement in Table 6 to Subpart FFFF that applies to equipment leaks, except as specified in 40 CFR 63.2480(b) through (d). **(40 CFR 63.2480)**
19. The permittee must meet each requirement in Table 7 to Subpart FFFF that applies to wastewater streams and liquid streams in open systems within an MCPU, except as specified in 40 CFR 63.2485(b) through (o). **(40 CFR 63.2485)**
20. The permittee must meet each requirement in Table 10 to Subpart FFFF that applies to heat exchange systems, except that the phrase "a chemical manufacturing process unit meeting the conditions of 40 CFR 63.100 (b)(1) through (b)(3) of this section" in 40 CFR 63.104(a) means "an MCPU meeting the conditions of 40 CFR 63.2435" for the purposes of Subpart FFFF and that the reference to 40 CFR 63.100(c) in 40 CFR 63.104(a) does not apply for the purposes Subpart FFFF. **(40 CFR 63.2490)**
21. For each MCPU for which the permittee is complying with 40 CFR 63.2495(a), the pollution prevention standard, the permittee must calculate annual rolling average values of the HAP and VOC factors (annual factors) in accordance with the procedures specified below. To show continuous compliance, the annual factors must be equal to or less than the target annual factors calculated according to 40 CFR 63.2495(c)(3). **(40 CFR 63.2495(d))**
 - a. To calculate the annual factors, the permittee must divide the consumption of both total HAP and total VOC by the production rate, per process, for 12-month periods at the frequency specified in either paragraph below, as applicable: **(40 CFR 63.2495(d)(1))**
 - i. For continuous processes, the permittee must calculate the annual factors every 30 days for the 12-month period preceding the 30th day (i.e., annual rolling average calculated every 30 days). A process with both batch and continuous operations is considered a continuous process for the purposes of this section; **(40 CFR 63.2495(d)(2))**

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- ii. For batch processes, the permittee must calculate the annual factors every 10 batches for the 12-month period preceding the 10th batch (i.e., annual rolling average calculated every 10 batches), except as specified if the permittee produces more than 10 batches during a month, the permittee must calculate the annual factors at least once during that month and, if the permittee produces less than 10 batches in a 12-month period, the permittee must calculate the annual factors for the number of batches in the 12-month period since the previous calculations. **(40 CFR 63.2495(d)(3))**
22. To demonstrate compliance with the alternative standard in 40 CFR 63.2505, the permittee must meet the requirements of 40 CFR 63.1258(b)(5) beginning no later than the initial compliance date specified in 40 CFR 63.2445, except as specified below. **(40 CFR 63.2505(b))**
 - a. The permittee must comply with the requirements in 40 CFR 63.983 and the requirements referenced therein for closed-vent systems. **(40 CFR 63.2505(b)(1))**
 - b. When 40 CFR 63.1258(b)(5)(i) refers to 40 CFR 63.1253(d) and 40 CFR 63.1254(c), the requirements in paragraph 40 CFR 63.2505(a) apply for the purposes of Subpart FFFF. **(40 CFR 63.2505(b)(2))**
 - c. When 40 CFR 63.1258(b)(5)(i)(B) refers to "HCl," it means "total hydrogen halide and halogen HAP" for the purposes of Subpart FFFF. **(40 CFR 63.2505(b)(3))**
 - d. When 40 CFR 63.1258(b)(5)(ii) refers to 40 CFR 63.1257(a)(3), it means 40 CFR 63.2450(j)(5) for the purposes of Subpart FFFF. **(40 CFR 63.2505(b)(4))**
 - e. The permittee must submit the results of any determination of the target analytes of predominant HAP in the notification of compliance status report. **(40 CFR 63.2505(b)(5))**
 - f. If the permittee elects to comply with the requirement to reduce hydrogen halide and halogen HAP by greater than or equal to 95% by weight in 40 CFR 63.2505(a)(1)(i)(C), the permittee must meet the requirements below. **(40 CFR 63.2505(b)(6))**
 - i. Demonstrate initial compliance with the 95% reduction by conducting a performance test and setting a site-specific operating limit(s) for the scrubber in accordance with 40 CFR 63.994 and the requirements referenced therein. The permittee must submit the results of the initial compliance demonstration in the notification of compliance status report. **(40 CFR 63.2505(b)(6)(i))**
 - ii. Install, operate, and maintain CPMS for the scrubber as specified in 40 CFR 63.994(c) and 40 CFR 63.2450(k), instead of as specified in 40 CFR 63.1258(b)(5)(i)(C). **(40 CFR 63.2505(b)(6)(ii))**
 - g. If flow to the scrubber could be intermittent, the permittee must install, calibrate, and operate a flow indicator as specified in 40 CFR 63.2460(c)(7). **(40 CFR 63.2505(b)(7))**
 - h. Use the operating day as the averaging period for CEMS data and scrubber parameter monitoring data. **(40 CFR 63.2505(b)(8))**
 - i. The requirements in 40 CFR 63.2505(a) do not apply to emissions from storage tanks during periods of planned routine maintenance of the control device that do not exceed 240 hr/yr. The permittee may submit an application to the Administrator requesting an extension of this time limit to a total of 360 hr/yr in accordance with the procedures specified in 40 CFR 63.2470(d). The permittee must comply with the recordkeeping and reporting specified in 40 CFR 63.998(d)(2)(ii) and 40 CFR 63.999(c)(4) for periods of planned routine maintenance. **(40 CFR 63.2505(b)(9))**
23. For any equipment, emission stream, or wastewater stream subject to the provisions of both 40 CFR Part 63, Subpart FFFF and another rule, the permittee may elect to comply only with the provisions as specified in 40 CFR 63.2535(a) through (l). The permittee also must identify the subject equipment, emission stream, or wastewater stream, and the provisions that will be complied with, in the notification of compliance status report required by 40 CFR 63.2520(d). **(40 CFR 63.2535)**
24. For any Group 2 emission point that becomes a Group 1 emission point after the compliance date for the facility, the permittee shall comply with the Group 1 requirements beginning on the date the switch occurs. An initial compliance demonstration, as specified in 40 CFR Part 63, Subpart FFFF, shall be conducted within 150 days after the switch occurs. **(40 CFR 63.2445(d))**
25. If, after the compliance date for the facility, hydrogen halide and halogen HAP emissions from process vents in a process increase to more than 1,000 lb/yr, or HAP metals emissions from a process at a new affected source increase to more than 150 lb/yr, the permittee shall comply with the applicable emission limits specified in Table 3 of 40 CFR Part 63, Subpart FFFF and the associated compliance requirements beginning on the date the emissions exceed the applicable threshold. An initial compliance demonstration, as specified in 40 CFR Part 63, Subpart FFFF, shall be conducted within 150 days after the switch occurs. **(40 CFR 63.2445(e))**

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26. If the permittee has a small control device for process vent or transfer rack emissions that becomes a large control device, as defined in 40 CFR 63.2550(i), the permittee shall comply with monitoring and associated recordkeeping and reporting requirements for large control devices beginning on the date the switch occurs. An initial compliance demonstration, as specified in 40 CFR Part 63, Subpart FFFF, shall be conducted within 150 days after the switch occurs. **(40 CFR 63.2445(f))**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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E. NON-APPLICABLE REQUIREMENTS

At the time of the ROP issuance, the AQD has determined that no non-applicable requirements have been identified for incorporation into the permit shield provision set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii).

APPENDICES

Appendix 1. Abbreviations and Acronyms

The following is an alphabetical listing of abbreviations/acronyms that may be used in this permit.

AQD	Air Quality Division	MM	Million
acfm	Actual cubic feet per minute	MSDS	Material Safety Data Sheet
BACT	Best Available Control Technology	MW	Megawatts
BTU	British Thermal Unit	NA	Not Applicable
°C	Degrees Celsius	NAAQS	National Ambient Air Quality Standards
CAA	Federal Clean Air Act	NESHAP	National Emission Standard for Hazardous Air Pollutants
CAM	Compliance Assurance Monitoring	NMOC	Non-methane Organic Compounds
CEM	Continuous Emission Monitoring	NOx	Oxides of Nitrogen
CFR	Code of Federal Regulations	NSPS	New Source Performance Standards
CO	Carbon Monoxide	NSR	New Source Review
COM	Continuous Opacity Monitoring	PM	Particulate Matter
department	Michigan Department of Environment, Great Lakes, and Energy	PM-10	Particulate Matter less than 10 microns in diameter
dscf	Dry standard cubic foot	pph	Pound per hour
dscm	Dry standard cubic meter	ppm	Parts per million
EPA	United States Environmental Protection Agency	ppmv	Parts per million by volume
EU	Emission Unit	ppmw	Parts per million by weight
°F	Degrees Fahrenheit	PS	Performance Specification
FG	Flexible Group	PSD	Prevention of Significant Deterioration
GACS	Gallon of Applied Coating Solids	psia	Pounds per square inch absolute
GC	General Condition	psig	Pounds per square inch gauge
gr	Grains	PeTE	Permanent Total Enclosure
HAP	Hazardous Air Pollutant	PTI	Permit to Install
Hg	Mercury	RACT	Reasonable Available Control Technology
hr	Hour	ROP	Renewable Operating Permit
HP	Horsepower	SC	Special Condition
H ₂ S	Hydrogen Sulfide	scf	Standard cubic feet
HVLP	High Volume Low Pressure *	sec	Seconds
ID	Identification (Number)	SCR	Selective Catalytic Reduction
IRSL	Initial Risk Screening Level	SO ₂	Sulfur Dioxide
ITSL	Initial Threshold Screening Level	SRN	State Registration Number
LAER	Lowest Achievable Emission Rate	TAC	Toxic Air Contaminant
lb	Pound	Temp	Temperature
m	Meter	THC	Total Hydrocarbons
MACT	Maximum Achievable Control Technology	tpy	Tons per year
MAERS	Michigan Air Emissions Reporting System	µg	Microgram
MAP	Malfunction Abatement Plan	VE	Visible Emissions
EGLE	Michigan Department of Environment, Great Lakes, and Energy	VOC	Volatile Organic Compounds
mg	Milligram	yr	Year
mm	Millimeter		

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 pounds per square inch gauge (psig).

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Appendix 2. Schedule of Compliance

The permittee certified in the ROP application that this stationary source is in compliance with all applicable requirements and the permittee shall continue to comply with all terms and conditions of this ROP. A Schedule of Compliance is not required. (R 336.1213(4)(a), R 336.1119(a)(ii))

Appendix 3. Monitoring Requirements

Appendix 3.A:

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FG432BOILERS.

FG432BOILERS
NOx and CO₂/O₂ Monitoring
Continuous Emission Monitoring System (CEMS) Requirements

1. Within 30 calendar days after commencement of trial operation, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required CEMS.
2. Within 150 calendar days after commencement of trial operation, the permittee shall submit two copies of a complete test plan for the CEMS to the AQD for approval.
3. Within 180 calendar days after commencement of trial operation, the permittee shall complete the installation and testing of the CEMS.
4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CEMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table.

Pollutant	Applicable PS
NOx	2
CO ₂ /O ₂	3

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.
6. The CEMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 2 and 3 of Appendix B, 40 CFR Part 60.
7. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CEMS set forth in Appendix F of 40 CFR Part 60. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report (Figure 1, Appendix F)
8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to the AQD, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
 - a. A report of each exceedance above the limits specified in the conditions of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
 - b. A report of all periods of CEMS downtime and corrective action.
 - c. A report of the total operating time of each boiler during the reporting period.
 - d. A report of any periods that the CEMS exceeds the instrument range.
 - e. If no exceedances or CEMS downtime occurred during the reporting period, the permittee shall report that fact.

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The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request.

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FGTHROX:

FGTHROX
NOx and CO₂/O₂ Monitoring
Continuous Emission Monitoring System (CEMS) Requirements

1. Within 30 calendar days after commencement of trial operation, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required CEMS.
2. Within 150 calendar days after commencement of trial operation, the permittee shall submit two copies of a complete test plan for the CEMS to the AQD for approval.
3. Within 180 calendar days after commencement of trial operation, the permittee shall complete the installation and testing of the CEMS.
4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CEMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table.

Pollutant	Applicable PS
NOx	2
CO ₂ /O ₂	3
Flow	6

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.
6. The CEMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 2 and 3 of Appendix B, 40 CFR Part 60.
7. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CEMS set forth in Appendix F of 40 CFR Part 60. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report (Figure 1, Appendix F)
8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to the AQD, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
 - a. A report of each exceedance above the limits specified in the conditions of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
 - b. A report of all periods of CEMS downtime and corrective action.
 - c. A report of the total operating time of each boiler during the reporting period.
 - d. A report of any periods that the CEMS exceeds the instrument range.
 - e. If no exceedances or CEMS downtime occurred during the reporting period, the permittee shall report that fact.

The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request.

Appendix 3.B: Operation and Maintenance Plan for Continuous Emission Monitoring

FG432BOILERS and FGTHROX
Requirements from EPA Consent Decree 19-11880
Operation and Maintenance Plan Requirements

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FG432BOILERS and FGTHROX.

1. ~~Operation and Maintenance Plan. By no later than one hundred eighty (180) Days after the Effective Date of the Consent Decree 19-11880 (CD), DSC shall submit to EPA for approval pursuant to Section XI of the CD (Approval of Deliverables) an Operation and Maintenance Plan (OMP) for the continuous emission monitoring units (#27897AE, #27899AE and #2514 CEMS, respectively) at Boiler #12, Boiler #13, and the THROX.~~
2. ~~Commencing no later than thirty (30) Days after EPA approval and continuing thereafter, DSC shall implement the OMP required by Paragraph 1, as approved by EPA, for the continuous emission monitoring units identified in Paragraph 1 above.~~
3. The OMP shall include the following:
 - a. Schedule for monthly inspections;
 - b. Unit inspection procedures and/or checklist, including calibration gas review; and
 - c. Corrective action process to address any instances of deviations from operating parameter requirements, including identifying the root cause of each deviation and ensuring that corrective actions are taken to address such deviations. Each root cause analysis must include:
 - (1) Description of corrective actions taken in response to the deviation or, alternatively, an explanation of why no actions were taken;
 - (2) Description of actions taken by DSC to prevent future deviations from the same or similar root cause(s); and
 - (3) When the root cause is unknown, a description of efforts undertaken by DSC to determine the root cause.
4. ~~OMP Plan Report. By no later than sixty (60) Days after two (2) years of implementation of the OMP, DSC shall submit a report to EPA (OMP Plan Report) that includes a summary and analysis of all root cause analyses performed under the OMP, and identifies any trends or commonalities among the root cause analyses. If a trend or commonality exists among the root causes that is within the control of DSC to correct, DSC shall include a proposal for corrective action in the OMP Plan Report to address the underlying causes and provide a proposed schedule for implementing such corrective action. DSC shall implement the proposed corrective action in accordance with the OMP Plan Report.~~

Appendix 3.C: THROX Automated Alert System

FGTHROX
Requirements from EPA Consent Decree 19-11880
Automated Alert System Requirements

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FGTHROX.

1. ~~By no later than eighteen (18) months after the Effective Date of Consent Decree 19-11880 (CD),~~ DSC shall ~~develop and thereafter~~ continuously operate, consistent with technological limitations, manufacturers' specifications, and good engineering and maintenance practices, an automated alert system to notify process operators who work in buildings containing processes that are controlled by the THROX when the THROX stops operating for any reason (downtime events). The automated alert system shall meet the requirements of Subparagraphs 1.a and 1.b.
 - a. The automated alert system shall notify all process operators before planned downtime events, and immediately after unplanned downtime events occur. Short-duration events, which would not provide sufficient time to allow initiation of secondary controls before the THROX returns to operation, do not need to be communicated to the process operators.
 - b. Until the automated alert system is in operation, DSC shall continue to operate its existing method of notifying process unit control room personnel when the THROX is not operating by following both its THROX Alerts Procedure and THROX Alerts Procedure Supplement. Under these procedures, environmental personnel evaluate the THROX outage and, if the duration warrants, initiate a site-wide alert message; process unit control room personnel are required to respond to the alert, and security personnel follow up if one or more process unit control rooms fail to respond; and process unit control room personnel are notified at the end of the THROX outage event.
2. The relevant building process operator shall start to operate and continue operating the secondary controls identified in the Renewable Operating Permit (e.g., condensers, water scrubbers) throughout the duration of each THROX downtime event to ensure the required level of control at the affected process units as follows:
 - a. For unplanned THROX downtime events, as soon as practicable after being notified of such event through the automated alert system identified in Paragraph 1; and
 - b. For a planned THROX downtime event, by the date scheduled for such event.
3. ~~By no later than ninety (90) Days after the installation of the automated alert system and continuing thereafter as necessary to train new employees,~~ DSC shall provide training to personnel responsible for processes that are affected by THROX downtime events about the alert system and required follow up actions as set forth in Paragraphs 1 and 2.
4. DSC shall notify personnel responsible for processes that are affected by THROX downtime events within twenty-four (24) hours of any changes to the alert system, and DSC shall train such personnel on any new procedures within ninety (90) Days of any changes.
5. ~~DSC shall inform EPA of the dates of completion for the installation and implementation of the automated alert system and training as required by Paragraphs 1 through 3 in the first Annual Report required by Section IX of the CD (Reporting Requirements) after installation. DSC shall inform EPA of the completion of required training as required by Paragraph 3 in the Annual Reports required by Section IX of the CD (Reporting Requirements).~~

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Appendix 4. Recordkeeping

Specific recordkeeping requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 5. Testing Procedures

Specific testing requirement plans, procedures, and averaging times are detailed in the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 6. Permits to Install

The following table lists any PTIs issued or ROP revision applications received since the effective date of the previously issued ROP No. MI-ROP-A4043-2008. Those ROP revision applications that are being issued concurrently with this ROP renewal are identified by an asterisk (*). Those revision applications not listed with an asterisk were processed prior to this renewal.

Source-Wide PTI No MI-PTI-A4043-2008 is being reissued as Source-Wide PTI No. MI-PTI-A4043-2019a.

Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
134-08	200800093	Silicone rubber manufacturing process	EU207-01
534-77G	200900104	Alkoxylation process	EU601-01
175-09A	201100031	25.1 MMBTU/hr boiler and electrically powered plasma arc gasifier known as a "plasma enhanced melter" (PEM)	EUBOILER2515, EU2515-01, FGPEM&BLR
812-91C	201300027	Grignard process	EU515-01
14-13	201300048	5617 batch kettle process producing silane and siloxane products	EU324-08
15-13	201300048	4820 batch kettle process producing silane and siloxane products	EU324-01
169-12	201300048	Resin and coating manufacturing	EU505-01
29-07B	201300077	HCl production plant, rail car transfer station no. 9E, and rail car unloading station no. 10E	EU356-01, EU356-02, EU356-03, FGHCLMACT
125-10A	201300106	Distillation pilot process	EU2901-12
34-04B	201300123	Calcium chloride process	EU340-01
91-07E	201400039	Site consolidation and blower system, site-wide scrubber system and thermal oxidation unit, and the trichlorosilane, silicon tetrachloride and dichlorosilane bulk move operations	FGSITEBLOWER, FGTHROX, FGSITESCUBBERS, FGHAP2012A2A, FGFOLD FACILITY
26-14	201400073	9025C dedicated waste tank in 2703 building	EU2703-17
84-08B	201400084	Phenyltrichlorosilane and diphenylchlorosilane recovery process	EU508-01, FG304VENTRECOVERY
91-14	201400117	Phenyl Chlorosilane Waste Tank 25403	EU502-09
44-89D	201500076	Silicone products manufacturing process	EU2504-01
104-14A	201500130	6019 Batch Kettle	EU212-03
63-14A	201500173	6054 Batch Kettle	EU212-01
48-14B	201500174	20400 Batch Kettle	EU212-12

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156-06D	201600012	Liquid silicone rubber manufacturing batch mixer process	EU207-03
132-15	201600017	Chlorosilane waste tank 256 in the 2502 tank farm	EU502-11
131-15	201600018	Methyl vent system consisting of emissions from tanks T-100, T-102, T-150, T-151, T-208, T-20841, and T-25-100, emissions from maintenance procedures involving portable storage containing methyltrichlorosilane, methyl-dichlorosilane, dimethyldichlorosilane, dimethylchlorosilane, trimethylchlorosilane, phenyltrichlorosilane, and ethyltrichlorosilane, and the vent from the Cabot Mix Tank operation.	EU502-01
185-07B	201600019	Two sets of related equipment with different emission profiles and different vent control paths: Distillation Vents and Bulk Move Vents	EU502-07
180-15A	201600022	B Module Twin Screw Extruder	EU2901-16
126-03A	201600037	1107 hydrolysis process, including tanks 4160 and 23535	EU501-02
	201600045	Remove condition V.1 from Table	EU207-01
200-15	201600046	Silicone manufacturing process	EU505-04
44-06B	201600121	Trichlorosilane vent recovery system including carbon bed and venturi scrubber system	EU325-01, FG325-01
	201600127	Revised list of site boilers subject to Boiler MACT	
174-12A	201600135	40x resin manufacture	EU321-01
146-16	201700019	1600 Batch Kettle	EU303-15
147-16	201700019	1650 Batch Kettle	EU303-16
804-92D	201700019	Phenyl Methyl Fluids	EU303-01
19-14A	201700026	Silicone fluids manufacturing process	EU324-18
622-92D	201800012	Carbon parametric monitoring and recordkeeping	EU108-01
18-18	201800070	Container Maintenance and Wash area for the High Volume Silanes production facility. Includes nitrogen purge for some containers	EU502-04
437-90B	Unknown	Low viscosity fluids and 3-component fluids process	EU501-49

The following table lists the ROP amendments or modifications issued after the effective date of ROP No. MI-ROP-A4043-2019.

Permit to Install Number	ROP Revision Application Number - Issuance Date	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
29-07C	201900164 / June 13, 2022	This Minor Modification was to incorporate PTI No. 29-07C into the ROP, which was to update the requirement for stack EU356-01 to discharge unobstructed	EU356-01, EU356-02, EU356-03, FGHCLMACT

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Permit to Install Number	ROP Revision Application Number - Issuance Date	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
		vertically upward be corrected to allow the stack to discharge horizontally. The stack was erroneously required to discharge unobstructed vertically upward in PTI No. 29-07B, (the last PTI that addressed this equipment), even though the stack has always discharged horizontally.	
616-92B	202000056 / June 13, 2022	<p>This Minor Modification was to incorporate PTI No. 616-92B into the ROP, which was to revise EU304-02. Specifically, PTI No. 616-92B was to</p> <ul style="list-style-type: none"> remove references of condenser 414 and the 337 scrubber; HAP emissions; and emissions from equipment that was not identified in the previous permit application. <p>This project did not change the major source status of the facility. The project was not subject to PSD because the potential VOC emissions (the criteria pollutant emitted at the highest rate from the emission unit) is only 7.3 tpy, as limited by the permit conditions.</p>	EU304-02,
29-07D	202000162 / June 13, 2022	This Minor Modification was to incorporate PTI No. 29-07D into the ROP, which was to add a second packed bed absorber to EU356-01.	EU356-01
156-06E	202100085 / June 13, 2022	This Minor Modification is to incorporate PTI No. 156-06E into the ROP, which is to update the requirements consistent with a USEPA Consent Decree, and to support process changes at the 207 Building facility, specifically EU207-03.	EU207-03
154-20	202100090 / June 13, 2022	This Minor Modification is to incorporate PTI No. 154-20, which is to incorporate previously exempt equipment in EU501-12 into the ROP. As part of the USEPA Consent Decree, The PTI revised emission limits for the EP process, located in Building 1790 (EU501-12).	EU501-12, FGMONMACT, FGHAP2012A2A
48-14C	202100111 / June 13, 2022	This Minor Modification is to incorporate PTI No. 48-14C, which is to update emission calculations and to support process changes at the 212 building facility for reaction kettle 20400 in EU212-12. The EU212-12 process is a condensation reaction mixing kettle that vents through SV212-023.	EU212-12
108-18A	202100114 / June 13, 2022	This Minor Modification is to incorporate PTI No. 108-18A, which revises emission limits to allow for operational flexibility and incorporate the impact of the trace	EU212-05 FGMONMACT, FGHAP2012A2A

General Business

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Permit to Install Number	ROP Revision Application Number - Issuance Date	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
		chemicals into the state air toxics evaluations. Specifically for the 6009 kettle, which is a cold blend mixing kettle that vents directly through SV212-004 in EU212-05. There are no heating or cooling capabilities on the process or process vents. All products contain xylene or toluene as solvents.	
169-20	202100115 / June 13, 2022	This Minor Modification is to incorporate PTI No. 169-20, which is for the batch mixer/reactor process, mixer 3, (EU207-13) due to the updating of emission calculations from the USEPA Consent Decree and to support process changes at Mixer 3, formerly in EU207-01 and now included in EU207-13.	EU207-13 FGMONMACT, FGHAP2012A2A
177-20	202100116 / June 13, 2022	This Minor Modification is to incorporate PTI No. 177-20, which is to revise emission estimates for Mixer 4 and removing this equipment from EU207-01 and making it its own emission unit as EU207-14.	EU207-14 FGMONMACT, FGHAP2012A2A
172-20	202100117 / June 13, 2022	This Minor Modification is to incorporate PTI No. 172-20, which is to revise emission estimates for Mixer 5 and removing this equipment from EU207-01 and making it its own emission unit as EU207-15.	EU207-15 FGMONMACT, FGHAP2012A2A
171-20	202100118 / June 13, 2022	This Minor Modification is to incorporate PTI 171-20, which is part of the EU207-01 breakup and is for updating emission calculations and to support process changes at Mixer 6, now identified as EU207-16.	EU207-16 FGMONMACT, FGHAP2012A2A
173-20	202100119 / June 13, 2022	This Minor Modification is to incorporate PTI No. 173-20, which is for the silicone rubber manufacturing process conducted in mixer 7 (EU207-17). This EU also includes equipment that is currently identified as EU207-02. The PTI revised emission estimates for Mixer 7, removing this equipment from EU207-01 and EU207-02 and making it its own emission unit.	EU207-02 EU207-17 FGMONMACT, FGHAP2012A2A
170-20	202100120 / June 13, 2022	This Minor Modification is to incorporate PTI No. 170-20, which is to revise emission estimates for Mixer 8, now identified as EU207-18 and removing the equipment from EU207-01 and making it its own emission unit.	EU207-18 FGMONMACT, FGHAP2012A2A
180-20	202100121 / June 13, 2022	This Minor Modification is to incorporate PTI No. 180-20, which is to revise emission estimates for Mixer 9, now identified as EU207-19, removing this equipment from EU207-01, and making it its own emission unit. DSC also has PTIs for the other	EU207-19 FGMONMACT, FGHAP2012A2A

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		emission units that result from splitting up EU207-01.	
437-90C	202100129 / June 13, 2022	This Minor Modification is to incorporate PTI No. 437-90C, which is to modify the low viscosity fluids and 3-component fluids process (EU501-49).	EU501-49
151-20	202100130 / June 13, 2022	This Minor Modification is to incorporate PTI No. 151-20, which is for the 63 Unit Silicone Gum Process (EU602-07). The purpose of this PTI is update emission calculations from the Consent Decree at the current EU602-07 facility.	EU602-07, FGMONMACT
176-20	202100133 / June 13, 2022	This Minor Modification is to incorporate PTI No. 176-20, which is for the Capped Resin Manufacturing Process (EU321-02).	EU321-02, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
19-14C	202100134 / June 13, 2022	This Minor Modification is to incorporate PTI No. 19-14C, which is to update the 25256 batch kettle process in EU324-18 due to the updating of emission calculations from the EPA Consent Decree.	EU324-18
174-20	202100136 / June 13, 2022	This Minor Modification is to incorporate PTI No. 174-20, which is for the mixing process in 2207 batch kettle process located in building 109 (EU109-02).	EU109-02
169-12B	202100139 / June 13, 2022	This Minor Modification is to incorporate PTI No. 169-12B, which is to revise emission estimates for EU505-01 and to remove some equipment from the current EU505-01 and put it in other permitted and exempt emission units. This emission unit no longer has NSPS subject tanks, therefore it was removed from FGOLDFACILITY. CAM will be reviewed during the next ROP Renewal.	EU505-01
162-20	202100140 / June 13, 2022	This Minor Modification is to incorporate PTI No. 162-20, which is for the batch resin process (EU505-11) due to the updating of emission calculations from the EPA Consent Decree and to support process changes, formerly in EU505-01, and now included in EU505-11.	EU505-11, FGLEAKDETECTION, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
155-80H	202100141 / June 13, 2022	This Minor Modification is to incorporate PTI No. 155-80H, which is due to the updating of emission calculations from the EPA Consent Decree and to support process changes in EU2703-01.	EU2703-01
153-20	202100142 / June 13, 2022	This Minor Modification is to incorporate PTI No. 153-20, which is for the siloxane	EU2503-13

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		kettles process in EU2503-13. The PTI updates emission calculations from the Consent Decree and to support includes process changes for DV8230, DV19826, and DV23050, formerly in EU2504-01, and now included in EU2504-13.	
137-20	202100143 / June 13, 2022	This Minor Modification is to incorporate PTI No. 137-20, which is for the batch reaction process in DV19840 kettle in emission unit EU2504-14. The PTI is part of the EU2504-01 breakup and is for updating emission calculations and to support process changes in the jacketed batch kettle DV19840 and associated equipment, now identified as EU2504-14.	EU2504-14, FGMONMACT
138-20	202100144 / June 13, 2022	This Minor Modification is to incorporate PTI No. 138-20, which is for the batch reaction process in DV19860 kettle in EU2504-15. The PTI is part of the EU2504-01 breakup and is for updating emission calculations and to support process changes in the jacketed batch kettle DV19860 and associated equipment, now identified as EU2504-15.	EU2504-15, FGMONMACT
139-20	202100145 / June 13, 2022	This Minor Modification is to incorporate PTI No. 139-20, which is for the mixing process in 8200 kettle in EU2504-16. The PTI is part of the EU2504-01 breakup and is for updating emission estimates for the mixing process for kettle 8200, and making it its own emission unit.	EU2504-16, FGMONMACT
140-20	202100146 / June 13, 2022	This Minor Modification is to incorporate PTI No. 140-20, which is for the mixing process in 8210 kettle in EU2504-17. The PTI is part of the EU2504-01 breakup and is for updating emission estimates for the mixing process for kettle 8210, and making it its own emission unit.	EU2504-17, FGMONMACT
141-20	202100147 / June 13, 2022	This Minor Modification is to incorporate PTI No. 141-20, which is for the mixing process in 8220 kettle in EU2504-18. The PTI is part of the EU2504-01 breakup and is for updating emission estimates for the mixing process for kettle 8220, and making it its own emission unit.	EU2504-18, FGMONMACT
142-20	202100148 / June 13, 2022	This Minor Modification is to incorporate PTI No. 142-20, which is for the mixing process in 8240 kettle in EU2504-19. The PTI is part of the EU2504-01 breakup and is for updating emission estimates for the mixing process for kettle 8240, and making it its own emission unit.	EU2504-19, FGMONMACT
143-20	202100149 / June 13, 2022	This Minor Modification is to incorporate PTI No. 143-20, which is for the Bis H	EU2504-20

General Business

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		Process in EU2504-20. The PTI is part of the EU2504-01 breakup and is for updating emission estimates for the mixing process for kettle 8240 and making it its own emission unit.	
146-20	202100154 / June 13, 2022	This Minor Modification is to incorporate PTI No. 146-20, which is for the Methylvinylchlorosilane Crude Distillation Process in EU322-11. EU322-11 is not part of FG322-01 which is a significant source of VOC emissions. The PTI is due to the updating of emission calculations from the EPA Consent Decree and to support process changes at the 322 Building.	EU322-11
147-12B	202100155 / June 13, 2022	This Minor Modification is to incorporate PTI No. 174-12B, which is for the 40x Resin Process for EU321-01 due to updating of emission calculations from the Consent Decree , to support process changes for EU321-01, to add operating limits for Scrubber 7170 and 4776, and to remove the hexamethyldisiloxane emission limit. EU322-11 is not part of FG322-01 which is a significant source of VOC emissions.	EU321-01
175-20	202100156 / June 13, 2022	This Minor Modification is to incorporate PTI No. 175-20, which is made up of a jacketed reactor, process condenser, receiver and auxiliary equipment in EU321-11. Process creates capped resins.	EU321-11, FGTHROX, FGSITESCRRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
18-18A	202100157 / June 13, 2022	This Minor Modification is to incorporate PTI No. 18-18A, which is for the High Volume Silanes Container Maintenance and Wash production facility for EU502-04. This emission unit is not subject to FGLEAKDETECTION, leak detection is enforced through FGMONMACT.	EU502-04, FGMONMACT
NA	202100158 / April 21, 2023	This Minor Modification is to remove Flexible Group FGBOILERS2701-01, which is for boilers 8 and 9. These boilers have been rendered inoperable and are proposed to be removed from the area source.	Boiler No. 8 and No. 9, EU2701-01, FGBOILERS2701-01
308-94B	202100168 / April 21, 2023	This Minor Modification is to incorporate PTI No. 308-94B into the ROP, which to revise emission limits for EU322-06, the Siloxane Catalyst Process where Octomethylcyclotetrasiloxane is reacted with potassium hydroxide in the presence of cyclohexane. An atmospheric strip removes the solvent from the product after	EU322-06

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		the reaction. The vent is sent through a glycol condenser then to the atmosphere. The recovered solvent is reused in the next batch. CAM Conditions were carried forward and will be addressed during the next ROP Renewal.	
152-20	202100169 / April 21, 2023	This Minor Modification is to incorporate PTI No. 152-20 into the ROP, which is the permitting of EU324-11 which was previously operated under the Rule 290 exemption, due to the updating of emission calculations from the EPA Consent Decree . EU324-11 mainly consists of the batch distillation kettle 4895, including 4896 distillation column, and 24924/24925/4898 overhead receivers.	EU324-11
134-20	202100172 / April 21, 2023	This Minor Modification is to incorporate PTI No. 134-20 into the ROP, which was to separate the LP-1 process (EU322-01) from the other emission units comprising FG322-01, due to the updating of emission calculations from the EPA Consent Decree . PTI No. 134-20 also removed the operating limits for Condenser 6379 given that this unit is a process condenser and is not a control device. DSC submitted similar separate applications for the other two emission units in FG322-01.	EU322-01
15-13A	202100175 / April 21, 2023	This Minor Modification is to incorporate PTI No. 15-13A into the ROP, which was to revise emission limits for the 4820 batch kettle process, located in Building 324 (EU324-01) due to the updating of emission calculations from the EPA Consent Decree . The condensers were formerly subject to CAM. CAM Conditions were carried forward and will be addressed during the next ROP Renewal.	EU324-01
63-14B	202100189 / April 21, 2023	This Minor Modification is to incorporate PTI No. 63-14B into the ROP, which was to update emission calculations and to support process changes for the 6054 batch kettle and associated equipment in the 212 building (EU212-01) due to the updating of emission calculations from the EPA Consent Decree .	EU212-01
144-20	202100190 / April 21, 2023	This Minor Modification is to incorporate PTI No. 144-20 into the ROP, which was to update emission calculations and to support the 20500 polymer process changes in the 212 building (EU212-02) due to the updating of emission calculations from the EPA Consent	EU212-02

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		Decree . This emission unit was previously authorized under a Rule 290 exemption.	
145-20	202100191 / April 21, 2023	This Minor Modification is to incorporate PTI No. 145-20 into the ROP, which was to update emission limits for the cold blend mixing process in 6019 batch kettle (EU212-03), located in Building 212.	EU212-03
156-20	202100208 / April 21, 2023	This Minor Modification is to incorporate PTI No. 156-20 into the ROP, which was to revise emission limits for the 2262 process, located in Building 109 (EU109-04), due to the updating of emission calculations from the EPA Consent Decree . This emission unit was previously authorized under a Rule 290 exemption.	EU109-04
161-20	202100217 / April 21, 2023	This Minor Modification is to incorporate PTI No. 161-20 into the ROP, which was to update emission estimates for the 200-gallon Myers change can mixer (EU2505-06) and permitting this previously Rule 290 exempt emission unit, due to the updating of emission calculations from the EPA Consent Decree .	EU2505-06
159-20	202100218 / April 21, 2023	This Minor Modification is to incorporate PTI No. 159-20 into the ROP, which was to provide information supporting permit updates due to the updating of emission calculations from the Consent Decree at the current 200-gallon Myers change can mixer (EU2505-07). This emission unit was previously authorized under a Rule 290 exemption.	EU2505-07
14-13A	202100226 / April 21, 2023	This Minor Modification is to incorporate PTI No. 14-13A into the ROP, which was modified to reflect updated emission calculations for the 5617 batch kettle process in EU324-08, due to the updating of emission calculations from the EPA Consent Decree . The condensers were formerly subject to CAM. The CAM Conditions were carried forward and will be addressed during the next ROP Renewal.	EU324-08, FGMONMACT
92-21	202100228 / April 21, 2023	This Minor Modification is to incorporate PTI No. 92-21 into the ROP, which was to include requirements from US EPA Consent Decree associated with the 432 boilers (FG432BOILERS) and thermal heat recovery oxidation unit (FGTHROX). In addition, the CO emission testing requirement for the boilers was removed. The CO testing data shows the CO emissions are very low (less than 1 tpy per boiler) and, therefore, future testing is not necessary.	FGTHROX, FG432BOILERS

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155-20	202100243 / April 21, 2023	This Minor Modification is to incorporate PTI No. 155-20 into the ROP, which was to incorporate previously exempt (under Rule 290) 9140 batch kettle and associated equipment in emission unit EU2703-08, to reflect updated emission calculations, due to the EPA Consent Decree.	EU2703-08, FGMONMACT, FGTHROX, FGSITEBLOWER, FGHAP2012A2A
920-84C	202100244 / April 21, 2023	This Minor Modification is to incorporate PTI No. 920-84C into the ROP, which was to modify the permit requirements for the Chloropropyl Trichlorosilane Process in emission unit EU2703-03. This PTI updates emission calculations from the Consent Decree and to support includes process changes at the current 2703 Building facility. The venturi scrubbers were subject to CAM. CAM Conditions were carried forward and will addressed during the next ROP Renewal.	EU2703-03
157-20	202200008 / April 21, 2023	This Minor Modification is to incorporate PTI No. 157-20 into the ROP, which was to incorporate previously exempt (under Rule 290) the 9250 Batch Kettle in emission unit EU2703-09, to reflect updated emission calculations, due to the EPA Consent Decree.	EU2703-09, FGTHROX, FGHAP2012A2A , FGMONMACT
190-20	202200009 / April 21, 2023	This Minor Modification is to incorporate PTI No. 190-20 into the ROP, which was for the 22270 Batch Kettle in EU2703-13, to incorporate previously exempt (under Rule 290), due to the discovery of 1,3-butadiene in this process.	EU2703-13, FGTHROX, FGHAP2012A2A , FGMONMACT
534-77H	202200023 / April 21, 2023	This Minor Modification was to incorporate PTI No. 534-77H into the ROP, which was to update the Alkoxylation Process in emission unit EU601-01 as a result of the USEPA Consent Order and to reflect the process as currently operating in the 601 building.	EU601-01
179-20	202200038 / April 21, 2023	This Minor Modification was to incorporate PTI No. 179-20 into the ROP, which was to update emission limits as a result of the USEPA Consent Order for the mixing process in the 5132 batch kettle, located in Building 321 in emission unit EU321-07.	EU321-07
158-20	202200061 / April 21, 2023	This Minor Modification was to incorporate PTI No. 158-20 into the ROP, which was for the phenyl methyl fluids and resin hydrolysis and polymerization process in emission unit EU303-01 to update emission limits as a result of the USEPA Consent Order . CAM was formerly associated with this emission unit. CAM will be addressed during the next Renewal.	EU303-01

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726-78C	202200062 / April 21, 2023	This Minor Modification was to incorporate PTI No. 726-78C into the ROP, which was for the flake resin hydrolysis process in emission unit EU303-09 located in Building 303, to update emission limits as a result of the USEPA Consent Order.	EU303-09
15-22	202200064 / April 21, 2023	This Minor Modification was to incorporate PTI No. 15-22 into the ROP, which to revise emission limits for the polymer and resin surge, mixing, filtration, and blending process, located in Building 303 (EU303-02) to update emission limits as a result of the USEPA Consent Order. CAM was formerly associated with this emission unit and will be addressed during the next ROP Renewal.	EU303-02
1-08a	202200089 / April 21, 2023	This Minor Modification was to incorporate PTI No. 1-08A into the ROP to revise emission limits for the HCl/MeCl recovery process, which include scrubbers, tanks, columns, vaporizer, absorber, compressor, and related equipment located in Building 311 (EU311-01). Several processes on-site vent to this recovery process. Emissions are controlled by two sets of control device trains, each operating in series, that vent through an absorber (2810/24101) and then a vent scrubber (2812/24102). EU311-01 was updated as a result of the USEPA Consent Order and to reflect the process as currently operating. The absorber and vent scrubber are subject to CAM. CAM Conditions were carried forward and will be addressed during the next ROP Renewal.	EU311-01
334-88E	202200097 / April 21, 2023	This Minor Modification was to incorporate PTI No. 334-88E into the ROP to revise conditions in EU800-01, the 800-block tank farm, consisting of storage and transfer operations for on-site waste liquids. The PTI added a minimum pressure of the nitrogen blanket itself, as opposed to pressure drop across the nitrogen blanket.	EU800-01
84-08D	202200104 / April 21, 2023	This Minor Modification was to incorporate PTI No. 84-08D into the ROP to revise emission limits for the Phenyltrichlorosilane (PhSiCl ₃) and Diphenyldichlorosilane (Ph ₂ SiCl ₂) processes, which include production, storage, and transfer activities, located in Building 508 (EU508-01). EU508-01 was updated as a result of the USEPA Consent Order.	EU508-01
812-91D	202200105 / April 21, 2023	This Minor Modification was to incorporate PTI No. 812-91D into the ROP to revise	EU515-01

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		emission limits that involves all activities associated with production, storage and transfer of Phenylmethylchlorosilane (PhMeSiCl ₂) and Diphenylmethylchlorosilane (Ph ₂ MeSiCl) in Building 515 (EU515-01). EU515-01 was updated as a result of the USEPA Consent Order. CAM was formerly associated with this emission unit, and the CAM related Conditions were carried forward. CAM will be addressed during the next Renewal.	
200-15A	202200120 / April 21, 2023	This Minor Modification was to incorporate PTI No. 200-15A into the ROP to revise emission limits in emission unit EU505-04 that involves batch reactor 23390 and the manufacturing process containing a receiver, filters, carbon beds, vacuum pump, condensers, storage tanks, and other associated equipment. The processes are controlled by condensers DVS-510 and DV23414 and scrubber DV23401 and then vents to the atmosphere. EU505-04 was updated as a result of the USEPA Consent Order.	EU505-04
38-22	202200153 / April 21, 2023	This Minor Modification was to incorporate PTI No. 38-22 into the ROP for changes to a previously exempt cosmetic wax manufacturing process, consisting of a reactor, process condenser, receiver, and auxiliary equipment which vents through one of two scrubbers operating in parallel prior to the exhaust going through two polishing scrubbers before going to FGTHROX, FGSITESCRUBBERS, or 321 Carbon Beds. This is designated EU321-12 and was newly permitted.	EU321-12
26-14A	202200167 / April 21, 2023	This Minor Modification was to incorporate PTI No. 26-14A into the ROP for changes to emission unit EU2703-17, the 9025C waste tank, due to updating of emission calculations. EU2703-17 was updated as a result of the USEPA Consent Order.	EU2703-17
146-16A	202200207 / April 21, 2023	This Minor Modification was to incorporate PTI No. 146-16A into the ROP to revise emission limits for the 1600 batch kettle manufacturing process consisting of an agitated, jacketed kettle, water trap, receiver, blending and filtration, and product packaging, located in Building 303 (EU303-15). EU303-15 was updated as a result of the USEPA Consent Order. CAM was formerly associated with this emission unit, and the CAM related Conditions were	EU303-15

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		carried forward. CAM will be addressed during the next Renewal.	
147-16A	202200208 / April 21, 2023	This Minor Modification was to incorporate PTI No. 147-16A into the ROP to revise emission limits for the 1650 batch kettle manufacturing process consisting of an agitated, jacketed kettle, water trap, receiver, blending and filtration, and product packaging, located in Building 303 (EU303-16). EU303-16 was updated as a result of the USEPA Consent Order. CAM was formerly associated with this emission unit, and the CAM related Conditions were carried forward. CAM will be addressed during the next Renewal.	EU303-16
160-20A	202200228 / April 21, 2023	This Minor Modification was to incorporate PTI No. 160-20A into the ROP, which was for the batch and semi-continuous polymer and resin processing including reactors, distillation columns, strippers, receivers, storage tanks, accumulators, separators, vacuum pumps, condensers, adsorbers, filters in emission unit EU303-06. There are several different ways in which emissions are vented from this emission unit. EU303-06 was updated as a result of the USEPA Consent Order and to reflect the process as currently operating. CAM was formerly associated with this emission unit, and the CAM related Conditions were carried forward. CAM will be addressed during the next Renewal.	EU303-06
166-20A	202200229 / April 21, 2023	This Minor Modification was to incorporate PTI No. 166-20A into the ROP, which was for the phenyl methyl polymerization semi-continuous process consisting of an agitated kettle, water trap, storage tanks, distillation column, receivers, filters, vacuum pumps, and related equipment in emission unit EU303-19. There are several different ways in which emissions are vented from this emission unit.	EU303-19 FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
132-20A	202300004 / April 21, 2023	This Minor Modification is to incorporate PTI No. 132-20A into the ROP, which was to revise emission limits for the HP-7 process, located in Building 322 (EU322-02) from the other emission units comprising FG322-01, due to the updating of emission calculations from the EPA Consent Decree , and to allow for the connection of EU322-02 to the THROX (in FGTHROX). DSC submitted similar separate applications for the other two emission units in FG322-01.	EU322-02

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133-20A	202300005 / April 21, 2023	This Minor Modification is to incorporate PTI No. 133-20A into the ROP, which was to revise emission limits for the HP-6 process, located in Building 322 (EU322-04) from the other emission units comprising FG322-01, due to the updating of emission calculations from the EPA Consent Decree and to allow for the connection of EU322-04 to the THROX (in FGTHROX). DSC submitted similar separate applications for the other two emission units in FG322-01.	EU322-04
24-23	202300049 / March 2, 2023	This Minor Modification is to incorporate PTI No. 24-23 into the ROP, which is the permitting of 501-05 which was previously operated under the Rule 290 exemption, due to the updating of emission calculations from the EPA Consent Decree. EU501-05 consists of the crosslinkers manufacturing process.	EU501-05
26-14B	202300086 / May 8, 2023	This Minor Modification is to incorporate PTI No. 26-14B into the ROP, which was to revise emission limits for the 9025C waste tank, located in Building 2703 (EU2703-17).	EU2703-17

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Appendix 7. Emission Calculations

The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in emission unit tables EU108-01, EU207-03, EU2703-03, EU303-02, EU303-01, EU303-09, EU322-01, EU322-03, EU322-04, EU322-11, EU340-01, EU604-08, and EU800-01.

7.1 – EU108-01 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [V_{p(i)}] of pure component x Mole Fraction of the component in the liquid [Y(i)]

$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [X(i)]

where X(i) = Partial Pressure Vapor/ Total System Pressure

$$X(i) = P_v / P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;
 SCFH (standard cubic feet per hour) is based on EGLE standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas [X(i)]}$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

7.2 – EU207-03 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [$V_p(i)$] of pure component x Mole Fraction of the component in the liquid [$Y(i)$]

$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [$X(i)$]

where $X(i)$ = Partial Pressure Vapor / Total System Pressure

$$X(i) = P_v / P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;

SCFH (standard cubic feet per hour) is based on EGGLE standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas [X(i)]}$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

Calculations based on vent samples

$$\text{VOC Total} = [(\text{No. Batches/ Month containing xylene and ethylbenzene}) \times (0.072 \text{ lb VOC/ batch})] + [(\text{No. of other Batches/ Month}) \times (0.015 \text{ lb VOC/ Batch})] = \text{lb VOC/ Month}$$

$$\text{VOC Rate (Maximum)} = [(0.13 \text{ lb VOC/ Mixer hour}) \times (\text{No. of Mixers in heat step at same time with xylene, ethylbenzene, and VOC emissions})] + [(0.05 \text{ lb VOC/ Mixer hour}) \times (\text{No. of other Mixers in heat step at same time})] = \text{lb VOC/ hour}$$

7.3 – EU2703-03 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's laws.

Determine partial pressure [P_v] of a component above a mixture

where P_v = Vapor Pressure [$V_p(i)$] of pure component x Mole Fraction of the component in the liquid [$Y(i)$]

$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [$X(i)$]

where $X(i)$ = Partial Pressure Vapor / Total System Pressure

$$X(i) = P_v / P_t$$

Determine partial pressure [P_v] of a component as a function of temperature

Determine Vapor Pressure by a form of Antoine's Law. (See simple form below)

$$\text{Log } [V_p(i)] = A + (B / \text{Absolute temperature})$$

Total vent flow calculation, based on molar flow rate (lbmol / hr)

SCFH (standard cubic feet per hour) is based on EGLE standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas } [X(i)]$$

Ton / year calculation

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

The above listed equations shall be used in the following manner for determining emission rates:

1. This item—Item No. 1—is located in the CONFIDENTIAL section of this permit file.
2. Determine the emissions resulting from three separate sets of operations:
 - a) start up/ shut down (i.e. purging with N₂, flushing, and tank feeding)
 - b) normal operations (i.e. steady state)
 - c) periodic tank level changes
3. Basic set of equations:
 - a) determine the moles/hour and mole fractions for the inert compounds
 - b) use Raoult's Law to determine partial pressures of inert compounds
 - c) determine total moles of active ingredients/compounds—thereby determining the lbs/hour before-control emissions
 - d) determine the lbs/hour after-the-condenser emissions—method for determining amount of material controlled in the condenser:

In addition to using Raoult's and Dalton's Laws, it is necessary to determine the "liquid/vapor distribution" coefficient and also the "individual mole fraction in the liquid phase" coefficient

The liquid/vapor distribution coefficient is determined through iteration of the following equations:

$$X_{wa} + X_{wb} + X_{wc} + X_{wd} = 1$$

where X_w = individual mole fraction in liquid phase

or more specifically,

$$X_{wa} = \text{liquid mole fraction}(a) \times ([\text{Liq/Vap Distrib}] + 1) \times (\text{individual Distribution Coef}(a) + [\text{Liq/Vap Distrib}])$$

*where individual Distribution Coef(a) =
lb moles / {[actual condenser pressure + 14.7] / 14.7} * 760}*

The amount of material condensed into the liquid phase can then be calculated, followed by the amount of uncondensed vapor:

$$\text{Lbs of liquid condensed for component (a)} = \text{total moles of liquid} \times \text{liquid mole fraction } (X_{wa}) \times \text{Mol. Wt. of component (a)}$$

$$\text{Lbs of uncondensed vapor of component (a)} = [\text{lbs of component (a) in feed}] - [\text{lbs of liquid (a) condensed}]$$

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Note the following relationship between the total number of moles of vapor in the system, the total number of moles of liquid, and the "Liquid/Vapor Distribution" coefficient:

Moles of vapor =

$$\frac{[\text{lb of component (a) in the feed/ Mol. Wt. of comp. (a)}] + [\text{lb of component (b) in the feed/ Mol. Wt. of comp. (b)}] + [\text{lb of component (c) in the feed/ Mol. Wt. of comp. (c)}] + [\text{lb of component (d) in the feed/ Mol. Wt. of comp. (d)}]}{[\text{Liq/Vap Distrib}]}$$

and

$$\text{moles of liquid} = [\text{Liq/Vap Distrib}] * \text{mol vapor}$$

- e) determine the lbs/hour after-the-scrubber emissions

Assume a scrubber removal efficiency of 98.4% for the various chlorosilanes, but take no removal credit for the other compounds (for example, allyl chloride).

- f) determine the tons/year after-control emissions

Multiply the lbs/hour values by the appropriate hours of operation per year and tanks filled per year, etc., to determine the annual emissions.

7.4 – EU303-01 & EU303-02 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [$V_p(i)$] of pure component x Mole Fraction of the component in the liquid [$Y(i)$]

$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [$X(i)$]

where $X(i)$ = Partial Pressure Vapor/ Total System Pressure

$$X(i) = P_v / P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;

SCFH (standard cubic feet per hour) is based on EGLE standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas [X(i)]}$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

VACUUM LEAK RATE (Lb/Hr), from Chemical Engineering, March 16, 1987 issue, Page 75;

$$\text{LEAK RATE, Lbs/Hr} = 0.08 \times [\text{Volume (ft}^3\text{)}]^{0.667}$$

ACHF (actual cubic feet per hour) is calculated at the vent outlet, based on atmospheric pressure and process temperature.

7.5 - EU303-09 - Vent Calculations

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Assumption: Gases are ideal and obey Raoult's and Dalton's Laws.

Dalton's Law of partial pressures:

$$P_1 + P_2 + P_3 + \dots = P_T$$

Where P_1 = partial pressure of component 1 in the vapor phase
 P_T = total pressure

Raoult's Law:

Determine Partial Pressure, P_i

where P_i = (Vapor Pressure of pure component [P_{vapi}])
* (Mole Fraction of the component in the liquid phase [X_i])

$$P_i = P_{vapi} * X_i$$

Determine the Mole Fraction of the Gas, Y_i

where Y_i = Partial Pressure Vapor/ Total System Pressure

$$Y_i = P_i \div P_T$$

Combining Dalton's and Raoult's Laws:

$$\frac{P_i}{P_T} = \frac{n_i}{n_T}$$

The above listed equations shall be used in the following manner for determining emission rates:

Basic set of equations:

- 1) determine the vent flow rate* [moles/hour] and mole fractions for the inert compounds
- 2) use Raoult's Law to determine partial pressures of inert compounds

* Where the total vent flow rate is determined as follows:

$$\text{Total vent flow rate} = \frac{(\text{lbmoles of volatiles stripped}) + (\text{lbmoles of N}_2 \text{ due to vacuum leak rate})}{[\text{vapor mole fraction of carrier gas (N}_2\text{)}]}$$

where the "lbmoles of volatiles stripped" is determined as follows:

$$\text{lbmoles of volatiles stripped} = \frac{(\text{loading rate}) + (\text{purge rate}) [\text{lbmoles/hour}]}{386.7 [\text{ft}^3/\text{lbmole}]}$$

HOURLY EMISSION RATE CALCULATION

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmole/Hr]} \times \text{Molecular Weight} \times \text{Vapor Mole Fraction [X(i)]}$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

VACUUM LEAK RATE (Lb/Hr), from *Chemical Engineering*, March 16, 1987 issue, Page 75;

$$\text{LEAK RATE, Lbs/Hr} = 0.08 \times [\text{Volume (ft}^3\text{)}]^{0.667}$$

7.6 – EU322-01 - Vent Calculations

Assumption: Gases are ideal and obey Raoult's and Dalton's law.

Dalton's Law of partial pressures:

$$P_1 + P_2 + P_3 + \dots = P_T$$

Where P_1 = partial pressure of component 1 in the vapor phase
 P_T = total pressure

Raoult's Law:

Determine Partial Pressure, P_i

where $P_i = (\text{Vapor Pressure of pure component } [P_{\text{vap}i}])$
* (Mole Fraction of the component in the liquid phase $[X_i]$)

$$P_i = P_{\text{vap}i} * X_i$$

Determine the Mole Fraction of the Gas, Y_i

where $Y_i = \text{Partial Pressure Vapor} / \text{Total System Pressure}$

$$Y_i = P_i \div P_t$$

Combining Dalton's and Raoult's Laws:

$$\frac{P_i}{P_t} = \frac{n_i}{n_t}$$

The above listed equations shall be used in the following manner for determining emission rates:

1. This item—Item No. 1—is located in the CONFIDENTIAL section of this permit file.
2. Determine the emissions resulting from three separate sets of operations:
 - a) start up/ shut down (i.e. purging with N_2 , flushing, and tank feeding)
 - b) normal operations (i.e. steady state)
 - c) periodic tank level changes
3. Basic set of equations:
 - a) determine the moles/hour and mole fractions for the inert compounds
 - b) use Raoult's Law to determine partial pressures of inert compounds
 - c) determine total moles of active ingredients/compounds—thereby determining the lbs/hour before-control-emissions
 - d) determine the lbs/hour after-the-condenser emissions—method for determining amount of material controlled in the condenser:

In addition to using Raoult's and Dalton's Laws, it is necessary to determine the "liquid/vapor distribution" coefficient and also the "individual mole fraction in the liquid phase" coefficient

The liquid/vapor distribution coefficient is determined through iteration of the following equations:

$$X_{wa} + X_{wb} + X_{wc} + X_{wd} = 1$$

where $X_w = \text{individual mole fraction in liquid phase}$

or more specifically,

$$X_{wa} = \text{liquid mole fraction}(a) * ([\text{Liq/Vap Distrib}] + 1) * (\text{individual Distribution Coef}(a) + [\text{Liq/Vap Distrib}])$$

where individual Distribution Coef(a) =
 $\text{lb moles} / \{([\text{actual condenser pressure} + 14.7] / 14.7)\} * 760\}$

The amount of material condensed into the liquid phase can then be calculated, followed by the amount of uncondensed vapor:

*Lbs of liquid condensed for component (a) =
total moles of liquid * liquid mole fraction (X_{wa}) * Mol. Wt. of component (a)*

*Lbs of uncondensed vapor of component (a) =
[lbs of component (a) in feed] – [lbs of liquid (a) condensed]*

Note the following relationship between the total number of moles of vapor in the system, the total number of moles of liquid, and the "Liquid/Vapor Distribution" coefficient:

Moles of vapor =

([lb of component (a) in the feed/ Mol. Wt. of comp. (a)] + [lb of component (b) in the feed/ Mol. Wt. of comp. (b)] + [lb of component (c) in the feed/ Mol. Wt. of comp. (c)] + [lb of component (d) in the feed/ Mol. Wt. of comp. (d)]) / [Liq/Vap Distrib]

and

*moles of liquid = [Liq/Vap Distrib] * mol vapor*

- e) determine the lbs/hour after-the-scrubber emissions

Assume a scrubber removal efficiency of 97% for the various chlorosilanes, but take no removal credit for the other compounds (i.e. xylene and acetylene).

- f) determine the tons/year after-control-emissions

Multiply the lbs/hour values by the appropriate hours of operation per year and tanks filled per year, etc. to determine the annual emissions.

7.7 – EU322-03 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [$V_p(i)$] of pure component x Mole Fraction of the component in the liquid [$Y(i)$]

$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [$X(i)$]

where $X(i)$ = Partial Pressure Vapor/ Total System Pressure

$$X(i) = P_v / P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;

SCFH (standard cubic feet per hour) is based on EGLE standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas [X(i)]}$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

VACUUM LEAK RATE (Lb/Hr), from Chemical Engineering, March 16, 1987 issue, Page 75;

$$\text{LEAK RATE, Lbs/Hr} = 0.08 \times [\text{Volume (ft}^3)]^{0.667}$$

ACHF (actual cubic feet per hour) is calculated at the vent outlet, based on atmospheric pressure and process temperature.

7.8 - EU322-04 - Vent Calculations For VOC's and chlorosilanes

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [$P_p(i)$] of pure component x Mole Fraction of the component in the liquid [$Y(i)$]

$$P_v = P_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [$X(i)$]

where $X(i)$ = Partial Pressure Vapor/ Total System Pressure

$$X(i) = P_v / P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;

SCFH (standard cubic feet per hour) is based on EGLE standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas } [X(i)] \times \text{Vent Reduction Equipment Efficiency (VREE)}$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

7.9 - EU322-11 - Vent Calculations

Assumption: Gases are ideal and obey Raoult's and Dalton's law.

Dalton's Law of partial pressures:

$$P_1 + P_2 + P_3 + \dots = P_T$$

Where P_1 = partial pressure of component 1 in the vapor phase
 P_T = total pressure

Raoult's Law:

Determine Partial Pressure, P_i

where P_i = (Vapor Pressure of pure component [P_{vapi}])
* (Mole Fraction of the component in the liquid phase [X_i])

$$P_i = P_{vapi} * X_i$$

Determine the Mole Fraction of the Gas, Y_i

where $Y_i = \text{Partial Pressure Vapor} / \text{Total System Pressure}$

$$Y_i = P_i \div P_t$$

Combining Dalton's and Raoult's Laws:

$$\frac{P_1}{P_T} = \frac{n_1}{n_T}$$

The above listed equations shall be used in the following manner for determining emission rates:

1. Recognize that this ("MeVi") process is a batch operation.
2. Basic set of equations:
 - a) determine the moles
 - b) determine the pounds emitted per batch of material produced
 - c) determine the lbs/hour (based on the worst-case highest instantaneous rate) flow to the condenser
 - d) determine the flow from vent condenser (to atmosphere) by using the following condensation calculations:

In addition to using Raoult's and Dalton's Laws, it is necessary to determine the "liquid/vapor distribution" coefficient and also the "individual mole fraction in the liquid phase" coefficient

The liquid/vapor distribution coefficient is determined through iteration of the following equations:

$$X_{wa} + X_{wb} + X_{wc} + X_{wd} = 1$$

where $X_w = \text{individual mole fraction in liquid phase}$

or more specifically,

$$X_{wa} = \text{liquid mole fraction}(a) * ([\text{Liq/Vap Distrib}] + 1) * (\text{individual Distribution Coef}(a) + [\text{Liq/Vap Distrib}])$$

where *individual Distribution Coef(a) = lb moles / {[actual condenser pressure + 14.7] / 14.7} * 760*

The amount of material condensed into the liquid phase can then be calculated, followed by the amount of uncondensed vapor:

$$\text{Lbs of liquid condensed for component (a)} = \text{total moles of liquid} * \text{liquid mole fraction } (X_{wa}) * \text{Mol. Wt. of component (a)}$$

$$\text{Lbs of uncondensed vapor of component (a)} = [\text{lbs of component (a) in feed}] - [\text{lbs of liquid (a) condensed}]$$

Note the following relationship between the total number of moles of vapor in the system, the total number of moles of liquid, and the "Liquid/Vapor Distribution" coefficient:

$$\text{Moles of vapor} = \frac{([\text{lb of component (a) in the feed/ Mol. Wt. of comp. (a)}] + [\text{lb of component (b) in the feed/ Mol. Wt. of comp. (b)}] + [\text{lb of component (c) in the feed/ Mol. Wt. of comp. (c)}] + [\text{lb of component (d) in the feed/ Mol. Wt. of comp. (d)}])}{[\text{Liq/Vap Distrib}]}$$

and

$$\text{moles of liquid} = [\text{Liq/Vap Distrib}] * \text{mol vapor}$$

e) multiply the lbs/batch values by the number of batches (produced) per year

7.10 - EU340-01 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [$V_p(i)$] of pure component x Mole Fraction of the component in the liquid [$Y(i)$]

$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [$X(i)$]

where $X(i)$ = Partial Pressure Vapor/ Total System Pressure

$$X(i) = P_v / P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;

SCFH (standard cubic feet per hour) is based on EGLE standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas [X(i)]}$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

VACUUM LEAK RATE (Lb/Hr), from Chemical Engineering, March 16, 1987 issue, Page 75;

$$\text{LEAK RATE, Lbs/Hr} = 0.08 \times [\text{Volume (ft}^3\text{)}]^{0.667}$$

ACHF (actual cubic feet per hour) is calculated at the vent outlet, based on atmospheric pressure and process temperature.

7.11 - EU604-08 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [$V_p(i)$] of pure component x Mole Fraction of the component in the liquid [$Y(i)$]

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$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [X(i)]

where X(i) = Partial Pressure Vapor/ Total System Pressure

$$X(i) = P_v \div P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;

SCFH (standard cubic feet per hour) is based on EGLE standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas [X(i)]}$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

VACUUM LEAK RATE (Lb/Hr), from Chemical Engineering, March 16, 1987 issue, Page 75;

$$\text{LEAK RATE, Lbs/Hr} = 0.08 \times [\text{Volume (ft}^3)]^{0.667}$$

ACFH (actual cubic feet per hour) is calculated at the vent outlet, based on atmospheric pressure and process temperature.

VOLUME VENTED DUE TO SEAL FLUID TRANSFER

$$\text{ft}^3/\text{year} = (\text{gallons / year}) \times (\text{ft}^3 / 7.48 \text{ gallons})$$
$$\text{VAPOR DISPLACED BY SEAL FLUID} = 40.11 \text{ ft}^3/\text{year}$$

VOLUME VENTED DUE TO B/S LEAKAGE AS MEASURED ON FLOW INDICATOR

$$\text{Number of batch still runs} = \text{B/S production} \div 8000 \text{ lbs/batch}$$
$$\text{B/S runs} = 250$$

$$\text{Total vent through FI-2054 for year} = (\text{B/S runs}) \times (\text{lb. vented / batch})$$

$$\text{Total vent} = 4500.0 \text{ lb./year}$$

$$\text{lb/year to ft}^3 = \text{specific volume} \times \text{lb/year}$$

specific volume @ 1 psig = (specific vol. of air lb/ft³) (MW air / MW N₂) (absolute pressure / actual pressure)

$$\text{Specific Vol.} = 12.527385 \text{ ft}^3/\text{lb}$$

$$\text{N}_2 \text{ vent ft}^3/\text{year} = \text{Specific Vol.} \times \text{total vent}$$

$$\text{N}_2 \text{ vent} = 56372.8 \text{ ft}^3/\text{year}$$

TOTAL VAPOR DISPLACEMENT

$$\text{ft}^3/\text{year} = \text{total displacement from level N}_2 + \text{displacement from TCP transfer}$$

$$\text{TOTAL VAPOR DISPLACED} = 56413 \text{ ft}^3/\text{year}$$

VENT COMPOSITION DETERMINATION

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Mole fraction trimer in vent = vapor pressure of trimer / total pressure

vapor mole fraction trimer = 0.00001

vent mole density = 7883 high pressure [psia] / (10.73 psia • ft³/lbmol • R) / TEMP R

mol density of vent = 0.00252 lbmol/ft³

7.12 - EU800-01 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [V_p(i)] of pure component x Mole Fraction of the component in the liquid [Y(i)]

$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [X(i)]

where X(i) = Partial Pressure Vapor / Total System Pressure

$$X(i) = P_v / P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;

SCFH (standard cubic feet per hour) is based on EGLE standard conditions of 70°F and 1 atmosphere.

Lbs/Hr = Total Vent Flow [lbmol/Hr] x Molecular Weight x Mole Fraction gas [X(i)]

OR

(Lbs of Compound A / hour) * (lbmol / MW of Compound A) * (1 Mole Compound A / 1 Mole Compound B)
* (MW of Compound B / lbmol of Compound B) = Lbs of Compound B Emitted per Hour

TON/YEAR CALCULATION

Ton/Yr = Lbs/Hr x Hr/Batch x Batch/Yr x Ton/2000 Lbs

OR

(Ton Compound A / hour) * (lbmol / MW of Compound A) * (1 Mole of Compound A / 1 Mole of Compound B)
* (MW of Compound B / lbmol of Compound B) = Tons of Compound B Emitted per Hour

~~7.13 – FG HAP 2012A2A – Recordkeeping Provisions for Source Using Actual to Projected-Actual Applicability Test~~

~~All information in this Appendix shall be maintained pursuant to R-336.2818 and 40 CFR 52.21(r)(6)(i) for ten years after issuance of Permit to Install No. 91-07C, and shall be provided to the Department for the first year and thereafter made available to the Department upon request.~~

~~A. Project Description:~~

~~—Dow Corning removed the facility wide HAP emission limits, which allows increased emissions of HAPs and criteria pollutants.~~

~~B. Applicability Test Description:~~

—The actual-to-projected actual applicability test was used to demonstrate that PSD does not apply to removal of the HAP emission limits.

C. Emission Projections:

Emission Unit/Flexible Group ID	Pollutant	Emissions (tpy)			Reason for Exclusion
		Baseline Actual	Projected Actual/Potential	Excluded	
FGHAP2012A2A	VOC	147	176	-	NA
FGHAP2012A2A	NOx	50	80	-	NA

Note-Dow Corning did not consider any emissions to be excludable for this applicability test.

7.14 - EU502-04- HCl Equivalents and SiO2 Equivalents

HCl Equivalents

“HCl equivalents” refers to a theoretical mass of hydrogen chloride calculated from the chlorine composition of chlorosilane compounds in an exhaust stream, presuming complete hydrolysis of the exhaust stream’s chlorosilane compounds. The calculation uses chemical principles to determine the stoichiometric amount of HCl from the chlorosilane compounds in the exhaust stream.

For each chlorosilane compound:

$$\frac{MF_{Cl\ compound}}{MW_{of\ MF}} \times \#\ of\ Cl\ atoms \times MW_{HCl} = MF_{HCl}$$

For the entire exhaust stream:

$$Total\ MF_{HCl} = \sum MF_{HCl}$$

Term	Explanation/Definition
MF _{Cl compound}	The mass flow or pound per hour mass emission rate of each chlorosilane compound in the exhaust stream
MW _{of MF}	The molecular weight of the chlorosilane compound
# of Cl _{atoms}	The number of chlorine atoms in the chlorosilane compound
MW _{HCl}	Molecular weight of HCl: 36.5 lbs/lb-mole
MF _{HCl}	The theoretical mass flow (pound per hour) emission rate of HCl equivalents for the chlorosilane compound
Total MF _{HCl}	The total HCl equivalents for the exhaust stream

HCl Equivalents Example

An exhaust stream contains trichlorosilane (TCS) and hexachlorodisilane (HCDS), with no other chlorosilane compounds:

Compound	Exhaust stream flow	Molecular weight	# of Cl atoms
TCS	4.0 lb/hr	135.5 lb/lb-mole	3
HCDS	2.0 lb/hr	268.9 lb/lb-mole	6

For TCS:

$$\frac{4.0}{135.5} \times 3 \times 36.5 = 3.15 \frac{lb}{hr} = MF_{HCl}$$

For HCDS:

$$\frac{2.0}{268.5} \times 3 \times 36.5 = 1.58 \frac{lb}{hr} = MF_{HCl}$$

For the entire exhaust stream:

$$Total\ MF_{HCl} = 3.15 + 1.58 = 4.73 \frac{lb}{hr} HCl\ equivalents$$

SiO₂ Equivalents

"SiO₂ equivalents" refers to a theoretical mass of silicon dioxide calculated from the silicon composition of silicon-containing compounds in an exhaust stream, presuming complete oxidation of the exhaust stream's silicon-containing compounds. The calculation uses chemical principles to determine the stoichiometric amount of SiO₂ from the amount of silicon in the exhaust stream.

For each silicon-containing compound:

$$\frac{MF_{Si\ compound}}{MW_{of\ MF}} \times \#\ of\ Si\ atoms \times MW_{SiO_2} = MF_{SiO_2}$$

For the entire exhaust stream:

$$Total\ MF_{SiO_2} = \sum MF_{SiO_2}$$

Term	Explanation/Definition
MF _{Si compound}	The mass flow or pound per hour mass emission rate of each silicon-containing compound in the exhaust stream
MW _{of MF}	The molecular weight of the silicon-containing compound
# of Si atoms	The number of silicon atoms in the silicon-containing compound
MW _{SiO₂}	The molecular weight of SiO ₂ : 60.08 lbs/lb-mole
MF _{SiO₂}	The theoretical mass flow (pound per hour) loading of SiO ₂ equivalents for the silicon-containing compound
Total MF _{SiO₂}	The total SiO ₂ equivalents for the exhaust stream

SiO₂ Equivalents Example

An exhaust stream contains trichlorosilane (TCS) and hexachlorodisilane (HCDS), with no other silicon-containing compounds:

Compound	Exhaust stream flow	Molecular weight	# of Si atoms
TCS	4.0 lb/hr	135.5 lb/lb-mole	1
HCDS	2.0 lb/hr	268.9 lb/lb-mole	2

For TCS:

$$\frac{4.0}{135.5} \times 1 \times 60.08 = 1.79 \frac{lb}{hr} = MF_{SiO_2}$$

For HCDS:

$$\frac{2.0}{268.5} \times 2 \times 60.08 = 0.90 \frac{lb}{hr} = MF_{SiO_2}$$

For the entire exhaust stream:

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$$Total MF_{SiO_2} = 1.79 + 0.90 = 2.69 \frac{lb}{hr} SiO_2 \text{ equivalents}$$

Appendix 8. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

The permittee shall use the EGLE, AQD, Report Certification form (EQP 5736) and EGLE, AQD, Deviation Report form (EQP 5737) for the annual, semiannual and deviation certification reporting referenced in the Reporting Section of the Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Alternative formats must meet the provisions of Rule 213(4)(c) and Rule 213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

B. Other Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, Part B of this appendix is not applicable.

PTI 24-23

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION**

February 6, 2023

PERMIT TO INSTALL
24-23

ISSUED TO
Dow Silicones Corporation

LOCATED AT
Michigan Operations
501 Building
Midland, Michigan 48674

IN THE COUNTY OF
Midland

STATE REGISTRATION NUMBER
A4043

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environment, Great Lakes, and Energy. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: December 16, 2022	
DATE PERMIT TO INSTALL APPROVED: February 6, 2023	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department/EGLE	Michigan Department of Environment, Great Lakes, and Energy
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO ₂ e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H ₂ S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO _x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO ₂	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal condition or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
 - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
 - b) A visible emission limit specified by an applicable federal new source performance standard.
 - c) A visible emission limit specified as a condition of this Permit to Install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EU501-05	Crosslinkers manufacturing process consisting of jacketed reactors, condensers, mixers, pumps and vacuum equipment, and product packaging. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. The most recent PTI for this emission unit is PTI No. 24-23.	1953, 02-06-2023	FGMONMACT

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1291.

**EU501-05
EMISSION UNIT CONDITIONS**

DESCRIPTION

Crosslinkers manufacturing process consisting of jacketed reactors, condensers, mixers, pumps and vacuum equipment, and product packaging. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 24-23.

Flexible Group ID: FGMONMACT

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	4.2 tpy *	12-month rolling time period as determined at the end of each calendar month	EU501-05	SC VI.2	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.1224, R 336.1225, R 336.1702(a))

2. The permittee shall calculate the VOC emission rate from EU501-05 monthly for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1702(a))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV501-021 ^a (DV4275)	6	53	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV501-204 (Drum Off Vent)	27	56	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV501-244 ^b (DV4284)	4	53	R 336.1225, 40 CFR 52.21(c) & (d)
^a This stack is equipped with a raincap. ^b This stack vents downwards.			

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

PTI 26-14B

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION**

May 1, 2023

PERMIT TO INSTALL
26-14B

ISSUED TO
Dow Silicones Corporation

LOCATED AT
Michigan Operations
2703 Building
Midland, Michigan 48686

IN THE COUNTY OF
Midland

STATE REGISTRATION NUMBER
A4043

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environment, Great Lakes, and Energy. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: March 30, 2023	
DATE PERMIT TO INSTALL APPROVED: May 1, 2023	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department/EGLE	Michigan Department of Environment, Great Lakes, and Energy
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO ₂ e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H ₂ S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO _x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO ₂	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal condition or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
 - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
 - b) A visible emission limit specified by an applicable federal new source performance standard.
 - c) A visible emission limit specified as a condition of this Permit to Install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EU2703-17	9025C dedicated waste tank in 2703 Building. This emission unit vents to FGTHROX and, when FGTHROX is not operating, scrubbers 9390 A and B. Emissions from transfers from the tank to tank trucks will be controlled by vapor balance back to the tank. The most recent PTI for this emission unit is PTI No. 26-14B	3/24/14 TBD	FGTHROX, FGSITEBLOWER, FGMONMACT

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1291.

**EU2703-17
 EMISSION UNIT CONDITIONS**

DESCRIPTION

9025C dedicated waste tank in 2703 Building.

The most recent PTI for this emission unit is PTI No. 26-14B.

Flexible Group ID: FGTHROX, FGSITEBLOWER, FGMONMACT

POLLUTION CONTROL EQUIPMENT

- This emission unit vents to FGTHROX and, when FGTHROX is not operating, scrubbers 9390 A and B.
- Emissions from transfers from the tank to tank trucks will be controlled by vapor balance back to the tank.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period Operating Scenario	Equipment	Monitoring Testing Method	Underlying Applicable Requirements
1. VOC	0.18 tpy*	Based on a 12-month rolling time period as determined at the end of each calendar month	EU2703-17	SC VI.2, VI.3	R 336.1702(a)
* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.					

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2703-17 unless one of the following is true. **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a) EU2703-17 emissions are exhausted to 9390 A or B scrubber and the water flow rate for the scrubber in use is 6.0 gallons per minute or greater.
 - b) EU2703-17 emissions are exhausted to FGTHROX and FGTHROX is installed, maintained, and operated in a satisfactory manner as provided in the Special Conditions for FGTHROX.
2. The permittee shall not load any tank truck from EU2703-17 unless the vapor balance system is installed, maintained, and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2703-17 unless the scrubbers (either scrubber 9390 A or B) or FGTHROX are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the applicable requirements of SC III.1. **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall equip and maintain scrubber 9390 A and scrubber 9390 B with a total scrubber water flow rate indicator. The permittee shall calibrate the total scrubber water flow rate indicator in a satisfactory manner acceptable to the AQD District Supervisor. **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the total scrubber water flow rate for the scrubber in use of scrubbers 9390 A and 9390 B with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2703-17 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1702(a))

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2703-011 (9390 A and B CPTC Scrubber Vent) ^A	2	78	R 336.1225, 40 CFR 52.21(c)&(d)
2. SV2514-006 (THROX)	54	90	R 336.1225, 40 CFR 52.21(c)&(d)
3. SV2517-001 (TOX vent) ^B	30	102	R 336.1225 40 CFR 52.21(c) & (d)

A. This stack is not required to be discharged unobstructed vertically upwards to the ambient air
B. This EU may exhaust from SV2517-001 after that stack has been installed

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

CAM Plans

I. BACKGROUND

A. Emission Unit

Description: Batch mixer/reactor process

Identification: EU207-13

Facility: Dow Silicones Corporation
3901 S. Saginaw Rd
Midland, MI 48686

B. Applicable Regulation, Emission Limit, Monitoring Requirements

Permit Number: 169-20

Emission Limits:

PM: 0.68 lb/hr through vent SV207-001, Rule 331

PM10: 0.68 lb/hr through vent SV207-001, 40 CFR 52.21(c) & (d)

PM2.5: 0.68 lb/hr through vent SV207-001, 40 CFR 52.21(c) & (d)

Monitoring Requirements: Dust collector pressure drop

Potential Pre-Control Emissions: 121 tons per year of PM, PM10, and PM2.5

C. Control Technology

Dust Collector 12912 with control efficiency rated at 98%.

II. MONITORING APPROACH

	Pressure Drop
A. Indicator	Pressure drop across the dust collector is measured with a continuous pressure drop indicator. It is continuously monitored and recorded in 15-minute intervals.
B. Indicator Range	An excursion is defined as a pressure drop greater than 10-inch water column (wc) or less than 0.5-inch wc. Excursions trigger an inspection and corrective action as necessary.
C. QIP Threshold	None selected
D. Control Bypass	None present

III. PERFORMANCE CRITERIA

	Pressure Drop
A. Data Representativeness	Pressure indicators are located at the dust collector inlet and outlet.
B. Verification of Operational Status	NA
C. QA/QC Practices and Criteria	The pressure indicators are on a regular PM schedule.
D. Monitoring Frequency	Pressure drop is continuously monitored.
E. Data Collection Procedure	Pressure drop data collected at 15-minute intervals (4 per hour) and recorded electronically.
F. Averaging Period	15 minutes

IV. JUSTIFICATION

A. Rationale for Selection of Performance Indicators

Pressure drop is a commonly monitored parameter that provides a means of detecting a change in operation that could lead to an increase in emissions. An increase in pressure drop can indicate that the filters are becoming inefficient or the airflow has increased. A decrease in pressure drop may indicate broken or loose filters. A pressure drop monitor across the dust collector also serves to indicate that there is airflow through the control device.

B. Rational for Selection of Indicator Ranges

The indicator range chosen for the dust collector pressure drop is between 0.5-inch wc and 10-inch wc. Operation outside of these ranges signifies a decrease in filter efficiency and would trigger an inspection and corrective action as necessary. The pressure drop is monitored continuously and recorded in 15 minute intervals. As the pressure drop approaches 10-inch wc, the filters are scheduled for replacement. The filters are typically changed every three (3) years. No QIP threshold has been selected for this indicator.

I. BACKGROUND

A. Emission Unit

Description: Batch mixer/reactor process

Identification: EU207-14

Facility: Dow Silicones Corporation
3901 S. Saginaw Rd
Midland, MI 48686

B. Applicable Regulation, Emission Limit, Monitoring Requirements

Permit Number: 177-20

Emission Limits:

PM: 0.68 lb/hr through vent SV207-001, Rule 331

PM10: 0.68 lb/hr through vent SV207-001, 40 CFR 52.21(c) & (d)

PM2.5: 0.68 lb/hr through vent SV207-001, 40 CFR 52.21(c) & (d)

Monitoring Requirements: Dust collector pressure drop

Potential Pre-Control Emissions: 121 tons per year of PM, PM10, and PM2.5

C. Control Technology

Dust Collector 12912 with control efficiency rated at 98%.

II. MONITORING APPROACH

	Pressure Drop
A. Indicator	Pressure drop across the dust collector is measured with a continuous pressure drop indicator. It is continuously monitored and recorded in 15-minute intervals.
B. Indicator Range	An excursion is defined as a pressure drop greater than 10-inch water column (wc) or less than 0.5-inch wc. Excursions trigger an inspection and corrective action as necessary.
C. QIP Threshold	None selected
D. Control Bypass	None present

III. PERFORMANCE CRITERIA

	Pressure Drop
A. Data Representativeness	Pressure indicators are located at the dust collector inlet and outlet.
B. Verification of Operational Status	NA
C. QA/QC Practices and Criteria	The pressure indicators are on a regular PM schedule.
D. Monitoring Frequency	Pressure drop is continuously monitored.
E. Data Collection Procedure	Pressure drop data collected at 15-minute intervals (4 per hour) and recorded electronically.
F. Averaging Period	15 minutes

IV. JUSTIFICATION

A. Rationale for Selection of Performance Indicators

Pressure drop is a commonly monitored parameter that provides a means of detecting a change in operation that could lead to an increase in emissions. An increase in pressure drop can indicate that the filters are becoming inefficient or the airflow has increased. A decrease in pressure drop may indicate broken or loose filters. A pressure drop monitor across the dust collector also serves to indicate that there is airflow through the control device.

B. Rational for Selection of Indicator Ranges

The indicator range chosen for the dust collector pressure drop is between 0.5-inch wc and 10-inch wc. Operation outside of these ranges signifies a decrease in filter efficiency and would trigger an inspection and corrective action as necessary. The pressure drop is monitored continuously and recorded in 15 minute intervals. As the pressure drop approaches 10-inch wc, the filters are scheduled for replacement. The filters are typically changed every three (3) years. No QIP threshold has been selected for this indicator.

I. BACKGROUND

A. Emission Unit

Description: Batch mixer/reactor process

Identification: EU207-15

Facility: Dow Silicones Corporation
3901 S. Saginaw Rd
Midland, MI 48686

B. Applicable Regulation, Emission Limit, Monitoring Requirements

Permit Number: 172-20

Emission Limits:

PM: 0.68 lb/hr through vent SV207-001, Rule 331
PM10: 0.68 lb/hr through vent SV207-001, 40 CFR 52.21(c) & (d)
PM2.5: 0.68 lb/hr through vent SV207-001, 40 CFR 52.21(c) & (d)

Monitoring Requirements: Dust collector pressure drop

Potential Pre-Control Emissions: 121 tons per year of PM, PM10, and PM2.5

C. Control Technology

Dust Collector 12912 with control efficiency rated at 98%.

II. MONITORING APPROACH

	Pressure Drop
A. Indicator	Pressure drop across the dust collector is measured with a continuous pressure drop indicator. It is continuously monitored and recorded in 15-minute intervals.
B. Indicator Range	An excursion is defined as a pressure drop greater than 10-inch water column (wc) or less than 0.5-inch wc. Excursions trigger an inspection and corrective action as necessary.
C. QIP Threshold	None selected
D. Control Bypass	None present

III. PERFORMANCE CRITERIA

	Pressure Drop
A. Data Representativeness	Pressure indicators are located at the dust collector inlet and outlet.
B. Verification of Operational Status	NA
C. QA/QC Practices and Criteria	The pressure indicators are on a regular PM schedule.
D. Monitoring Frequency	Pressure drop is continuously monitored.
E. Data Collection Procedure	Pressure drop data collected at 15-minute intervals (4 per hour) and recorded electronically.
F. Averaging Period	15 minutes

IV. JUSTIFICATION

A. Rationale for Selection of Performance Indicators

Pressure drop is a commonly monitored parameter that provides a means of detecting a change in operation that could lead to an increase in emissions. An increase in pressure drop can indicate that the filters are becoming inefficient or the airflow has increased. A decrease in pressure drop may indicate broken or loose filters. A pressure drop monitor across the dust collector also serves to indicate that there is airflow through the control device.

B. Rational for Selection of Indicator Ranges

The indicator range chosen for the dust collector pressure drop is between 0.5-inch wc and 10-inch wc. Operation outside of these ranges signifies a decrease in filter efficiency and would trigger an inspection and corrective action as necessary. The pressure drop is monitored continuously and recorded in 15 minute intervals. As the pressure drop approaches 10-inch wc, the filters are scheduled for replacement. The filters are typically changed every three (3) years. No QIP threshold has been selected for this indicator.

I. BACKGROUND

A. Emission Unit

Description: Batch mixer/reactor process

Identification: EU207-16

Facility: Dow Silicones Corporation
3901 S. Saginaw Rd
Midland, MI 48686

B. Applicable Regulation, Emission Limit, Monitoring Requirements

Permit Number: 171-20

Emission Limits:

PM: 0.68 lb/hr through vent SV207-001, Rule 331

PM10: 0.68 lb/hr through vent SV207-001, 40 CFR 52.21(c) & (d)

PM2.5: 0.68 lb/hr through vent SV207-001, 40 CFR 52.21(c) & (d)

Monitoring Requirements: Dust collector pressure drop

Potential Pre-Control Emissions: 121 tons per year of PM, PM10, and PM2.5

C. Control Technology

Dust Collector 12912 with control efficiency rated at 98%.

II. MONITORING APPROACH

	Pressure Drop
A. Indicator	Pressure drop across the dust collector is measured with a continuous pressure drop indicator. It is continuously monitored and recorded in 15-minute intervals.
B. Indicator Range	An excursion is defined as a pressure drop greater than 10-inch water column (wc) or less than 0.5-inch wc. Excursions trigger an inspection and corrective action as necessary.
C. QIP Threshold	None selected
D. Control Bypass	None present

III. PERFORMANCE CRITERIA

	Pressure Drop
A. Data Representativeness	Pressure indicators are located at the dust collector inlet and outlet.
B. Verification of Operational Status	NA
C. QA/QC Practices and Criteria	The pressure indicators are on a regular PM schedule.
D. Monitoring Frequency	Pressure drop is continuously monitored.
E. Data Collection Procedure	Pressure drop data collected at 15-minute intervals (4 per hour) and recorded electronically.
F. Averaging Period	15 minutes

IV. JUSTIFICATION

A. Rationale for Selection of Performance Indicators

Pressure drop is a commonly monitored parameter that provides a means of detecting a change in operation that could lead to an increase in emissions. An increase in pressure drop can indicate that the filters are becoming inefficient or the airflow has increased. A decrease in pressure drop may indicate broken or loose filters. A pressure drop monitor across the dust collector also serves to indicate that there is airflow through the control device.

B. Rational for Selection of Indicator Ranges

The indicator range chosen for the dust collector pressure drop is between 0.5-inch wc and 10-inch wc. Operation outside of these ranges signifies a decrease in filter efficiency and would trigger an inspection and corrective action as necessary. The pressure drop is monitored continuously and recorded in 15 minute intervals. As the pressure drop approaches 10-inch wc, the filters are scheduled for replacement. The filters are typically changed every three (3) years. No QIP threshold has been selected for this indicator.

I. BACKGROUND

A. Emission Unit

Description: Batch mixer/reactor process

Identification: EU207-17

Facility: Dow Silicones Corporation
3901 S. Saginaw Rd
Midland, MI 48686

B. Applicable Regulation, Emission Limit, Monitoring Requirements

Permit Number: 173-20

Emission Limits:

PM: 0.68 lb/hr through vent SV207-001, Rule 331

PM10: 0.68 lb/hr through vent SV207-001, 40 CFR 52.21(c) & (d)

PM2.5: 0.68 lb/hr through vent SV207-001, 40 CFR 52.21(c) & (d)

Monitoring Requirements: Dust collector pressure drop

Potential Pre-Control Emissions: 121 tons per year of PM, PM10, and PM2.5

C. Control Technology

Dust Collector 12912 with control efficiency rated at 98%.

II. MONITORING APPROACH

	Pressure Drop
A. Indicator	Pressure drop across the dust collector is measured with a continuous pressure drop indicator. It is continuously monitored and recorded in 15-minute intervals.
B. Indicator Range	An excursion is defined as a pressure drop greater than 10-inch water column (wc) or less than 0.5-inch wc. Excursions trigger an inspection and corrective action as necessary.
C. QIP Threshold	None selected
D. Control Bypass	None present

III. PERFORMANCE CRITERIA

	Pressure Drop
A. Data Representativeness	Pressure indicators are located at the dust collector inlet and outlet.
B. Verification of Operational Status	NA
C. QA/QC Practices and Criteria	The pressure indicators are on a regular PM schedule.
D. Monitoring Frequency	Pressure drop is continuously monitored.
E. Data Collection Procedure	Pressure drop data collected at 15-minute intervals (4 per hour) and recorded electronically.
F. Averaging Period	15 minutes

IV. JUSTIFICATION

A. Rationale for Selection of Performance Indicators

Pressure drop is a commonly monitored parameter that provides a means of detecting a change in operation that could lead to an increase in emissions. An increase in pressure drop can indicate that the filters are becoming inefficient or the airflow has increased. A decrease in pressure drop may indicate broken or loose filters. A pressure drop monitor across the dust collector also serves to indicate that there is airflow through the control device.

B. Rational for Selection of Indicator Ranges

The indicator range chosen for the dust collector pressure drop is between 0.5-inch wc and 10-inch wc. Operation outside of these ranges signifies a decrease in filter efficiency and would trigger an inspection and corrective action as necessary. The pressure drop is monitored continuously and recorded in 15 minute intervals. As the pressure drop approaches 10-inch wc, the filters are scheduled for replacement. The filters are typically changed every three (3) years. No QIP threshold has been selected for this indicator.

I. BACKGROUND

A. Emission Unit

Description: Batch mixer/reactor process

Identification: EU207-18

Facility: Dow Silicones Corporation
3901 S. Saginaw Rd
Midland, MI 48686

B. Applicable Regulation, Emission Limit, Monitoring Requirements

Permit Number: 170-20

Emission Limits:

PM: 0.68 lb/hr through vent SV207-001, Rule 331

PM10: 0.68 lb/hr through vent SV207-001, 40 CFR 52.21(c) & (d)

PM2.5: 0.68 lb/hr through vent SV207-001, 40 CFR 52.21(c) & (d)

Monitoring Requirements: Dust collector pressure drop

Potential Pre-Control Emissions: 121 tons per year of PM, PM10, and PM2.5

C. Control Technology

Dust Collector 12912 with control efficiency rated at 98%.

II. MONITORING APPROACH

	Pressure Drop
A. Indicator	Pressure drop across the dust collector is measured with a continuous pressure drop indicator. It is continuously monitored and recorded in 15-minute intervals.
B. Indicator Range	An excursion is defined as a pressure drop greater than 10-inch water column (wc) or less than 0.5-inch wc. Excursions trigger an inspection and corrective action as necessary.
C. QIP Threshold	None selected
D. Control Bypass	None present

III. PERFORMANCE CRITERIA

	Pressure Drop
A. Data Representativeness	Pressure indicators are located at the dust collector inlet and outlet.
B. Verification of Operational Status	NA
C. QA/QC Practices and Criteria	The pressure indicators are on a regular PM schedule.
D. Monitoring Frequency	Pressure drop is continuously monitored.
E. Data Collection Procedure	Pressure drop data collected at 15-minute intervals (4 per hour) and recorded electronically.
F. Averaging Period	15 minutes

IV. JUSTIFICATION

A. Rationale for Selection of Performance Indicators

Pressure drop is a commonly monitored parameter that provides a means of detecting a change in operation that could lead to an increase in emissions. An increase in pressure drop can indicate that the filters are becoming inefficient or the airflow has increased. A decrease in pressure drop may indicate broken or loose filters. A pressure drop monitor across the dust collector also serves to indicate that there is airflow through the control device.

B. Rational for Selection of Indicator Ranges

The indicator range chosen for the dust collector pressure drop is between 0.5-inch wc and 10-inch wc. Operation outside of these ranges signifies a decrease in filter efficiency and would trigger an inspection and corrective action as necessary. The pressure drop is monitored continuously and recorded in 15 minute intervals. As the pressure drop approaches 10-inch wc, the filters are scheduled for replacement. The filters are typically changed every three (3) years. No QIP threshold has been selected for this indicator.

I. BACKGROUND

A. Emission Unit

Description: Batch mixer/reactor process

Identification: EU207-19

Facility: Dow Silicones Corporation
3901 S. Saginaw Rd
Midland, MI 48686

B. Applicable Regulation, Emission Limit, Monitoring Requirements

Permit Number: 180-20

Emission Limits:

PM: 0.68 lb/hr through vent SV207-001, Rule 331

PM10: 0.68 lb/hr through vent SV207-001, 40 CFR 52.21(c) & (d)

PM2.5: 0.68 lb/hr through vent SV207-001, 40 CFR 52.21(c) & (d)

Monitoring Requirements: Dust collector pressure drop

Potential Pre-Control Emissions: 121 tons per year of PM, PM10, and PM2.5

C. Control Technology

Dust Collector 12912 with control efficiency rated at 98%.

II. MONITORING APPROACH

	Pressure Drop
A. Indicator	Pressure drop across the dust collector is measured with a continuous pressure drop indicator. It is continuously monitored and recorded in 15-minute intervals.
B. Indicator Range	An excursion is defined as a pressure drop greater than 10-inch water column (wc) or less than 0.5-inch wc. Excursions trigger an inspection and corrective action as necessary.
C. QIP Threshold	None selected
D. Control Bypass	None present

III. PERFORMANCE CRITERIA

	Pressure Drop
A. Data Representativeness	Pressure indicators are located at the dust collector inlet and outlet.
B. Verification of Operational Status	NA
C. QA/QC Practices and Criteria	The pressure indicators are on a regular PM schedule.
D. Monitoring Frequency	Pressure drop is continuously monitored.
E. Data Collection Procedure	Pressure drop data collected at 15-minute intervals (4 per hour) and recorded electronically.
F. Averaging Period	15 minutes

IV. JUSTIFICATION

A. Rationale for Selection of Performance Indicators

Pressure drop is a commonly monitored parameter that provides a means of detecting a change in operation that could lead to an increase in emissions. An increase in pressure drop can indicate that the filters are becoming inefficient or the airflow has increased. A decrease in pressure drop may indicate broken or loose filters. A pressure drop monitor across the dust collector also serves to indicate that there is airflow through the control device.

B. Rational for Selection of Indicator Ranges

The indicator range chosen for the dust collector pressure drop is between 0.5-inch wc and 10-inch wc. Operation outside of these ranges signifies a decrease in filter efficiency and would trigger an inspection and corrective action as necessary. The pressure drop is monitored continuously and recorded in 15 minute intervals. As the pressure drop approaches 10-inch wc, the filters are scheduled for replacement. The filters are typically changed every three (3) years. No QIP threshold has been selected for this indicator.

Michigan Department of Environmental Quality - Air Quality Division

RENEWABLE OPERATING PERMIT APPLICATION

AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

Form Type AI-001	SRN A4043
1. Operator's Additional Information Id AI304-02CAM	
Additional Information	
2. Is This Information Confidential?	No
3. Narrative	

CAM Plan

1. BACKGROUND

1.1 Emission Unit:

Description: Alkylsilane Process

Identification: EG304-02

Facility: Dow Corning

3901 S. Saginaw Rd

Midland, MI 48686

1.2 Applicable Regulations, Emission Limit, and Monitoring Requirements:

Permit No: ROP# 199600217

Emission Limits: 15.2 tons/yr VOC Rule 336.1702(a), Rule 336.1201

Monitoring Requirements: Condenser Inlet Coolant temperature

1.3 Control Technology:

Condensers (414, 1154) operating at < -13oC

2. MONITORING APPROACH DESCRIPTION

1 Parameters to be Monitored: Coolant inlet temperature

2 Rationale for Monitoring Approach: Condenser outlet gas temperature affects removal efficiency; an increase in inlet coolant temperature indicates decreased removal efficiency.

2.3 Monitoring Location: Coolant inlet side of the condenser

2.4 Analytical Devices Required: RTD's

2.5 Data Acquisition and Measurement System Operation

*Frequency of measurement: The temperature will be continuously monitored by a data acquisition system.

*Reporting Units: Degrees Celsius

*Recording process: These RTD's are connected to a data acquisition system.

2.6 Data Requirements

*Calculations were completed showing that the operating coolant inlet temperatures of the condensers are adequate to condense the majority of the condensable in the vent stream.

2.7 Specific QA/QC Procedures

*The RTD's are calibrated on a regular schedule

3. JUSTIFICATION

3.1 Rationale for selection of Performance Indicators:

Condenser coolant inlet temperature was selected as a performance indicator because low vent flows made the outlet temperature unusable. The inlet temperature does show that there is adequate cooling entering the condenser. When the condensers are operating properly the temperature will be under the required level. Any increase in temperature indicates reduced performance of the Condenser. Therefore, the condenser inlet coolant temperature is used as a performance indicator.

3.2 Rationale for Selection of Indicator Ranges:

A maximum temperature of -13oC was used because this temperature was required to achieve compliance according to the vent calculations.

Note: Dow Corning is currently following this plan and it is written into the current ROP.

Michigan Department of Environmental Quality - Air Quality Division

RENEWABLE OPERATING PERMIT APPLICATION

AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

Form Type AI-001	SRN A4043
1. Operator's Additional Information Id AI340-01+CAM	
Additional Information	
2. Is This Information Confidential? No	
3. Narrative	

The "any control device" is an absorber

CAM Plan

1. BACKGROUND

1.1 Emission Unit:

Description: Calcium Chloride Process

Identification: EG340-01

Facility: Dow Corning

3901 S. Saginaw Rd

Midland, MI 48686

1.2 Applicable Regulations, Emission Limit, and Monitoring Requirements:

Permit No: ROP# 199600217

Emission Limits: 5.0 tons/yr VOC Rule 336.1702(a)

2.6 tons/yr MeCl R 336.1225

Monitoring Requirements: Liquid flow rate into absorber

1.3 Control Technology:

Absorber (8745A) operating with a flow rate of at least 50.0 gpm

Scrubber (8745B) is operating with a flow rate of at least 2.5 gpm

Scrubber (8752) is operating with a flow rate of at least 35.0 gpm

2. MONITORING APPROACH DESCRIPTION

2.1 Parameters to be Monitored: Liquid flow rate: measured at scrubber liquid inlet

2.2 Rationale for Monitoring Approach: Adequate liquid flow insures good gas/liquid contact and maintenance of proper pressure differential

2.3 Monitoring Location: The inlet side of the scrubber

2.4 Analytical Devices Required: Yokogawa Magnetic Flow Meter

2.5 Data Acquisition and Measurement System Operation

*Frequency of measurement: The temperature will be continuously monitored by a data acquisition system.

*Reporting Units: Gallons per minute

*Recording process: This Yokogawa Magnetic Flow Meter is connected to a data acquisition system.

2.6 Data Requirements

*According to the manufactures specifications these scrubbers need at least 50.0/2.5/35.0 gpm to achieve the desired efficiency.

2.7 Specific QA/QC Procedures

*The Yokogawa Magnetic Flow Meter calibrated on a regular schedule

3. JUSTIFICATION

3.1 Rationale for selection of Performance Indicators:

The scrubber inlet flow rate was selected as a performance indicator because it shows good scrubber operation. When the absorber is operating properly the scrubbing medium flow rate will be greater than the required level. Any decrease in flows indicates reduced performance of the scrubbers. Therefore, the scrubber inlet flow rate is used as a performance indicator.

3.2 Rationale for Selection of Indicator Ranges:

A minimum flow rate of 50.0/2.5/35.0 gpm was used because according to the manufacture's specification the scrubbers need at least 50.0/2.5/35.0 gpm flow to operate properly.

Note: Dow Corning is currently following this plan and it is written into the current ROP.

1. BACKGROUND

- 1.1 Emission Unit:
 - Description: 1107 Hydrolysis Process
 - Identification: EG501-02
 - Facility: Dow Silicones Corporation
3901 S. Saginaw Rd
Midland, MI 48686

- 1.2 Applicable Regulations, Emission Limit, and Monitoring Requirements:
 - Permit No: 126-03A
 - Emission Limits: 9.1 lbs/hr VOC Rule 336.1702(a)
5.9 tpy VOC Rule 336.1702(a)
 - Monitoring Requirements: Liquid flow rate into the Venturi Scrubbers
- 1.3 Control Technology:
 - Venturi Scrubber (4109) operating at a flow rate of at least 18.0 gpm
 - Venturi Scrubber (7585) operating at a flow rate of at least 1.5 gpm

2. MONITORING APPROACH DESCRIPTION

- 2.1 Parameters to be Monitored: Scrubber liquid flow rate: measured at scrubber liquid inlet
- 2.2 Rationale for Monitoring Approach: Adequate liquid flow insures good gas/liquid contact and maintenance of proper pressure differential
- 2.3 Monitoring Location: The inlet side of the scrubber
- 2.4 Analytical Devices Required: Rosemont DP orifice flow meter
- 2.5 Data Acquisition and Measurement System Operation
 - * Frequency of measurement: The temperature will be continuously monitored by a data acquisition system.
 - * Reporting Units: Gallons per minute (gpm)
 - * Recording process: These Rosemont DP orifice flow meters are connected to the data acquisition system.
- 2.6 Data Requirements
 - * According to the manufactures specifications these scrubbers need at least 18.0 / 1.5 gpm respectively to achieve the desired efficiency.
- 2.7 Specific QA/QC Procedures
 - * The Rosemont DP orifice flow meters calibrated on a regular schedule

3. JUSTIFICATION

- 3.1 Rationale for selection of Performance Indicators:

The scrubber inlet flow rate was selected as a performance indicator because it shows good venturi scrubber operation. When the scrubber is operating properly the scrubbing medium flow rate will be greater than the required level. Any decrease in flows indicates reduced performance of the scrubber. Therefore, the scrubber inlet flow rate is used as a performance indicator.

3.2 Rationale for Selection of Indicator Ranges:

A minimum flow rate of 18.0 / 1.5 gpm was used because according to the manufacture this venturi scrubber needs at least 18.0 / 1.5 gpm flow to operate properly.

Note: Dow Silicones Corporation is currently following this plan and it is written into the current ROP.

I. BACKGROUND

A. Emission Unit

Description: Production, storage, and transfer of Phenylmethyldichlorosilane (PhMeSiCl₂) and Diphenylmethylchlorosilane (Ph₂MeSiCl).

Identification: EU515-01

Facility: Dow Silicones Corporation
3901 S. Saginaw Rd
Midland, MI 48686

B. Applicable Regulation, Emission Limit, Monitoring Requirements

Permit Number: 812-91D

Emission Limits:

VOC: 4.6 lb/hr, R 336.1702(a)

Monitoring Requirements: 10530 Toluene Scrubber
HX-10453 Coolant Supply Temperature
HX-10541 Coolant Supply Temperature
HX-10657 Liquid Flow Rate
MgCl₂ Carbon Drum Weight Gain

Potential Pre-Control Emissions: 1,008 tons per year of VOC

C. Control Technology

Toluene Scrubber 10530
Condenser HX-10453
Condenser HX-10541
Condenser HX-10657
MgCl₂ Carbon Drum

II. MONITORING APPROACH

	Toluene Scrubber 10530 Exhaust Air Temperature
A. Indicator	Condenser coolant supply temperature.
B. Indicator Range	An excursion is defined as operation of EU515-01 without Toluene Scrubber 10530 exhaust air temperature being less than or equal to -5 °C. Excursions trigger an inspection and corrective action as necessary.
C. QIP Threshold	None selected
D. Control Bypass	None present

HX-10453 Coolant Supply Temperature	
E. Indicator	Condenser coolant supply temperature.
F. Indicator Range	An excursion is defined as operation of EU515-01 without Condenser HX-10453 coolant supply temperature being less than or equal to -5 °C. Excursions trigger an inspection and corrective action as necessary.
G. QIP Threshold	None selected
H. Control Bypass	None present

HX-10541 Coolant Supply Temperature	
I. Indicator	Condenser coolant supply temperature.
J. Indicator Range	An excursion is defined as operation of EU515-01 without Condenser HX-10541 coolant supply temperature being less than or equal to -5 C. Excursions trigger an inspection and corrective action as necessary.
K. QIP Threshold	None selected
L. Control Bypass	None present

HX-10657 Liquid Flow Rate	
M. Indicator	Condenser liquid flow rate is continuously monitored when not venting to FGTHROX.
N. Indicator Range	An excursion is defined as operation of EU515-01 without Condenser HX-10657 liquid flow rate being greater than or equal to 100 gallons per minute while not venting to FGTHROX. Excursions trigger an inspection and corrective action as necessary.
O. QIP Threshold	None selected
P. Control Bypass	None present

Carbon Drum Weight Gain	
Q. Indicator	Carbon drum weight gain is monitored for each bank of carbon drums.
R. Indicator Range	An excursion is defined as operation of EU515-01 with any carbon drum bank having a weight gain of more than 80 kilograms. Excursions trigger an inspection and corrective action as necessary.
S. QIP Threshold	None selected
T. Control Bypass	None present

III. PERFORMANCE CRITERIA

Toluene Scrubber 10530 Exhaust Air Temperature	
A. Data Representativeness	Toluene scrubber exhaust air temperature is continuously tracked during emission unit operation.
B. Verification of Operational Status	NA
C. QA/QC Practices and Criteria	The toluene scrubber is on a regular PM schedule.
D. Monitoring Frequency	Toluene scrubber exhaust air temperature is continuously tracked during emission unit operation.
E. Data Collection Procedure	Toluene scrubber exhaust air temperature is recorded at least once every 15-minutes during emission unit operation.
F. Averaging Period	15-minute

HX-10453 Coolant Supply Temperature	
G. Data Representativeness	Condenser coolant supply temperature is continuously tracked during emission unit operation.
H. Verification of Operational Status	NA
I. QA/QC Practices and Criteria	The condenser is on a regular PM schedule.
J. Monitoring Frequency	Condenser coolant supply temperature is continuously tracked during emission unit operation.
K. Data Collection Procedure	Condenser coolant supply temperature is recorded at least once every 15-minutes during emission unit operation.
L. Averaging Period	15-minute

HX-10541 Coolant Supply Temperature	
M. Data Representativeness	Condenser coolant supply temperature is continuously tracked during emission unit operation.
N. Verification of Operational Status	NA
O. QA/QC Practices and Criteria	The condenser is on a regular PM schedule.
P. Monitoring Frequency	Condenser coolant supply temperature is continuously tracked during emission unit operation.
Q. Data Collection Procedure	Condenser coolant supply temperature is recorded at least once every 15-minutes during emission unit operation.
R. Averaging Period	15-minute

HX-10657 Liquid Flow Rate	
S. Data Representativeness	Condenser liquid flow rate is continuously tracked during emission unit operation when not venting to FGTHROX.
T. Verification of Operational Status	NA
U. QA/QC Practices and Criteria	The condenser is on a regular PM schedule.
V. Monitoring Frequency	Condenser coolant supply temperature is continuously tracked during emission unit operation when not venting to FGTHROX.
W. Data Collection Procedure	Condenser coolant supply temperature is recorded at least once every 15-minutes during emission unit operation when not venting to FGTHROX.
X. Averaging Period	15-minute

Carbon Drum Weight Gain	
Y. Data Representativeness	Carbon drum weight gain is continuously tracked during emission unit operation.
Z. Verification of Operational Status	NA
AA. QA/QC Practices and Criteria	The carbon drums are on a regular PM schedule.
BB. Monitoring Frequency	Carbon drum weight gain is continuously tracked during emission unit operation.
CC. Data Collection Procedure	Carbon drum weight gain is recorded at least once every 15-minutes during emission unit operation.
DD. Averaging Period	15-minute

IV. JUSTIFICATION

A. Rationale for Selection of Performance Indicators

Monitoring the toluene scrubber exhaust air temperature ensures proper operation and control efficiency is being achieved by the toluene scrubber. This shows that the vent stream was in contact long enough with the scrubber liquid to remove the necessary quantity of emissions. An increase in the temperature of the scrubber exhaust can indicate that the scrubber is not achieving the proper level of emissions control and that corrective actions should be implemented.

Monitoring condenser coolant supply temperature ensures proper operation and control efficiency is being achieved by the condenser. An increase in coolant supply temperature can indicate that the condenser will not achieve the desired level of control and that corrective actions should be implemented.

Monitoring condenser liquid flow rate ensures proper operation and control efficiency is being achieved by the condenser. A decrease in condenser liquid flow rate can indicate that the condenser will not achieve the desired level of control and that corrective actions should be implemented.

Monitoring carbon drum weight gain is a method of monitoring capacity of the carbon drums to clean emissions from the exhaust gas stream. Once the carbon drum weight gain exceeds the monitoring threshold, the carbon drums are getting close to breakthrough and need to be replaced to ensure the proper control of emissions is achieved.

B. Rationale for Selection of Indicator Ranges

The indicator range for the toluene scrubber exhaust air temperature is set based on the maximum temperature that can be measured for the exhaust air temperature while still achieving the necessary control efficiency. No QIP threshold has been selected for this indicator.

The indicator range for the condenser coolant supply temperature is set based on the maximum temperature that can be measured for the coolant supply while still achieving the necessary control efficiency. No QIP threshold has been selected for this indicator.

The indicator range for the condenser liquid flow rate is set based on the minimum flowrate necessary for the liquid flow rate while still achieving the necessary control efficiency. No QIP threshold has been selected for this indicator.

The indicator range for the carbon drum weight gain is set based on the capacity of the carbon drums to clean the exhaust stream before breakthrough occurs. No QIP threshold has been selected for this indicator.

I. BACKGROUND

A. Emission Unit

Description: Production, storage, and transfer of Fluoro cyclics process.

Identification: EU604-08

Facility: Dow Silicones Corporation
3901 S. Saginaw Rd
Midland, MI 48686

B. Applicable Regulation, Emission Limit, Monitoring Requirements

Permit Number: 466-73E

Emission Limits:

VOC: 16.7 lb/hr, R 336.1702(a)
11.8 tons/yr, R 336.1702(a)

Monitoring Requirements:

- 7791 Condenser while offloading railcar
- 22713 condenser cooling outlet temp

C. Control Technology

Condenser HX-7791
Condenser HX-22713

II. MONITORING APPROACH

	HX-7791 Condenser Outlet Temperature
A. Indicator	Condenser Outlet Temperature.
B. Indicator Range	An excursion is defined as operation of railcar unloading without condenser 7791 outlet temperature being less than 40.6°F.
C. QIP Threshold	None selected
D. Control Bypass	None present

HX-22713 Service Water Return Temperature	
E. Indicator	Condenser liquid flow rate is continuously monitored when not venting to FGTHROX.
F. Indicator Range	An excursion is defined as operation of the EU604-08 process with condenser 22713 service water return temperature being greater than 105°F.
G. QIP Threshold	None selected
H. Control Bypass	None present

PERFORMANCE CRITERIA

HX-7791 Condenser Outlet Temperature	
I. Data Representativeness	Condenser outlet temperature is continuously tracking during railcar unloading operation.
J. Verification of Operational Status	NA
K. QA/QC Practices and Criteria	The condenser is on a regular PM schedule.
L. Monitoring Frequency	Condenser outlet temperature is continuously tracking during railcar unloading operation.
M. Data Collection Procedure	Condenser outlet temperature is recorded at least once every 15-minutes during railcar unloading operation.
N. Averaging Period	15-minute

HX-22713 Service Water Return Temperature	
O. Data Representativeness	Condenser service water return temperature is continuously tracked during emission unit operation.
P. Verification of Operational Status	NA
Q. QA/QC Practices and Criteria	The condenser is on a regular PM schedule.
R. Monitoring Frequency	Condenser service water return temperature is continuously tracked during emission unit operation.
S. Data Collection Procedure	Condenser service water return temperature is recorded at least once every 15-minutes during emission unit operation.
T. Averaging Period	15-minute

III. JUSTIFICATION

A. Rationale for Selection of Performance Indicators

Monitoring condenser outlet temperature ensures proper operation and control efficiency is being achieved by the condenser. An increase in condenser outlet temperature can indicate that the condenser will not achieve the desired level of control and that corrective actions should be implemented.

Monitoring service water return temperature ensures proper operation and control efficiency is being achieved by the condenser. An increase in service water return temperature can indicate that the condenser will not achieve the desired level of control and that corrective actions should be implemented.

B. Rationale for Selection of Indicator Ranges

The indicator range for the condenser outlet temperature is set based on the worst-case temperature used for emission calculations. No QIP threshold has been selected for this indicator.

The indicator range for the service water return temperature is set based on the worst-case temperature used for emission calculations. No QIP threshold has been selected for this indicator.

I. BACKGROUND

A. Emission Unit

Description: Site wide thermal oxidizer system.

Identification: FGTHROX

Facility: Dow Silicones Corporation
3901 S. Saginaw Rd
Midland, MI 48686

B. Applicable Regulation, Emission Limit, Monitoring Requirements

Permit Number: 91-07E

Emission Limits:

VOC: 6.6 lb/hr, Rules 205(1), 702(a), and 901

PM10: 3.5 lb/hr, Rule 205(3)

Monitoring Requirements: Combustion Chamber Temperature
Combustion Chamber Residence Time
IWS 1st Stage Secondary Voltage
IWS 2nd Stage Secondary Voltage
IWS Secondary Current
IWS Packing Recycle Rate per Stage

C. Control Technology

Thermal Oxidizer (THROX)

2 Stage Ionizing Wet Scrubber (IWS)

II. MONITORING APPROACH

	Combustion Chamber Temperature
A. Indicator	Combustion chamber temperature is monitored through two redundant thermocouples. It is continuously monitored and recorded in 15-minute intervals.
B. Indicator Range	An excursion is defined as a combustion chamber temperature less than 1800 °F. Excursions trigger action under the Malfunction Abatement Plan (MAP).
C. QIP Threshold	None selected
D. Control Bypass	Vent streams can be sent to FGSITESCUBBERS by a control valve that is located upstream of the combustion chamber.

Combustion Chamber Residence Time	
E. Indicator	Combustion chamber residence time is calculated via gas flow rate monitors located on the stack and physical dimensions of the combustion chamber. It is continuously calculated and recorded.
F. Indicator Range	An excursion is defined as a combustion chamber residence time of one second or less. Excursions trigger action under the Malfunction Abatement Plan (MAP).
G. QIP Threshold	None selected
H. Control Bypass	Vent streams can be sent to FGSITESCRUBBERS by a control valve that is located upstream of the combustion chamber.

IWS 1st Stage Secondary Voltage	
I. Indicator	IWS 1 st stage secondary voltage is monitored through a voltmeter located in the IWS 1 st stage. It is continuously monitored and recorded in 1-hour intervals.
J. Indicator Range	An excursion is defined as an hourly average voltage less than 10 kV while emissions are routed to the THROX. Excursions trigger action under the Malfunction Abatement Plan (MAP).
K. QIP Threshold	None selected
L. Control Bypass	None present

IWS 2nd Stage Secondary Voltage	
M. Indicator	IWS 2 nd stage secondary voltage is monitored through a voltmeter located in the IWS 2 nd stage. It is continuously monitored and recorded in 1-hour intervals.
N. Indicator Range	An excursion is defined as an hourly average voltage less than 15 kV while emissions are routed to the THROX. Excursions trigger action under the Malfunction Abatement Plan (MAP).
O. QIP Threshold	None selected
P. Control Bypass	None present

IWS Secondary Current	
Q. Indicator	IWS secondary current is monitored through an ammeter located in the IWS 1 st and 2 nd stage. It is continuously monitored and recorded in 1-hour intervals.
R. Indicator Range	An excursion is defined as an hourly average current less than 50 mA while emissions are routed to the THROX. Excursions trigger action under the Malfunction Abatement Plan (MAP).
S. QIP Threshold	None selected
T. Control Bypass	None present

IWS Packing Recycle Flow per Stage	
U. Indicator	IWS packing recycle rate per stage is monitored through a liquid flowmeter located in each IWS stage. It is continuously monitored and recorded in 1-hour intervals.
V. Indicator Range	An excursion is defined as an hourly average packing recycle rate less than 324 gallons/minute per stage while emissions are routed to the THROX. Excursions trigger action under the Malfunction Abatement Plan (MAP).
W. QIP Threshold	None selected
X. Control Bypass	None present

III. PERFORMANCE CRITERIA

Combustion Chamber Temperature	
A. Data Representativeness	Two thermocouples operate in a redundant manner and are located within the combustion chamber.
B. Verification of Operational Status	Not Applicable (NA)
C. QA/QC Practices and Criteria	The thermocouples are on a regular PM schedule.
D. Monitoring Frequency	Combustion chamber temperature is continuously monitored.
E. Data Collection Procedure	Combustion chamber temperature data is collected at 15-minute intervals (4 per hour) and recorded electronically.
F. Averaging Period	15 minutes

		Combustion Chamber Residence Time
G.	Data Representativeness	Combustion chamber residence time is calculated based on the stack flowrates and the physical dimensions of the combustion chamber.
H.	Verification of Operational Status	NA
I.	QA/QC Practices and Criteria	The gas flowmeters are on a regular PM schedule.
J.	Monitoring Frequency	Combustion chamber residence time is continuously calculated.
K.	Data Collection Procedure	Combustion chamber residence time is calculated continuously and recorded electronically at 15-minute intervals (4 per hour).
L.	Averaging Period	15 minutes

		IWS 1st Stage Secondary Voltage
M.	Data Representativeness	A voltmeter is located in the 1 st stage to measure secondary voltage.
N.	Verification of Operational Status	NA
O.	QA/QC Practices and Criteria	The voltmeter is on a regular PM schedule.
P.	Monitoring Frequency	IWS 1 st stage secondary voltage is continuously monitored.
Q.	Data Collection Procedure	IWS 1 st stage secondary voltage data is averaged into 1-hour intervals and recorded electronically.
R.	Averaging Period	1 hour

IWS 2nd Stage Secondary Voltage	
S. Data Representativeness	A voltmeter is located in the 2 nd stage to measure secondary voltage.
T. Verification of Operational Status	NA
U. QA/QC Practices and Criteria	The voltmeter is on a regular PM schedule.
V. Monitoring Frequency	IWS 2 nd stage secondary voltage is continuously monitored.
W. Data Collection Procedure	IWS 2 nd stage secondary voltage data is averaged into 1-hour intervals and recorded electronically.
X. Averaging Period	1 hour

IWS Secondary Current	
Y. Data Representativeness	An ammeter is located in the IWS 1 st and 2 nd stage to measure secondary voltage.
Z. Verification of Operational Status	NA
AA. QA/QC Practices and Criteria	The ammeter is on a regular PM schedule.
BB. Monitoring Frequency	IWS secondary current is continuously monitored.
CC. Data Collection Procedure	IWS secondary current data is averaged into 1-hour intervals and recorded electronically.
DD. Averaging Period	1 hour

IWS Packing Recycle Rate per Stage	
EE. Data Representativeness	Liquid flowmeters are located in the 1 st and 2 nd stages to measure packing recycle rate.
FF. Verification of Operational Status	NA
GG. QA/QC Practices and Criteria	The liquid flowmeters are on a regular PM schedule.
HH. Monitoring Frequency	IWS packing recycle rate per stage is continuously monitored.
II. Data Collection Procedure	IWS packing recycle rate per stage data is averaged into 1-hour intervals and recorded electronically.
JJ. Averaging Period	1 hour

IV. JUSTIFICATION

A. Rationale for Selection of Performance Indicators

For the THROX, combustion chamber temperature and combustion chamber residence time are commonly monitored parameters that provide a means of assurance that the required destruction efficiency of VOCs is being achieved. A decrease in temperature or residence time may indicate that the THROX is not achieving the desired control efficiency.

For the IWS, the combination of the secondary voltage, secondary current, and packing recycle rate monitoring provides assurance that the IWS is achieving the desired PM removal efficiency. An excursion of any of these parameters may indicate that the IWS is not achieving the desired control efficiency of PM.

B. Rational for Selection of Indicator Ranges

All indicator ranges included in this CAM plan for THROX were established based on source testing of the THROX that demonstrates compliance with the required emission limits. An excursion of any of these parameters would trigger action based on the MAP. The THROX parameters are monitored continuously and recorded in 15-minute intervals. The IWS parameters are monitored continuously and recorded in 1-hour intervals. No QIP threshold has been selected for this indicator.

Attachment G1 – Rule 290 List

Attachment G1 - Rule 290 Emission Units

Emission Unit ID	Plant/Process	Control Device	NESHAP/Flexible Group	Exemption Date
EG106-02	Resins - 100 Block	N/A	FGLEAKDETECTION FGMONMACT	9/16/2020
EG106-04	Resins - 100 Block	N/A	FGMONMACT	1/27/2021
EG106-05	Resins - 100 Block	DV4016 Scrubber	FGLEAKDETECTION FGMONMACT	1/22/2021
EG106-06	Resins - 100 Block	DV4016 Scrubber	FGLEAKDETECTION FGMONMACT	1/27/2021
EG106-08	Resins - 100 Block	DV4016 Scrubber	FGLEAKDETECTION FGMONMACT	9/18/2020
EG106-09	Resins - 100 Block	N/A	FGMONMACT	9/16/2020
EG106-10	Resins - 100 Block	N/A	FGMONMACT	9/22/2020
EG106-11	Resins - 100 Block	N/A	FGLEAKDETECTION FGMONMACT	9/22/2020
EG106-12	Resins - 100 Block	N/A	FGLEAKDETECTION FGMONMACT	9/16/2020
EG106-13	Resins - 100 Block	N/A	FGMONMACT	1/7/2021
EG108-02	Resins - 100 Block	N/A	FGLEAKDETECTION FGMONMACT	9/24/2020
EG109-01	Resins - 100 Block	DV2210 Scrubber DV24472 Condenser	FGLEAKDETECTION FGMONMACT	1/25/2021
EG109-03	Resins - 100 Block	N/A	FGMONMACT	10/16/2020
EG109-05	Resins - 100 Block	N/A	FGMONMACT	8/31/2020
EG109-06	Resins - 100 Block	DV2299 Scrubber	FGLEAKDETECTION FGMONMACT	1/23/2020
EG109-07	Resins - 100 Block	DV24472 Condenser	FGLEAKDETECTION FGMONMACT	1/19/2022
EG109-09	Resins - 100 Block	DV4443 Condenser	FGLEAKDETECTION FGMONMACT	9/24/2020
EG207-04	Elastomers - 207 Bldg	Dust Collector	N/A	2/18/2021
EG207-07	Elastomers - 207 Bldg	Dust Collector	N/A	2/11/2021
EG207-08	Elastomers - 207 Bldg	Dust Collector	N/A	2/11/2021
EG207-09	Elastomers - 207 Bldg	N/A	FGLEAKDETECTION FGMONMACT	11/24/2020
EG212-04	Elastomers - 212 Bldg	N/A	FGLEAKDETECTION FGMONMACT	10/9/2020
EG212-06	Elastomers - 212 Bldg	N/A	FGLEAKDETECTION FGMONMACT	9/1/2020
EG212-07	Elastomers - 212 Bldg	N/A	FGLEAKDETECTION FGMONMACT	3/24/2023
EG212-08	Elastomers - 212 Bldg	N/A	FGLEAKDETECTION FGMONMACT	9/28/2020
EG212-09	Elastomers - 212 Bldg	N/A	FGLEAKDETECTION FGMONMACT	9/16/2020
EG212-10	Elastomers - 212 Bldg	N/A	FGLEAKDETECTION FGMONMACT	9/29/2020
EG212-11	Elastomers - 212 Bldg	N/A	FGLEAKDETECTION FGMONMACT	9/1/2020
EG212-19	Elastomers - 212 Bldg	N/A	FGLEAKDETECTION FGMONMACT	2/2/2021
EG212-20	Elastomers - 212 Bldg	N/A	N/A	11/24/2020
EG2504-09	Emulsions - 2504 Bldg	DV25028 Condenser	FGMONMACT	9/21/2020
EG2505-02	Emulsions - 2505 Bldg	N/A	FGMONMACT	8/12/2020
EG2505-10	Emulsions - 2505 Bldg	DV25714 Condenser	FGMONMACT	2/25/2021

Attachment G1 - Rule 290 Emission Units

Emission Unit ID	Plant/Process	Control Device	NESHAP/Flexible Group	Exemption Date
EG2505-12	Emulsions - 2505 Bldg	DV22494 Condenser	N/A	8/14/2020
EG2505-13	Emulsions - 2505 Bldg	Baghouse	N/A	6/10/2021
EG2602-01	Infrastructure - 2602 Bldg	N/A	N/A	11/10/2021
EG2602-03	Infrastructure - 2602 Bldg	N/A	FGLEAKDETECTION FGMONMACT	4/16/2014
EG2703-02	OSS - 2703 Bldg	DV9103 Emergency Scrubber	FGLEAKDETECTION FGMONMACT	2/12/2021
EG2703-05	OSS - 2703 Bldg	DV9254 Scrubber DV9255 Scrubber DV9285 Amine Scrubber	FGLEAKDETECTION FGMONMACT	9/15/2021
EG2703-06	OSS - 2703 Bldg	DV9254 Scrubber DV9255 Scrubber FGTHROX	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX	9/14/2021
EG2703-10	OSS - 2703 Bldg	N/A	FGLEAKDETECTION FGMONMACT	8/12/2021
EG2703-12	OSS - 2703 Bldg	DV9285 Scrubber	FGLEAKDETECTION FGMONMACT	2/26/2021
EG2703-14	OSS - 2703 Bldg	DV9254 Scrubber DV9255 CPTC Scrubber DV9390 A/B Scrubber DV9163 PP S/D Scrubber DV9208 Scrubber	FGLEAKDETECTION FGMONMACT	4/23/2021
EG2703-15	OSS - 2703 Bldg	DV25959 Scrubber DV24660 Condenser FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS	9/10/2021
EG2901-02	Finishings - 2901 Bldg	DV19734 Scrubber DV19735 Condenser	FGLEAKDETECTION FGMONMACT	10/9/2020
EG2901-05	Finishings - 2901 Bldg	DV16564 Condenser DV16573 Condenser	FGMONMACT	11/24/2020
EG2901-06	Finishings - 2901 Bldg	DV16583B Condenser DV16585 Condenser	FGLEAKDETECTION FGMONMACT	9/25/2020
EG2901-17	Finishings - 2901 Bldg	DV19735 Condenser DV25541 Condenser	FGLEAKDETECTION FGMONMACT	9/29/2020
EG303-13	Resins - 303 Bldg	DV24905 Condenser FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS	11/20/2020
EG303-14	Resins - 303 Bldg	FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS	10/9/2020
EG303-17	Resins - 303 Bldg	DV1637 Condenser DV3458 Condenser FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS	10/7/2022

Attachment G1 - Rule 290 Emission Units

Emission Unit ID	Plant/Process	Control Device	NESHAP/Flexible Group	Exemption Date
EG303-18	Resins - 303 Bldg	DV1637 Condenser DV3458 Condenser FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS	10/9/2020
EG304-01	HVS - 304 Bldg	N/A	N/A	6/17/2020
EG305-01	HVS - 305 Bldg	Scrubber 5224	FGLEAKDETECTION FGMONMACT	10/15/2020
EG3102-02	Finishings - 3102 Bldg	DV16311 Condenser DV16312 Condenser	FGLEAKDETECTION FGMONMACT	3/15/2022
EG3102-05	Finishings - 3102 Bldg	DV16311 Condenser DV16312 Condenser	FGLEAKDETECTION FGMONMACT	6/1/2022
EG3104-06	Finishings - 3104 Bldg	DV16311 Condenser DV16312 Condenser DV25270 Scrubber DV23610 Scrubber	FGLEAKDETECTION FGMONMACT	11/11/2021
EG3104-09	Finishings - 3104 Bldg	DV16311 Condenser DV16312 Condenser	FGLEAKDETECTION FGMONMACT	11/11/2020
EG3104-19	Finishings - 3104 Bldg	DV25265 Condenser	FGLEAKDETECTION FGMONMACT	11/12/2020
EG321-05	Resins - 321 Bldg	DV5106 Scrubber DV7170 Scrubber DV11476 Scrubber DV4776 Scrubber Carbon Beds FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS	9/13/2021
EG321-06	Resins - 321 Bldg	DV7159 Scrubber DV7158 Scrubber DV7170 Scrubber DV4776 Scrubber DV5141 Condenser Carbon Bed FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS	2/5/2021
EG321-09	Resins - 321 Bldg	DV7158 Scrubber DV7170 Scrubber DV4776 Scrubber DV5141 Condenser FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS	7/6/2022
EG321-10	Resins - 321 Bldg	N/A	FGLEAKDETECTION FGMONMACT	2/12/2021
EG321-14	Resins - 321 Bldg	DV5143 Condenser Carbon Bed FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS	4/8/2021

Attachment G1 - Rule 290 Emission Units

Emission Unit ID	Plant/Process	Control Device	NESHAP/Flexible Group	Exemption Date
EG321-17	Resins - 321 Bldg	DV11476 Scrubber DV7170 Scrubber DV4776 Scrubber Carbon Beds FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS	9/13/2021
EG321-18	Resins - 321 Bldg	Carbon Beds FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS	6/23/2020
EG322-05	OSS - 322 Bldg	DV19673 Condenser FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGTHROX FGSITEBLOWER FGSITESCRUBBERS	2/2/2021
EG322-08	OSS - 322 Bldg	N/A	N/A	3/3/2021
EG322-09	OSS - 322 Bldg	N/A	FGLEAKDETECTION FGMONMACT	9/29/2020
EG322-10	OSS - 322 Bldg	N/A	FGLEAKDETECTION FGMONMACT	1/13/2021
EG322-14	OSS - 322 Bldg	N/A	FGLEAKDETECTION FGMONMACT	9/30/2020
EG322-15	OSS - 322 Bldg	DV22452 Scrubber	FGLEAKDETECTION FGMONMACT	10/8/2020
EG324-02	OSS - 324 Bldg	N/A	FGLEAKDETECTION FGMONMACT	12/15/2021
EG324-03	OSS - 324 Bldg	N/A	FGLEAKDETECTION FGMONMACT	2/1/2021
EG324-04	OSS - 324 Bldg	N/A	N/A	4/22/2022
EG324-09	OSS - 324 Bldg	DV4804 Condenser DV4807 Condenser	FGLEAKDETECTION FGMONMACT	11/9/2020
EG324-10	OSS - 324 Bldg	DV4804 Condenser DV4807 Condenser	FGLEAKDETECTION FGMONMACT	12/7/2021
EG324-12	OSS - 324 Bldg	DV25169 Scrubber	FGLEAKDETECTION FGMONMACT	2/4/2021
EG324-13	OSS - 324 Bldg	DV5609 Condenser DV25169 Scrubber	FGLEAKDETECTION FGMONMACT	10/30/2020
EG324-14	OSS - 324 Bldg	DV25169 Scrubber	FGLEAKDETECTION	11/9/2020
EG324-16	OSS - 324 Bldg	N/A	FGLEAKDETECTION FGMONMACT	3/23/2021
EG324-17	OSS - 324 Bldg	N/A	FGLEAKDETECTION FGMONMACT	9/29/2021
EG324-19	OSS - 324 Bldg	DV4813 Scrubber	FGLEAKDETECTION FGMONMACT	11/5/2020
EG325-02	HVS - 325 Bldg	N/A	N/A	7/29/2021
EG340-03	HVS - 340 Bldg	N/A	N/A	2/5/2021
EG340-04	HVS - 340 Bldg	N/A	N/A	2/1/2021
EG501-03	Emulsions - 501 Bldg	DV1808 Condenser DV24877 Condenser	N/A	1/22/2021
EG501-07	Emulsions - 501 Bldg	N/A	FGLEAKDETECTION FGMONMACT	1/14/2021
EG501-08	Emulsions - 501 Bldg	DV7533 Scrubber	N/A	12/6/2000

Attachment G1 - Rule 290 Emission Units

Emission Unit ID	Plant/Process	Control Device	NESHAP/Flexible Group	Exemption Date
EG501-23	Emulsions - 501 Bldg	N/A	FGLEAKDETECTION FGMONMACT	1/14/2021
EG501-31	Emulsions - 501 Bldg	DV15091 Condenser	N/A	1/27/2021
EG501-47	Emulsions - 501 Bldg	DV4358 Condenser	N/A	1/27/2021
EG501-50	Emulsions - 501 Bldg	N/A	N/A	1/27/2021
EG501-51	Emulsions - 501 Bldg	N/A	N/A	1/27/2021
EG501-52	Emulsions - 501 Bldg	N/A	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS	9/29/2020
EG502-02	HVS - 502 Bldg	FGTHROX Site Scrubbers #1 and #2	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS	4/27/2016
EG505-05	Resins - 505 Bldg	DV510 Condenser DV6553 Condenser DV16092 Condenser DV25094 Condenser FGTHROX Site Scrubbers #1 and #2	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS	5/10/2023
EG505-07	Resins - 505 Bldg	DV6547 Scrubber FGTHROX Site Scrubbers #1 and #2	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS	3/19/2021
EG505-08	Resins - 505 Bldg	DV16092 Condenser DV25094 Condenser DV26176 Condenser FGTHROX Site Scrubbers #1 and #2	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS	5/10/2023
EG505-09	Resins - 505 Bldg	FGTHROX Site Scrubbers #1 and #2	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS	3/18/2021
EG505-10	Resins - 505 Bldg	Carbon Drums	FGLEAKDETECTION FGMONMACT	1/26/2021
EG505-13	Resins - 505 Bldg	DV5-510 FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS	3/24/2021
EG602-01	Elastomers - 602 Bldg	DV23967 Condenser	N/A	2/5/2021
EG602-02	Elastomers - 602 Bldg	DV16489 Condenser	FGMONMACT	1/22/2021
EG602-03	Elastomers - 602 Bldg	DV6168 Condenser DV23633 Condenser	FGMONMACT	10/23/2020
EG602-04	Elastomers - 602 Bldg	DV8890 Condenser DV6168 Condenser	FGMONMACT	11/12/2020
EG602-05	Elastomers - 602 Bldg	DV8837 Condenser	FGMONMACT	10/23/2020
EG602-06	Elastomers - 602 Bldg	DV6679 Condenser	FGMONMACT	10/2/2020
EG602-12	Elastomers - 602 Bldg	DV22968 Condenser	FGMONMACT	1/22/2021

Attachment G1 - Rule 290 Emission Units

Emission Unit ID	Plant/Process	Control Device	NESHAP/Flexible Group	Exemption Date
EG602-13	Elastomers - 602 Bldg	DV22852 Condenser	N/A	11/19/2020
EG602-14	Elastomers - 602 Bldg	N/A	N/A	11/12/2020
EG800-02	Infrastructure - 800 Bldg	N/A	FGMONMACT	11/12/2020

Preventative Maintenance and Malfunction Abatement Plan

**Preventative Maintenance
and
Malfunction Abatement Plan**

**Emission Control System
FGTHROX
2512/2514 Building**

**Dow Silicones Corporation
Midland, Michigan**

June 2, 2021

Dow Silicones Corporation Preventative Maintenance and Malfunction Abatement Plan FGTHROX – Primary Control Equipment

In 2008, Dow Silicones Corporation (hereinafter “Dow”) received an air permit to install (PTI) to add a thermal oxidizer as control for numerous on-site processes. This PTI also allowed Dow to install backup scrubbers for use when the thermal oxidizer is non-operational. Dow currently operates the thermal oxidizer and backup scrubbers under Renewable Operating Permit (ROP) Number MI-ROP-A4043-2019. Pursuant to R 336.1911 and special condition III.1 in the source-wide table of the ROP, Dow is required to develop and maintain a Malfunction Abatement Plan (MAP) for the THROX (FGTHROX).

The thermal oxidizer controls various process vents with a minimum VOC destruction efficiency of 98%. The ROP allows chemical processes, which vent emissions to FGTHROX or FGSITESCRRUBBERS, to either bypass or operate their local building control devices outside of the ranges specified in their individual emission unit and flexible group tables when FGTHROX or FGSITESCRRUBBERS is operating properly. During FGTHROX shutdown, most of the vents are automatically switched over to one of the two scrubbers that make-up the FGSITESCRRUBBERS system. If both FGTHROX and FGSITESCRRUBBERS are down, processes will vent to their local building control prior to discharging to atmosphere or shutdown. Detail regarding individual vent scenarios can be obtained from the ROP and PTIs.

Pursuant to R 336.1911(2)(a), a MAP shall specify a complete preventative maintenance program, including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement. Tables 1, 3 and 4 below address this requirement.

Pursuant to R 336.1911(2)(b), a MAP shall specify an identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures. Tables 1 and 2 below address this requirement.

Pursuant to R 336.1911(2)(c), a MAP shall specify a description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits. Tables 1 and 2 below address this requirement.

If FGTHROX goes down, all affected buildings will be notified. All building control equipment will operate within the parameter limits (e.g. pressure, temperature, flow) allowed by the ROP within 1 hour after FGTHROX goes down.

There are currently three gas chromatographs (GCs) associated with the FGTHROX located on the wet vent, dry vent, and the 2703/601 vent. The 2703/601 vent line does not vent to the site scrubber. In the event FGTHROX is non-operational, buildings associated with the 2703/601 vent line will exhaust to their local building control prior to discharging to atmosphere or shutdown.

Table 1 – Control system summary

Control System No.	Control System Description	Description of Vapor Sources
1	Thermal Oxidizer	Consolidated process vents which are taken from a wide variety of process units
2	HCL Absorber	Consolidated process vents which are taken from a wide variety of process units
3	Ionizing Wet Scrubbers	Consolidated process vents which are taken from a wide variety of process units

Table 2 – Pollution Control System Operating Variables

Control System No.	Control Equipment	Operating Variable	Monitoring Method	Frequency	Permitted Operating Range	Corrective Procedure or Operational Change in the Event of a Malfunction	Responsible Supervisor
1,2&3	Vent Collection System	Silicon Atom	Gas Chromatograph	Continuously – every 60 minutes	See permit for conditions that define the proper operation of FGTHRO X and IWS #1 and #2.	See note 1 below.	The Site Scrubber / FGTHROX supervisor
1	Thermal Oxidizer Chamber	Temperature	Thermocouple	Continuously – every 15 minutes	See permit for conditions that define the proper operation of FGTHRO X and IWS #1 and #2.	If the temperature drops below the permitted temperature for longer than 15 minutes, vents will be routed to some other back-up control or shutdown.	The Site Scrubber / FGTHROX supervisor
2	HCL Absorber	pH	pH Probe	Continuously – every 15 minutes	Greater than 5 pH	If the pH drops below 5 for longer than 24 hours, vents will be routed to some other back-up control or shutdown.	The Site Scrubber / FGTHROX supervisor

Table 2 – Pollution Control System Operating Variables (cont.)

Control System No.	Control Equipment	Operating Variable	Monitoring Method	Frequency	Permitted Operating Range	Corrective Procedure or Operational Change in the Event of a Malfunction	Responsible Supervisor
3	Ionizing Wet Scrubbers 1 & 2	Voltage	Voltage meters	Continuously – every 30 minutes	See permit for conditions that define proper operation of FGTHRO X. and IWS #1 and #2.	If voltage of either two wet ionizing scrubbers drops below the permitted voltage for a period of 30 continuous minutes, vents will be routed to some other back-up control or shutdown.	The Site Scrubber / FGTHROX supervisor
3	Ionizing Wet Scrubbers 1 & 2	Water Flow	Flow meters	Continuously – every 15 minutes	See permit for conditions that define the proper operation of FGTHRO X and IWS #1 and #2.	If water flow to the ionizing wet scrubbers is lost (i.e., drops below the permit limit), vents will be routed to some other back-up control or shutdown.	The Site Scrubber / FGTHROX supervisor

Note 1: There are two alarms on the three GC systems (i.e., wet & dry vent GCs & the 2703/601 vent line GC). The first alarm is for total composition that alarms low and high set points. This alarm checks that the constituents making up the feed stream when added equal approximately 100% or 1,000,000 parts per million by volume. The second alarm makes sure that the GC is continuously updating by looking for periods when constituent compositions do not change. If either of these alarms indicate an issue, then troubleshooting of the GC system will be initiated.

As required by the ROP, the GC systems (i.e., wet & dry vent GCs and the 2703/601 vent line GC) will be operated in a satisfactory manner. A satisfactory manner is defined in condition no. VI.4 of table FGTHROX in the ROP. Normal verification, calibration, troubleshooting and preventive maintenance do not count as downtime.

Table 3 – Preventative Maintenance Summary

Control System No.	Device Description	Equipment No. or Name	Preventative Maintenance Task	Frequency	Responsible Supervisory Personnel
1	Thermal Oxidizer Chamber	24422	Calibrate thermocouples TT29150A, TT29150B	Annually	The Site Scrubber / FGTHROX supervisor
1	Thermal Oxidizer Chamber	24422	Verification/Calibration – wet & dry vent GCs & 2703/601 vent GC	Monthly	The Site Scrubber / FGTHROX supervisor
1	Thermal Oxidizer Chamber	24422	Routine maintenance of flows, pressures, and gas cylinder– wet & dry vent GCs & 2703/601 vent GC	Weekly	The Site Scrubber / FGTHROX supervisor
1	Thermal Oxidizer Chamber	24422	Preventive maintenance of filters, ports, rotors, and vac pump – wet & dry vent GCs & 2703/601 vent GC	Monthly	The Site Scrubber / FGTHROX supervisor
1	Thermal Oxidizer Chamber	24422	Preventive maintenance of valves, septa, and seals – wet & dry vent GCs & 2703/601 vent GC	Semi-annually	The Site Scrubber / FGTHROX supervisor
2	HCL Absorber	24425	Calibrate pH probes AT29247 & AT29248	Annually	The Site Scrubber / FGTHROX supervisor
3	Ionizing Wet Scrubbers 1 & 2	24427 & 24428	Annual Visual Inspection	Annually	The Site Scrubber / FGTHROX supervisor
3	Ionizing Wet Scrubbers 1 & 2	24427 & 24428	Annual calibration of flowmeters.	Annually	The Site Scrubber / FGTHROX supervisor

Table 4 – Maintenance Spare Parts Summary

Control System No.	Spare Parts
1	1 set of GC columns, GC rotameter, GC gold seals, GC liner O-rigs, GC chemtraps, GC Hoke stone filters, GC large Parker filter, GC 6 port valve, GC vacuum pump rebuild kit, GC vacuum pump, GC septums
2	Caustic pump rebuild kit
3	Electrode Wires

**Preventative Maintenance
and
Malfunction Abatement Plan**

**Emission Control System
FGSITESCRUBBERS
2514 Building**

**Dow Silicones Corporation
Midland, Michigan**

February 14, 2018

**Dow Silicones Corporation Preventative Maintenance and
Malfunction Abatement Plan
FGSITESCRUBBERS – Back up control equipment**

In 2008, Dow Silicones Corporation (hereinafter “Dow”) received a PTI to add a thermal oxidizer as control for numerous on-site processes. The PTI also allowed Dow to install backup scrubbers for use when the thermal oxidizer is non-operational. Dow currently operates the thermal oxidizer and backup scrubbers under Renewable Operating Permit (ROP) Number MI-ROP-A4043-2008. Pursuant to R 336.1911 and the requirements of table FGFACILITY in the ROP, Dow is required to generate and maintain a Malfunction Abatement Plan (MAP) for the THROX (FGTHROX) and Site Scrubbers (FGSITESCRUBBERS). This document covers FGSITESCRUBBERS. A separate plan was submitted to the DEQ for FGTHROX.

Dow installed a thermal oxidizer that controls various process vents with a minimum destruction efficiency of 98%. When the thermal oxidizer goes down for maintenance or an emergency, the vents are automatically switched over to the site scrubber system. This scrubber system consists of two separate spray towers which can operate individually or together in parallel. The two parallel scrubber systems are 36” in diameter and 36’ tall and are constructed of FRP. The top section of the scrubber contains 12 spray nozzles 1’ apart which are fed with fresh city water. The bottom section contains 6 baffle trays about 1’ apart and it’s fed recycled water from an in-ground containment tank. The liquid effluent flows out the bottom of the scrubber to the in-ground containment tank which overflows to the Wastewater Sewer. A pump is used to circulate the water from the containment tanks to the baffled section of the scrubber. The total water flow to the scrubber will be a minimum of 100 gpm when venting to the scrubber occurs and 40 gpm when the scrubber is on stand-by. Depending on the vent load and composition, the spray tower section has a minimum flow setting of 50 gpm, and the baffle system has a minimum flow setting of 50 gpm. When vents are directed to one of the FGSITESCRUBBERS, the scrubber will obtain the 100 gpm minimum flow rate within 15 minutes of taking vents. Process vents enter the scrubber near the bottom and flow upward against the down flowing water. At the top of the scrubber is a 4’6” x 9’ expanded head to slow down the gas velocity to reduce entrainment. The vents exit the top of the scrubber through a 10” carbon steel pipe which reduces down to 6” to increase velocity and improve dispersion. Normally, only one scrubber is operational while the other unit is being cleaned, on stand-by or shutdown. Both the fresh city water and the recycle feeds are monitored using inline flow meters that are on a preventative maintenance schedule to assure proper operation.

FGSITESCRUBBERS have a design removal efficiency of 99.4% for HCl and chlorosilanes. Methanol, Ethanol and IPA have a removal efficiency of 98%.

FGSITEBLOWER in the ROP covers the site vent consolidation and blower system that collects vapor streams from numerous emission units and vents throughout the facility and routes them to either the THROX (FGTHROX) or the site-scrubber system (FGSITESCRUBBERS). This system is comprised of blowers located at both the buildings/plants and THROX. Upon malfunction of FGSITEBLOWER, emissions from the individual buildings/plants are automatically routed to FGSITESCRUBBERS as described in condition no. VI.1 of table FGSITEBLOWER in the ROP. In some cases, if FGSITEBLOWER malfunctions and THROX diverts emissions to FGSITESCRUBBERS, buildings/plants may be able to divert emissions to locally owned air pollution control equipment prior to discharging to FGSITESCRUBBERS or the atmosphere.

Pursuant to R 336.1911(2)(a), a MAP shall specify a complete preventative maintenance program, including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement. Tables 1, 3 and 4 below address this requirement.

Pursuant to R 336.1911(2)(b), a MAP shall specify an identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures. Tables 1 and 2 below address this requirement.

Pursuant to R 336.1911(2)(c), a MAP shall specify a description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits. Tables 1 and 2 below address this requirement.

Table 1 – Control system summary

Control System No.	Control System Description	Description of Vapor Sources
1	Two identical water spray towers	Consolidated process vents which are taken from a wide variety of process units

Table 2 – Pollution Control System Operating Variables

Control System No.	Control Equipment	Operating Variable	Monitoring Method	Frequency	Normal Operating Range	Corrective Procedure or Operational Change in the Event of a Malfunction	Responsible Supervisor
1	Site Scrubbers	Flow rate to both the top (spray tower section) and bottom sections (baffle system)	Flow meter	Continuously – every 15 minutes	Greater than 50 gpm to each section when handling emissions, and greater than 40 gpm total flow when on standby.	If the flow drops off or the tower begins to plug, then the back-up scrubber will be brought online. If both of them go down, the buildings will revert back to their old control schemes.	The Site Scrubber / Throx supervisor

Table 3 – Preventative Maintenance Summary

Control System No.	Device Description	Equipment No. or Name	Preventative Maintenance Task	Frequency	Responsible Supervisory Personnel
1	East Site Scrubber	23709	Calibrate Flow meters FE/FT-24095 FE/FT-24096	Annually	The Site Scrubber / Throx supervisor
2	West Site Scrubber	23710	Calibrate Flow meters FE/FT-24105 FE/FT-24106	Annually	The Site Scrubber / Throx supervisor
3	East & West Scrubber	23709 & 23710	High pressure wash/clean scrubber	Bi-Weekly, or on a less frequent/more frequent schedule as determined by the building.	The Site Scrubber / Throx supervisor
4	East & West Scrubber	23709 & 23710	Calibrate pressure transmitters on spray nozzle header (East PT-24110, West PT-24111)	Annually	The Site Scrubber / Throx supervisor

Table 4 – Maintenance Spare Parts Summary

Control System No.	Spare Parts
1	Scrubber spray nozzles, CW pump parts, Sump pump parts
2	Scrubber spray nozzles, CW pump parts, Sump pump parts

Fugitive Dust Control Program

Dow Silicones Midland Plant Fugitive Dust Program

The following is proposed as the minimum treatment schedule

Control Method	Frequency	Area
Power flushing or street sweeper	Three times per year in May, July and September. *	<u>Paved Roads</u> A Road B Road C Road 2 Road 3 Road 4 Road 5 Road 300 Bk. Alley
Power flushing or street sweeper	Once in April or May	<u>Paved Lots</u> North 208/214 Main 114A South 5107
Applying CaCl ₂ dust Suppressent**	Once a Month April 1 thru Oct. 31	<u>Unpaved roads & parking areas in normal traffic areas</u> 400 Lot 500 Road 612 Lot 700 Lot 800 Lot 2410 Road N.E. 2602 2700 Lot 4704 Lots Contractors Lot
Applying CaCl ₂ dust Suppressent**	Once a Month April 1 thru Oct. 31	Landfill access road and normal traffic areas in the landfill

* Infrastructure will monitor the condition of the roads and will power flush the roads additional times as necessary.

** CaCl₂ application is done by Liquid Calcium Chloride Sales.

Leak Detection and Repair Program

***National Emission Standards for Hazardous
Air Pollutants (NESHAP) for Hydrochloric
Acid Production***

Leak Detection and Repair Plan

Dow Silicones Corporation
Midland Plant

August 1, 2018

1. Purpose

The Dow Silicones Corporation (DSC) Midland Plant is subject to Title 40 Code of Federal Regulations (CFR) Part 63, Subpart NNNNN - “National Emission Standards for Hazardous Air Pollutants: Hydrochloric Acid Production” (HCl MACT). The HCl production facility at the site is required to comply with 40 CFR 63.9000(a), which incorporates the emission limits and work practice standards in Table 1 of HCl MACT. Table 1 includes provisions related to equipment leak standards for equipment in HCl service. Item 4.a in Table 1 requires that the DSC Midland Plant prepare and operate at all times according to an equipment Leak Detection and Repair (LDAR) Plan that describes in detail the measures that will be put in place to detect leaks and repair them in a timely fashion. As such, the purpose of this LDAR Plan is to document (for the equipment leak provisions) how the HCl production facility located at DSC’s Midland Plant will identify and respond to leaking equipment.

2. Definitions

All definitions utilized in this LDAR Plan are taken from the definitions section of HCl MACT (§63.9075) unless otherwise specified. In the event that a definition is not available in HCl MACT, the definitions contained within 40 CFR 63, Subpart UU were utilized.

5/15 Day Rule – Leaking Equipment must be repaired as soon as possible. A first repair attempt is required within 5 days of the leak discovery. A final repair attempt must be made within 15 days of the leak discovery, unless following the delay of repair option provided in Section 6 of this LDAR Plan.

Equipment – Each of the following:

- Pump,
- Compressor,
- Agitator,
- Pressure relief device,
- Sampling connection system,
- Open-ended valve or line,
- Valve,
- Connector, or
- Instrumentation system.

Equipment in HCl Service – Each piece of equipment in an HCl production facility that contains 30 weight percent or greater of liquid HCl or 5 weight percent or greater of gaseous HCl at any time.

HCl – Hydrochloric acid.

HCl MACT – 40 CFR 63, Subpart NNNNN

HCl Production Facility – The collection of unit operations and equipment associated with the production of liquid HCl product at a concentration greater than 30 weight percent during normal operation. [§63.8985(a)(1)]

LDAR – Leak Detection and Repair.

Leak – A leak is defined as an audio, visual, or olfactory indication of a leak from a piece of equipment in HCl service.

LeakDAS – The database of all LDAR subject components.

Repaired – Equipment is adjusted, or otherwise altered to eliminate a leak as defined in this section.

3. Applicability

HCl MACT applies to the portion of the 356 Process that is used for manufacturing aqueous HCl, as well as storing the HCl and transferring it to HCl storage tanks in buildings 321 (4755) and 340 (8750), and railcars. Per 40 CFR 63.8985(a)(2), storage tanks that are dedicated feedstock tanks (e.g., 4755 / 8750) are not considered part of the HCl production facility. Therefore, the boundary of HCl MACT applicability follows the transfer lines up to the dedicated HCl storage tanks for other processes, but does not include these storage tanks. The equipment associated with the process lines subject to HCl MACT at the DSC Midland Plant are documented in the LeakDAS database.

Per 40 CFR 63.8990(b)(4) and Table 1 to Subpart NNNNN, Item 4, the LDAR Plan required by HCl MACT applies to equipment in HCl service that are part of the affected source subject to the HCl MACT.

Note, HCl MACT does not apply to the production of anhydrous HCl or the production of aqueous HCl as a byproduct via a hydrolysis process.¹ As such, HCl MACT does not apply to any other processes in the DSC Midland Plant.

¹ The HCl produced via hydrolysis is produced as a by-product. The primary purpose is not the production of HCl, therefore it is not defined as an HCl production process.

4. Equipment Identification

The official equipment identification will be performed via the LeakDAS database. As a supplement, the facility may tag equipment in HCl service in the field and on process and instrumentation diagrams (P&IDs).²

The equipment in HCl Service will be added to the LeakDAS database under the applicable regulation (in the database, this is “Subpart NNNNN”). This database will maintain the component list, the inspection history, the leak history, and the repair history.

² If the facility elects to identify equipment subject to HCl MACT in the field, this tagging will be in line with the tagging performed on equipment subject to LDAR requirements under other regulations.

5. Inspection Requirements

All equipment in HCl service will be inspected on an annual basis, except as specified herein. The inspection will consist of an audio, visual, and olfactory (AVO) inspection of each piece of equipment. The inspection history will be tracked in LeakDAS.

The aqueous HCl process may not operate 8,760 hours per year (The HCl Production Facility is subject at all times, even those times when a liquid HCl product of a lower concentration is being produced).³ Routine inspection will occur during normal operation of the aqueous HCl process. If the aqueous HCl process is not operating, the inspection may be performed if all equipment in HCl service is currently charged with at least 30 weight percent aqueous HCl or at least 5 weight percent gaseous HCl. Equipment taken out-of-service and equipment operating less than 300 hours per year are not subject to the routine inspection requirements.

Repairs are to be consistent with the 5/15 Day Rule.

³ From the 2003 preamble to HCl MACT: ...*The final rule states that an HCl production facility that produces a liquid HCl product at a concentration of 30 weight percent or greater is subject to the final rule. That means that this unit is subject at all times, even those times when a liquid HCl product of a lower concentration is being produced. Therefore, the final rule will cover facilities like the one pointed out by the commenter that occasionally produce liquid HCl product at concentrations less than 30 percent, even when those lower concentration products are being produced...*

6. Leak Identification and Repair

If a leak is found, a leak tag is to be hung on the piece of equipment. The leak information will be entered into LeakDAS.

The expected procedure will be the following:

- If the LDAR technician performing the inspection finds the leak, they will hang a leak tag on the piece of equipment identifying the equipment and the date found leaking. The leak tag will remain on the piece of equipment until it is repaired. All applicable leak information will be entered into the LeakDAS database.
- If a leak is found outside of the annual inspection, building personnel are responsible for hanging the leak tag on the piece of leaking equipment and submitting the AVO Leak Report Form.⁴

Facility and/or LDAR technician personnel will follow standard facility practices for following up on leak repairs. Repaired means that equipment is adjusted, or otherwise altered, in order to eliminate a leak as defined in Section 2. Confirmation of leak repair will be performed via AVO inspection.

In the event delay of repair is required (i.e., the repair cannot be made within the 15 day repair deadline), approval from the LDAR Coordinator and knowledgeable operations personnel is required. Delay of repair will be allowed in the following, but not limited to, circumstances:

- For a continuous process, if repair is technically infeasible without an entire process unit shutdown as defined in 40 CFR 63.1020. Repair must then be made by the end of the next scheduled process unit shutdown;
- Equipment that is isolated from the process and is not in service;
- If the emissions of purged material resulting from an immediate repair would be greater than the fugitive emission likely to result from a delay of repair;
- For any pump, agitator, or compressor, if repair requires the replacing the existing seal design to a new system that will provide better performance (e.g., single mechanical to canned);
- Repairing a leak during cold weather conditions could cause freezing in the process and damage equipment; or
- Repairing a leak threatens the safety of the workers doing the repair.

⁴ This is the standard form utilized by the DSC Midland Plant for all LDAR Programs and it is incorporated by reference for this plan.

Benzene Emissions Management and Monitoring Plan

**Benzene Emissions Management
and
Monitoring Plan (BEMMP)**

**Emission Control System
FGSITESCRUBBERS
2514 Building**

**Dow Silicones Corporation
Midland, Michigan**

February 14, 2018

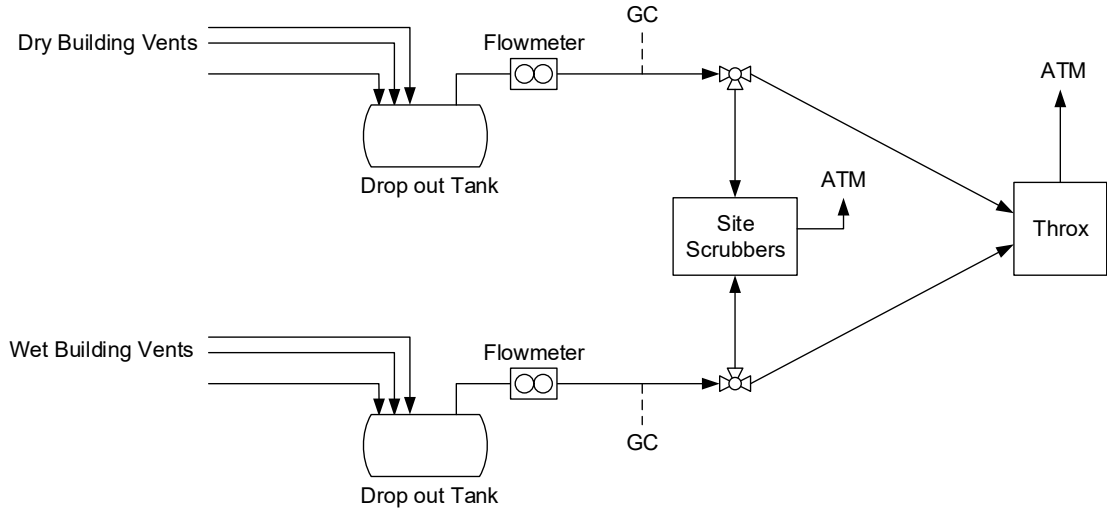
In 2008, Dow Silicones Corporation (hereinafter, "Dow") received a PTI to add a thermal oxidizer as control for numerous on-site processes. The PTI also allowed Dow to install backup scrubbers for use when the thermal oxidizer is non-operational. Dow currently operates the thermal oxidizer and backup scrubbers under Renewable Operating Permit (ROP) Number MI-ROP-A4043-2008. Table FGSITESCRRUBBERS in the ROP requires Dow to have an approved Benzene Emissions Management and Monitoring Plan (BEMMP) for demonstrating compliance with the 7.1 lb/hr benzene emission limit for FGSITESCRRUBBERS.

To demonstrate compliance with the benzene limit, Dow has installed two online GCs (one on the dry vent stream and one on the wet vent stream) that continuously measure the feed compositions. In addition, a Micromotion coriolis flow meter was installed on both vent lines to measure flow (lb/hr and/or scfm) while venting to FGSITESCRRUBBERS. The GCs grab a vent sample approximately every 30 minutes. Once analysis is completed, the results are loaded onto the Dow network where the data is saved and backed up. On a monthly basis, the data is compiled and the benzene flow rates (on an hourly basis) are checked for compliance. The Dow data acquisition system allows every GC trace to be observed. Using the benzene concentration in conjunction with the average hourly flow rate (during the hour the sample was taken), an hourly benzene emission rate is determined. Since the water scrubbers do not control benzene, it's assumed that all benzene entering the scrubbers leaves the scrubbers through the vent stack. The GCs are dedicated to the Throx/site scrubber system and are constantly sampling the vent streams (even when the Throx is operating).

Dow's PSA (Process Stream Analysis) shop is responsible for maintaining the GCs, and they're available via call-in if the GCs go down on weekends or holidays. The PSA shop also conducts a verification of the calibration for the GCs using a 1.0% mixture of C1 – C5 and 400 ppm benzene sample. If the calibration checks are within acceptable error ($\pm 10\%$), the GCs will not be recalibrated. If the calibration check falls outside the acceptable error, the GCs will be recalibrated by the PSA shop. Scheduled calibration checks will occur on a monthly basis. GC operational and analytical procedures (column type, temperature, and retention times) are documented and can be made available to the Department upon request.

If it's found that Dow has reached a benzene rate of 6.8 lbs/hr at any time while venting to FGSITESCRRUBBERS, the BEMMP will be reopened and modified. This should give Dow enough time to adjust the plan and put additional control parameters in place to reduce the benzene flow while venting to the scrubbers.

Dry and Wet Vent Consolidation Project



FG432 Boilers Startup, Shutdown, and Malfunction Plan

Filename: DOCUMENTUM SERVER\432 BOILER SOP
Title: 432 Boiler

Midland Plant Power & Utility Services

Control Document Update Acknowledgment

Signature of Power & Utility Operators acknowledging that the update to this controlled document has been communicated to them.

PRINTED NAME	NAME (signature)	DATE
SHAWN GRAHAM		
THAD HINTZ		
RUSS MCCANN		
KEVIN SYRING		
DONZEL TAYLOR		

Reason for the current issue of this control document: Minor updates.

New Document	<input type="checkbox"/>	Revision	<input type="checkbox"/>	Edit	<input checked="" type="checkbox"/>
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Underlining and left border indicates change in current issue.

Rev. Ref. (i.e. PCR #): Yes No MDMS Checked: Yes No NA

Review Date:	Reviewed By:
_____	_____
_____	_____
_____	_____

APPROVED BY: _____
E & I Maintenance Engineer DATE

Written/Reviewed By: Brett Dittenber

Filename: DOCUMENTUM SERVER\432 BOILER SOP
Title: 432 Boiler

STANDARD OPERATING PROCEDURES SITE: MIDLAND PLANT POWER & UTILITY

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Filename: DOCUMENTUM SERVER\432 BOILER SOP
Title: 432 Boiler

1. DESCRIPTION OF THE PROCESS OR OPERATION

- 1.1.1. The boiler system consists of three Johnston, three pass, natural gas fired, fire tube boilers with a capacity of 86,250 lbs/hr of steam per boiler.
 - 1.1.1.1. Process includes but is not limited to the following hardware:
- 1.1.2. Natural gas feed controls for each boiler and for each combustion air supply heater.
- 1.1.3. 25,000 cfm 2739 rpm combustion air blower with 150 hp 3575 rpm motor and controls for each boiler.
- 1.1.4. Four 238 gpm boiler feed water pumps with water cooling / flush systems, 3560 rpm 50 hp Variable Frequency Drive (VFD) motors, recycle line back to de-aeration (DA) tanks from economizers shared with steam boiler outlet drip trap condensate lines, and control valves to control boiler level.
- 1.1.5. Economizers heat boiler feed water with heat from flue gas. Flue gas inlet and outlet thermometers and outlet temperature transmitter. Temperature Transmitter on boiler feed water inlet and outlet of each economizer. Flue gas analyzer.
- 1.1.6. Boiler treatment chemical feed lines, adjustable stroke A & F model 1860 piston pumps, 200 gallon tank, and Aquatrac Multiflex controller.
- 1.1.7. 3 natural gas fueled Johnston 509 series Model Number PFTS2500-3G-225S horizontal fire tube boilers;
 - 1.1.7.1. 9618 gallon normal water level for each boiler;
 - 1.1.7.2. Heat transfer area = 10,000 SF per boiler;
 - 1.1.7.3. Btu's per hour = 83,688,000 per boiler;
 - 1.1.7.4. Design heat transfer rate = 8,370 Btu's per SF;
 - 1.1.7.5. Natural circulation water side.
 - 1.1.7.6. Two relief valves on each boiler set at 225 psig with relief valve stacks.
 - 1.1.7.7. Flame safety controls for each boiler.
 - 1.1.7.8. Boiler sight glass level gauge.
 - 1.1.7.9. Boiler Level Indicator and Recorder on control room panel.
 - 1.1.7.10. Boiler Low Level Switch.
 - 1.1.7.11. Boiler Steam Flow Indicator and Recorder on control room panel.

Filename: DOCUMENTUM SERVER\432 BOILER SOP
Title: 432 Boiler

- 1.1.7.12. Non-return valve and steam block valve on outlet of each boiler.
- 1.1.7.13. Pressure Indicator Controller Recorder on 432 building main steam header to control boiler output.
- 1.1.7.14. Flow Indicator Controller Recorder on 432 building main steam header to control chemical treatment feeds.
- 1.1.7.15. Pressure transmitters on boiler feed water pump discharge, inlet and outlet of each economizer, and on each boiler.
- 1.1.8. Continuous automatic boiler blow down line with control valve to Penberthy flash steam separator to separate flash steam to supply DA tanks and to partially heat makeup water in heat exchanger while cooling continuous boiler blow down before discharge to waste water sewer. Continuous blow down controlled by conductivity probe. Flow to sewer controlled by level control valve on Penberthy steam separator. Temperature indicators on heat exchanger makeup water inlet and outlet and cool blow down.
- 1.1.9. Manual batch mud drum blow down piping, flash steam separator to atmosphere, blow down cooling water and controls, waste water sewer.
- 1.1.10. Boiler sample coolers, sample lines, and cooling water lines.
- 1.1.11. Piping, valves, flanges, all components.

2. SAFETY KEYPOINTS

- 2.1.1. Read and understand General Safety Procedure SOP 2.001

2.2. MATERIAL SAFETY DATA SHEET

- 2.2.1. For material hazards and first aid instructions see the MSDS.
- 2.2.2. All Dow Corning and Vendor material safety data sheets (MSDS) can be accessed by the Dow Corning desktop. Logon to any Dow Corning network computer and double click on the MSDS-PSDS icon on the desktop. Enter the name of the product in the proper field and submit the search.
<http://corpnt4c/sds/>
- 2.2.3. Steam, boiler feed water, boiler water, and condensate are high temperature (up to 400 degrees F at 225 psig relief setting on boiler) and high pressure (up to 300 psig differential pressure on discharge of boiler feed water pump) so they can cause severe thermal burns from leaks or contact with hot surfaces.
- 2.2.4. Condensate, boiler feed water, and boiler water contain parts per million of condensate treatment chemicals to prevent corrosion and scaling and may contain contamination from production processes.

Filename: DOCUMENTUM SERVER\432 BOILER SOP
Title: 432 Boiler

- 2.2.5. Flood affected area with cool water for 15 minutes and get medical attention in case of contact with skin or eyes. This will minimize damage from heat or chemicals.
- 2.2.6. Memorize location of eye wash / safety showers for emergency use.
- 2.2.7. Wear goggles for protection from concentrated boiler treatment chemical.
- 2.2.8. Wear any of the following gloves for protection from boiler treatment chemical per review with Jeff Frazier from Industrial Hygiene:

Nitrile >or = to 15 mil thick
Neoprene > or = to 18 mil thick
Butyl > or = to 20 mil thick
PVC > or = to 15 mil thick
Viton > or = to 30 mil thick

NOTE: NEVER touch eyes with hands after handling chemicals.

- 2.2.9. Wear leather gloves for protection from thermal burns and cuts when operating valve handles.
- 2.2.10. Valves should be steel OS&Y bolted bonnet design. Threaded bonnets can work loose and come off when valve handle is turned so watch closely for loose or rotating threaded bonnets.
- 2.2.11. Use valve wrench when needed to operate valve. Do not use pipe wrench since jaws of pipe wrench can create burrs on valve wheel handle.

NOTE: NEVER close block valves on both ends of a liquid filled pipe or makeup water flow through heat exchanger or economizer without either locking out the heat source or draining some of the colder liquid since severe hydrostatic pressure increases can result. (There is no relief valve on water heater tubes to protect 125 psig at 375 F tubes from hydrostatic expansion when water flow is interrupted).

NOTE: NEVER check for steam leaks with any part of your body. A broomstick with a rag attached will be used to check for steam leaks.

- 2.2.12. Use sample cooler for routine boiler water sampling to prevent burns.
- 2.2.13. Pump deadhead pressure plus DA (Deaeration) tank pressure plus DA tank liquid head will exceed 300 psig rating of boiler feed water piping system (with no relief valve or high pressure switch.)
- 2.2.14. Partially close pump discharge valve before starting pump to prevent water hammer and improve pump reliability when large rapid flow change would result from starting pump with valve open.
- 2.2.15. Open discharge valve wide open as soon as pressure is established.
- 2.2.16. Partially close pump discharge valve before stopping pump to prevent water hammer and improve pump reliability when large rapid flow change would result from turning pump off with valve open.
- 2.2.17. Do not run boiler feed water pumps with valve closed or when there is no flow.

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- 2.2.18. Maintain boiler feed water supply to boilers at all times when boilers are operating.
- 2.2.19. 480 volt electrical supply for pump motors.
- 2.2.20. Written SOP's are not intended to be a substitute for other types of supervision, attention to the job or established safety standards and procedures and do not relieve the worker (tradesperson, engineer or other) from the responsibility of exercising good safety judgment in performing work.

3. ENVIRONMENTAL CONSIDERATIONS

3.1. VENT PERMIT INFORMATION

- 3.1.1. Operating limit for 432 boilers is 0.041 lbs of NOX per millions btu's.
- 3.1.2. See section 8.1.9. for procedures for NOx emission issues.

3.2. STORM/WASTE WATER

- 3.2.1. Not applicable to this SOP.

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Title: 432 Boiler

4. EMERGENCY SHUTDOWN PROCEDURES

4.1. EMERGENCY SHUTDOWN CONDITIONS

4.1.1. Not applicable to this SOP.

4.2. STEPS TO TAKE IN CASE OF EMERGENCY SHUTDOWN

4.2.1. Shutdown boiler at local control panel.

4.2.2. Close natural gas supply block valves outside south wall of 432 building in case of fire in 432 building.

4.2.3. Turn off boiler feed water pump if not needed for other boilers.

4.2.3.1. Close boiler feed water valve upstream of economizer – leave economizer discharge valves open to recycle to DA to prevent hydrostatic pressure buildup and relief valve discharge / leak / repair.

4.2.3.2. Close boiler level control valve on manual.

4.2.3.4. Close continuous boiler blow down block valve.

4.2.4. Turn off boiler chemical feed pump and close one discharge block valve.

4.2.5. Turn off boiler sample flow before turning off sample cooling water flow.

5. EMERGENCY OPERATIONS

5.1.1. Not applicable to this SOP.

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6. MATERIALS AND EQUIPMENT

6.1. EQUIPMENT COVERED UNDER THIS SOP

6.1.1. Not applicable to this SOP.

6.2. MATERIALS USED IN THE PROCESS

6.2.1. See General Safety Procedure SOP 2.001 for a list of hazardous materials used in the department.

6.2.2. Log into SAP on any DC computer. Type IL03 on the main command bar at the top of the screen and hit enter. This will bring up the Display Functional Location: Initial Screen, type 0052-432 in the FunctLocation box. Click on the button to the right of the FunctLocation box. This button has three small boxes in it. This should bring up another screen that lists all the processes for 432 bldg. Click on the small button to the left of the desired process. This will expand that process and show all the equipment associated with it. This can be repeated for further break down of the processes and equipment.

7. INITIAL START UP PROCEDURES

7.1.1. Visually inspect and verify that all maintenance and construction has been successfully completed and process is ready to start up.

7.1.2. All drain valves must be closed including mud drum and continuous blow down.

7.1.3. All bypass valves must be closed.

7.1.4. Two block valves must be closed in flash steam line from Penberthy steam separator to keep steam from pressure reducing stations from entering Penberthy steam separator and hydrostatically over pressurizing cold water in heat exchanger when there is no flow.

7.1.5. Check cooling water block valves to mud drum blow down cooling system to make sure that they are open.

7.1.6. Check mud drum blow down line valves to make sure that valves are open, except for the one that will be used to control blow down.

7.1.7. Open manual boiler top blow down/air vent valve and air vent valve on top of economizer to vent air as boiler and economizer are filled with boiler feed water. Air is expected to vent out of economizer much faster than boiler – attach hose to direct any overflow to safe location. Close valve when venting is complete.

7.1.8. Open boiler non-return valve and main steam header block valve.

7.1.9. Open boiler and economizer boiler feed water block valves and set boiler level control valve on manual to feed at pump minimum flow rate or more through economizer to boiler normal

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level without water hammer. 9,618 gallons or 80,214 pounds of water at normal working level.

- 7.1.10. Check boiler feed water pump strainer to be sure it is not restricted.
- 7.1.11. Check boiler feed water pump suction valve to be sure it is wide open.
- 7.1.12. Turn on boiler feed water cooling/flush system.
- 7.1.13. Partially open pump discharge valve to let water displace air in pump and piping.
- 7.1.14. DA system must be operating properly (See 432 DA Tank SOP), tank level must be at least 80 %, and boiler feed water pump recycle valve from economizer to DA tank must be open before turning one boiler feed water pump on.
- 7.1.15. Do not run boiler feed water pump with valve closed or when there is no flow. Pump deadhead pressure plus DA tank pressure plus DA tank liquid head will exceed 300 psig rating of boiler feed water piping system so partially close pump discharge valve before starting pump to prevent water hammer and improve pump reliability when large rapid flow change would result from starting pump with valve open.
- 7.1.16. See Installation, Operation, and Maintenance Manual for pumps. Bump boiler feed water pump to check for leaks, binding, vibration, etc. Start pump if OK. Fully open discharge valve as soon as pump pressure is established.
- 7.1.17. Close manual boiler top blow down/air vent valve when normal level is reached.
- 7.1.18. Turn boiler feed pump off, close boiler level control valve on manual, and close block valve until boiler is ready for more feed water.
- 7.1.19. Empty boiler will require about 0.8 gallons of Accuserse 3222 boiler treatment chemical to treat to target range so start boiler treatment feed pump as soon as boiler begins to fill.
- 7.1.20. Check pump relief valve discharge to be sure it is connected to safe location. Relief valves on boiler treatment chemical pumps are set at 400 psig.
- 7.1.21. Check pump strainer.
- 7.1.22. Lubricate pump head and bearing drive weekly.
- 7.1.23. See attached sheets for lubrication, breather plug for speed reducer, & lubricating pump head and bearing drive.
- 7.1.24. See Installation, Operation, and Maintenance Manual for pumps.
- 7.1.25. Verify that valves are open at pump and at boiler before starting pump.
- 7.1.26. Set piston pump at minimum stroke on adjustable knob on pump. Minimum setting is 0.5 gallon per hour or 12 gallons per day.

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- 7.1.27. Adjust Aquatrac Multiflex controller to feed for 96 minutes and start pump.
- 7.1.28. Check for leaks - piping, valves, flanges, threaded connections, packing, seals, pressure gauges.
- 7.1.29. Cooling water must be turned on to boiler sample cooler before sample flow is turned on.
- 7.1.30. Flush sample through line and sample cooler to get representative sample from boiler when boiler level is high enough to take sample.
- 7.1.31. Turn off boiler chemical feed pump once target time has been reached if there will be a delay in starting boiler.
- 7.1.32. If there will be no delay in starting boiler after initial treatment is completed then adjust Aquatrac Multiflex controller to feed every 10 minutes for 0.35 minutes or 21 seconds (3.5% feed time) for 42,000 pph of steam or to feed every 10 minutes for 0.7 minutes or 42 seconds (7% feed time) for 84,000 pph of steam. These rates are based on recent experience with the old boilers.
- 7.1.33. If the Aquatrac Multiflex controller is not capable of feeding as described above then adjust it to feed every 29 minutes for 1 minute (3.5% feed time) for 42,000 pph of steam or to feed every 14 minutes for 1 minute (7% feed time) for 84,000 pph of steam.
- 7.1.34. The initial startup rates above may be different than the rates provided by the chemical treatment service provider when those are communicated.
- 7.1.35. Start up boiler when normal boiler level is reached. See Installation, Operation, and Maintenance Manual for boiler startup.
- 7.1.36. Review Initial Startup e through i above when boiler is ready for more feed water to make sure that all valves are in proper position, to make sure boiler feed water pump is running properly, to make sure boiler level control valve is on automatic, to make sure chemical feed valves are all open, and that chemical feed pump is running at proper rate.
- 7.1.37. Manually blow down mud drum every 8 hours by opening and then closing block valve in one continuous motion with no delay when valve is wide open.
- 7.1.38. Steam will automatically flash off the blow down in the flash steam separator and the remaining hot liquid will be automatically cooled by mixing with cold water to protect waste water sewer from high temperature damage.
- 7.1.39. Check makeup water flow to heat exchanger in continuous blow down cooling system to make sure that there is flow and that no valves including automatic control valve to DA are closed.
- 7.1.40. Check continuous boiler blow down line valves to make sure that valves are open except for the control valve.
- 7.1.41. Open flash steam block valve to specific DA tank.

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- 7.1.42. Set automatic continuous boiler blow down conductivity control set point at 5000 mmhos to begin.
- 7.1.43. Expect boiler to run at about 50 cycles when dealkalinizer is running so expect continuous blow down to begin after about 4 million pounds of steam from boiler which would be about 48 hours at maximum steam design rate.
- 7.1.44. Steam will automatically flash off the continuous boiler blow down in the flash steam separator and the remaining hot liquid will be automatically cooled by the continuous makeup water flow to protect waste water sewer from high temperature damage.

8. NORMAL OPERATING PROCEDURES

8.1. OPERATING PARAMETERS

- 8.1.1. Boiler feed water is automatically pumped from DA tank to maintain boiler level with some recycle back to DA tank after economizer.
- 8.1.2. Flue gas heats boiler feed water in economizer.
- 8.1.3. Boiler natural gas and combustion air feed rates are controlled by pressure controller on 432 building main steam header to generate steam to match variable site demand.
- 8.1.4. Boiler treatment chemical is fed to boiler per chemical treatment supplier recommendations.
- 8.1.5. Continuous blow down rate is controlled by conductivity set point which is adjusted to maintain hardness, OH alkalinity, and conductivity based on sample results.
- 8.1.6. Continuous boiler blow down supplies flash steam for DA and is cooled by makeup water before discharge to waste water sewer.
- 8.1.7. Samples go to waste water sewer.
- 8.1.8. Manual mud drum blow down every 8 hours is cooled by flashing steam and cooling water.
- 8.1.9. NOx emissions operating limit is 0.041 lbs/MMbtu. If NOx emissions goes higher, operator pager will get an alarm. Operator should contact bldg engineers and troubleshoot cause of high NOx levels (see section 13.1.5.). If NOx is over limit by less than 10% above operating limit (0.045 lbs/MMbtu), the boiler should be shut down within ½ hour. If NOx is above 0.045 lbs/MMbtu, the offending boiler's load should be shifted to other 432 bldg boilers, MCV or backup boilers and shutdown immediately.

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DESCRIPTION	TYPE	TARGET (UNIT)	ALLOWED OP. LIMITS	IMPACT IF OUT OF OPERATING LIMITS	ACTIONS TO TAKE IF OUTSIDE THE ALLOWABLE LIMITS
NOx emissions		<0.041 lbs/MMbtu	0.041 lbs/MMbtu	DEQ Emissions Noncompliance	See section 13.1.5.

9. TEMPORARY OPERATIONS

- 9.1.1. Boiler feed water bypasses economizer.
- 9.1.2. Load shifting / sharing with backup boilers in 2701 or 403 for reliability demonstration tests or 432 building maintenance.
- 9.1.3. As needed to maintain supply.

10. NORMAL SHUTDOWN PROCEDURES

- 10.1.1. Slowly shift load on boiler to other boilers to prevent upset to site steam pressure or flow.
- 10.1.2. When load has been reduced to zero:
 - 10.1.2.1. Close continuous boiler blow down block valve.
- 10.1.3. Turn off boiler chemical feed pump and close one discharge block valve.
- 10.1.4. Turn off boiler sample flow before turning off sample cooling water flow.

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11. START-UP AFTER EMERGENCY SHUTDOWN

- 11.1.1. Once reason for shutdown has been corrected, and all faults and alarms have been cleared, open any hand valves that were closed during the shutdown and restart automatic control system.

12. DESCRIPTION OF SAFETY SYSTEMS AND THEIR FUNCTIONS

- 12.1.1. Relief valves on boiler set at 225 psig to protect class 150 flanges in site distribution system.
 - 12.1.1.1. Boiler high pressure switch shuts down boiler at 180 psig to protect class 150 flanges in site distribution system and to prevent boiler relief valve discharge / leak / repair.
- 12.1.2. Relief valves on boiler feed water economizers set at 400 psig.
- 12.1.3. Relief valve on Penberthy steam separator set at 125 psig.
- 12.1.4. Relief valve on heat exchanger set at 125 psig to prevent hydrostatic pressure.
- 12.1.5. Relief valves on boiler chemical feed pumps set at 300 psig.
- 12.1.6. Boiler feed water pumps will shut down to prevent damage to pumps or piping if minimum flow rate of 12,500 pounds per hour each is not maintained or if pressure exceeds 300 psig rating of piping.
- 12.1.7. Boiler Low Level shuts boiler down.
- 12.1.8. Flame safeguard shuts boiler down if no flame is detected.
- 12.1.9. Tank overflow directs hot boiler feed water to waste water sewer if level is high enough.
 - 12.1.9.1. High level alarm notifies operator.
- 12.1.10. Low and Low Low Level Alarms notify operator of potential loss of level control.
- 12.1.11. Low Level Switch protects boiler feed water pumps from running dry.
- 12.1.12. Safety Shower / Eyewash located near brine tank.
- 12.1.13. Pyrotronics alert system.
- 12.1.14. Fire protection sprinkler system.

13. TROUBLESHOOTING

13.1. QUALITY KEY POINTS:

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- 13.1.1. Test sulfite concentration, hardness, alkalinity, and conductivity per run sheet schedule and directions and record results.
- 13.1.2. Adjust conductivity set point as needed based on lab sample results to control boiler hardness, OH alkalinity, and conductivity within control ranges and note adjustments on run sheet.
 - 13.1.2.1. Increase blow down by reducing conductivity set point when high sample results.
 - 13.1.2.2. Decrease blow down by raising conductivity set point when low sample results.
- 13.1.3. Adjust sulfite feed rate to DA as needed to maintain levels in boiler in control range and note adjustments on run sheet.
 - 13.1.3.1. Increase sulfite feed rate when low sample results.
 - 13.1.3.2. Decrease sulfite feed rate when high sample results.
- 13.1.4. Feed boiler chemical per current recommendation of supplier and note adjustments on run sheet.
- 13.1.5. The following is a list of high NOx troubleshooting steps to perform upon pager alarm.
 - 13.1.5.1. Check boiler loads. NOx levels increase with high boiler load. Try switching some of affected boiler's load to other boilers by placing in manual and driving gas valve output down.
 - 13.1.5.2. Contact P&U Department Instrument Technician to check emissions monitoring equipment and calibration gases.
 - 13.1.5.3. Check / adjust damper operation for correct fuel to air ratio.
- 13.1.6. Troubleshooting the CEMS
 - 13.1.6.1. Perform gas calibration
 - 13.1.6.2. Check for malfunctioning equipment
- 13.1.7. List of spare equipment kept on hand:
 - 13.1.7.1. Vacuum pump
 - 13.1.7.2. Any other spare equipment can be ordered through Monitoring Solutions.

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION**

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EFFECTIVE DATE: February 20, 2019
REVISION DATES: June 13, 2022, April 21, 2023

ISSUED TO

Dow Silicones Corporation

State Registration Number (SRN): A4043

LOCATED AT

3901 South Saginaw Road, Midland, Michigan 48640

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-A4043-2019b

Expiration Date: February 20, 2024

Administratively Complete ROP Renewal Application
Due Between August 20, 2022 and August 20, 2023

This Renewable Operating Permit (ROP) is issued in accordance with and subject to Section 5506(3) of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Pursuant to Michigan Air Pollution Control Rule 210(1), this ROP constitutes the permittee's authority to operate the stationary source identified above in accordance with the general conditions, special conditions and attachments contained herein. Operation of the stationary source and all emission units listed in the permit are subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

SOURCE-WIDE PERMIT TO INSTALL

Permit Number: MI-PTI-A4043-2019b

This Permit to Install (PTI) is issued in accordance with and subject to Section 5505(5) of Act 451. Pursuant to Michigan Air Pollution Control Rule 214a, the terms and conditions herein, identified by the underlying applicable requirement citation of Rule 201(1)(a), constitute a federally enforceable PTI. The PTI terms and conditions do not expire and remain in effect unless the criteria of Rule 201(6) are met. Operation of all emission units identified in the PTI is subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

Michigan Department of Environment, Great Lakes, and Energy

Chris Hare, Saginaw Bay District Supervisor

General Business

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PTI No: MI-PTI-A4043-2019b

AUTHORITY AND ENFORCEABILITY

For the purpose of this permit, the **permittee** is defined as any person who owns or operates an emission unit at a stationary source for which this permit has been issued. The **department** is defined in Rule 104(d) as the Director of the Michigan Department of Environment, Great Lakes, and Energy (EGLE) or his or her designee.

The permittee shall comply with all specific details in the permit terms and conditions and the cited underlying applicable requirements. All terms and conditions in this ROP are both federally enforceable and state enforceable unless otherwise footnoted. Certain terms and conditions are applicable to most stationary sources for which an ROP has been issued. These general conditions are included in Part A of this ROP. Other terms and conditions may apply to a specific emission unit, several emission units which are represented as a flexible group, or the entire stationary source which is represented as a source-wide group. Special conditions are identified in Parts B, C, D and/or the appendices.

In accordance with Rule 213(2)(a), all underlying applicable requirements will be identified for each ROP term or condition. All terms and conditions that are included in a PTI, are streamlined or subsumed, or is state only enforceable will be noted as such.

In accordance with Section 5507 of Act 451, the permittee has included in the ROP application a compliance certification, a schedule of compliance, and a compliance plan. For applicable requirements with which the source is in compliance, the source will continue to comply with these requirements. For applicable requirements with which the source is not in compliance, the source will comply with the detailed schedule of compliance requirements that are incorporated as an appendix in this ROP. Furthermore, for any applicable requirements effective after the date of issuance of this ROP, the stationary source will meet the requirements on a timely basis, unless the underlying applicable requirement requires a more detailed schedule of compliance.

Issuance of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

A. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**
- Those conditions that are hereby incorporated in a state-only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. **(R 336.1213(5)(a), R 336.1214a(5))**
- Those conditions that are hereby incorporated in a federally enforceable Source-Wide PTI pursuant to Rule 201(2)(c) are designated by footnote two. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state-only" are not enforceable by the USEPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**
2. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this ROP. **(R 336.1213(1)(b))**
3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. **(R 336.1213(1)(c))**
4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities: **(R 336.1213(1)(d))**
 - a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
 - c. Inspect, at reasonable times, any of the following:
 - i. Any stationary source.
 - ii. Any emission unit.
 - iii. Any equipment, including monitoring and air pollution control equipment.
 - iv. Any work practices or operations regulated or required under the ROP.
 - d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.
5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL 40 CFR 15.231 et seq., and known as the Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

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6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**
7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**
8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2).² **(R 336.1370)**
10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

11. Unless otherwise specified in this ROP, the permittee shall comply with Rule 301, which states, in part, "Except as provided in subrules 2, 3, and 4 of this rule, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of the following:"² **(R 336.1301(1))**
 - a. A 6-minute average of 20% opacity, except for one 6-minute average per hour of not more than 27% opacity.
 - b. A limit specified by an applicable federal new source performance standard.

The grading of visible emissions shall be determined in accordance with Rule 303.
12. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
 - a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property.¹ **(R 336.1901(a))**
 - b. Unreasonable interference with the comfortable enjoyment of life and property.¹ **(R 336.1901(b))**

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1).² **(R 336.2001)**
14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**
15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(5))**

Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate. **(R 336.1213(3)(b))**
- The date, location, time, and method of sampling or measurements.
 - The dates the analyses of the samples were performed.
 - The company or entity that performed the analyses of the samples.
 - The analytical techniques or methods used.
 - The results of the analyses.
 - The related process operating conditions or parameters that existed at the time of sampling or measurement.
17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a Responsible Official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**
19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604-3507. **(R 336.1213(4)(c))**
20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**
21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP. **(R 336.1213(3)(c))**
- For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
 - For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
 - For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

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22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following: **(R 336.1213(3)(c))**
- Submitting a certification by a Responsible Official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
 - Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a Responsible Official which states that; "based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete." The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.
23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate AQD District Office. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**
24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**
25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a Responsible Official in a manner consistent with the CAA.² **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance, if either of the following provisions is satisfied. **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
- The applicable requirements are included and are specifically identified in the ROP.
 - The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.

Any requirements identified in Part E of this ROP have been identified as non-applicable to this ROP and are included in the permit shield.

27. Nothing in this ROP shall alter or affect any of the following:
- The provisions of Section 303 of the CAA, emergency orders, including the authority of the USEPA under Section 303 of the CAA. **(R 336.1213(6)(b)(i))**
 - The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this ROP issuance. **(R 336.1213(6)(b)(ii))**
 - The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**

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- d. The ability of the USEPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**
- 28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
 - a. Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
 - b. Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
 - c. Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
 - d. Minor Permit Modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
 - e. State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**
- 29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

Revisions

- 30. For changes to any process or process equipment covered by this ROP that do not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**
- 31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(2))**
- 32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(10))**
- 33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(iii), R 336.1216(2)(d), R 336.1216(4)(d))**

Reopenings

- 34. A ROP shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
 - a. If additional requirements become applicable to this stationary source with three or more years remaining in the term of the ROP, but not if the effective date of the new applicable requirement is later than the ROP expiration date. **(R 336.1217(2)(a)(i))**
 - b. If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. **(R 336.1217(2)(a)(ii))**
 - c. If the department determines that the ROP contains a material mistake, information required by any applicable requirement was omitted, or inaccurate statements were made in establishing emission limits or the terms or conditions of the ROP. **(R 336.1217(2)(a)(iii))**
 - d. If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

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Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(9))**

Stratospheric Ozone Protection

36. If the permittee is subject to Title 40 of the Code of Federal Regulations (CFR), Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.
37. If the permittee is subject to 40 CFR Part 82, and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).
39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of 40 CFR Part 68, no later than the latest of the following dates as provided in 40 CFR 68.10(a):
- June 21, 1999,
 - Three years after the date on which a regulated substance is first listed under 40 CFR 68.130, or
 - The date on which a regulated substance is first present above a threshold quantity in a process.
40. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.
41. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c). **(40 CFR Part 68)**

Emission Trading

42. Emission averaging and emission reduction credit trading are allowed pursuant to any applicable interstate or regional emission trading program that has been approved by the Administrator of the USEPA as a part of Michigan's State Implementation Plan. Such activities must comply with Rule 215 and Rule 216. **(R 336.1213(12))**

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Permit to Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.² **(R 336.1201(1))**
44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.² **(R 336.1201(8), Section 5510 of Act 451)**
45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, EGLE.² **(R 336.1219)**
46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months of the original PTI issuance date, or has been interrupted for 18 months, the applicable terms and conditions from that PTI, as incorporated into the ROP, shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, EGLE, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.² **(R 336.1201(4))**

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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B. SOURCE-WIDE CONDITIONS

Part B outlines the Source-Wide Terms and Conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the general conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, NA (not applicable) has been used in the table. If there are no Source-Wide Conditions, this section will be left blank.

General Business

SOURCE-WIDE CONDITIONS

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any emission units having emission vents tied into FGSITEBLOWER, FGTHROX, and FGSITESCRUBBERS unless malfunction abatement plan (MAP) as described in Rule 911(2), for FGTHROX and FGSITESCRUBBERS has been submitted to the AQD District Supervisor. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits.² (R 336.1205(2), R 336.1224, R 336.1225, R 336.1910, R 336.1911, R 336.1912)

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Unless otherwise specified in this permit, monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event. (R 336.1213(3))
2. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart Kb, Section 60.116b(a) and (b) for those storage vessels which are exempt from the General Provisions (Subpart A) of 40 CFR Part 60 and from the provisions of Subpart Kb except for Section 60.116b(a) and (b) of Subpart Kb. (40 CFR Part 60, Subpart Kb)

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3. The permittee shall maintain an up-to-date list of all storage vessels exempt from the General Provisions (Subpart A) of 40 CFR Part 60 and from the provisions of Subpart Kb except for Section 60.116b(a) and (b) of Subpart Kb. **(R 336.1213(3))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the malfunction abatement plan (MAP) for the chlorosilane transfer highline systems. Applicant shall not operate the process until the MAP is reviewed and approved by the AQD District Supervisor. This information shall be kept on file and be made available to the Air Quality Division upon request. **(R 336.1911)**
2. The permittee shall comply with the applicable provisions of 1994 PA 451, Section 324.5524 (Fugitive dust sources or emissions) and with the provisions of the operating program received by the AQD, Saginaw Bay District Office on March 16, 2001. The operating program shall be amended by the permittee so that the operating program is current and reflects any significant change in the fugitive dust source or fugitive dust emissions. An amendment to an operating program shall be consistent with the requirements of Section 324.5524 and shall be submitted to the department for its review and approval. **(1994 PA 451, Section 324.5524)**
3. The permittee shall comply with the applicable requirements of 40 CFR Part 61, Subparts A (General Provisions) and M (National Emission Standard for Asbestos). The applicable sections of Subpart M include, but are not necessarily limited to: **(40 CFR Part 61, Subparts A and M)**
 - a. 61.145 (Standard for demolition and renovation)
 - b. 61.150 (Standard for waste disposal for manufacturing, fabricating, demolition, renovation, and spraying operations)
4. The permittee shall comply with the applicable requirements of 40 CFR Part 63, Subpart GGGGG (National Emission Standards for Hazardous Air Pollutants (NESHAP): Site Remediation). **(40 CFR Part 63, Subpart GGGGG)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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C. EMISSION UNIT CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU108-01	Platinum catalyst manufacturing process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. The most recent PTI for this emission unit is PTI No. 622-92D.	1992, 2000, 2014, 2016	FGMONMACT, FGHAP2012A2A
EU109-02	Mixing process in 2207 Kettle with product. Emissions are vented through scrubber 2214 and condenser 24472 as well as other vents. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. The most recent PTI for this emission unit is PTI No. 174-20.	08-16-2021	FGMONMACT, FGHAP2012A2A
EU109-04	2262 process producing silane products. Emissions are controlled by scrubber 2267 and condenser 24472 as well as other vents. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. The most recent PTI for this emission unit is PTI No. 156-20.	03-07-2022	FGMONMACT, FGHAP2012A2A
EU207-03	Liquid silicone rubber (LSR) rubber manufacturing batch mixer process. Emissions are controlled by venturi scrubber 22426 and water scrubbers 22412 and 23828. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.	1994, 1996, 1999, 2001, 2008, 2011, 2012, 2021	FGMONMACT

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
	The most recent PTI for this emission unit is PTI No. 156-06E.		
EU207-13	<p>Batch mixer/reactor process. Emissions are controlled by condenser 19251 and dust collector 12912. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU207-13 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 169-20.</p>	1994, 1998, 2008, 05-19-2021	FGMONMACT, FGHAP2012A2A
EU207-14	<p>Mixer 4 process producing silicone rubber products. Emissions are controlled by dust collector 12912 and condenser 19251. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU207-14 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 177-20.</p>	1994, 1998, 2008 05-21-2021	FGMONMACT, FGHAP2012A2A
EU207-15	<p>Silicone rubber manufacturing process conducted in Mixer 5. Emissions are controlled by condenser 19251 and dust collector 12912. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU207-15 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 172-20.</p>	1994, 1998, 2008, 05-19-2021	FGMONMACT, FGHAP2012A2A
EU207-16	<p>Silicone rubber manufacturing process conducted in Mixer 6. Emissions are controlled by condenser 19251 and dust collector 12912. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU207-16 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p>	1994, 1998, 2008, 05-19-2021	FGMONMACT, FGHAP2012A2A

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
	The most recent PTI for this emission unit is PTI No. 171-20.		
EU207-17	<p>Silicone rubber manufacturing process conducted in Mixer 7. Emissions are controlled by dust collector 12912 and condenser 19251. When manufacturing methoxy-treated products, emissions are routed through the IPA scrubber 19298 and condenser 19296 during stripping and cool down. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF, HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU207-17 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 173-20.</p>	1998, 1994, 1998, 1999, 2008, 05-19-2021	FGMONMACT, FGHAP2012A2A
EU207-18	<p>Mixer 8 process producing silicone rubber products. Emissions are controlled by dust collector 12912 and condenser 19251. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU207-18 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 170-20.</p>	1994, 1998, 2008, 05-21-2021	FGMONMACT, FGHAP2012A2A
EU207-19	<p>Silicone rubber manufacturing process conducted in Mixer 9. Emissions are controlled by dust collector 12912 and condenser 19251. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF, HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU207-19 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 180-20.</p>	1994, 1998, 2008, 05-19-2021	FGMONMACT, FGHAP2012A2A
EU212-01	Batch reaction process consisting of the 6054 batch kettle (an agitated, jacketed kettle), a heater, a receiver, and a service water cooled heat exchanger located in 212 building. Emissions are controlled by chilled condenser 6060. This emission unit is	2014, 9-16-2021	FGMONMACT, FGHAP2012A2A

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	<p>subject to the requirements of 40 CFR Part 63, Subpart FFFF.</p> <p>The most recent PTI for this emission unit is PTI No. 63-14B.</p>		
EU212-02	<p>20500 Polymer Process, with process emissions controlled by condenser 20539. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 144-20.</p>	9-16-2021	FGMONMACT, FGHAP2012A2A
EU212-03	<p>Cold blend mixing process in 6019 Kettle with a man-way loading vent and a product drum-off vent. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 145-20.</p>	2014, 9-17-2021	FGMONMACT, FGHAP2012A2A
EU212-05	<p>Cold blend mixing process in 6009 Gum Kettle with a man-way loading vent and a product drum-off. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 108-18A.</p>	1962, 1996, 06-03-2021	FGMONMACT, FGHAP2012A2A
EU212-12	<p>Batch reaction process consisting of the 20400 batch kettle (an agitated, jacketed kettle), a trap, a receiver, and two heat exchangers located in 212 building. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, UU, and HHHHH.</p> <p>The most recent PTI for this emission unit is PTI No. 48-14C.</p>	2012 05-25-2021	FGMONMACT, FGHAP2012A2A
EU2504-13	<p>Siloxane Kettles process consisting of three jacketed batch kettles and ancillary equipment. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611.</p> <p>The most recent PTI for this emission unit is PTI No. 153-20.</p>	1987, 1989, 1997, 2008, 2009, 2015, 06-28-2021	NAFGSITEBLOWER FGTHROX FGSITESCRUBBERS

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EU2504-14	<p>Batch reaction process consisting of jacketed batch kettle DV19840, a receiver, and vacuum system. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 137-20.</p>	1987, 1989, 1997, 2008, 2009, 2015, 05-27-2021	FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EU2504-15	<p>Batch reaction process consisting of jacketed batch kettle DV19860, a receiver, and vacuum system. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 138-20.</p>	1987, 1989, 1997, 2008, 2009, 2015, 05-27-2021	FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EU2504-16	<p>Mixing process in 8200 Kettle with product. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.</p> <p>The most recent PTI for this emission unit is PTI No. 139-20.</p>	1987, 1989, 1997, 2008, 2009, 2015, 05-24-2021	FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EU2504-17	<p>Mixing process in 8210 Kettle with product. Emissions are vented through condensers DV24609 and/or DV 24611 as well as other vents. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.</p> <p>The most recent PTI for this emission unit is PTI No. 140-20.</p>	1987, 1989, 1997, 2008, 2009, 2015, 05-24-2021	FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EU2504-18	<p>Mixing process in 8220 Kettle with product. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and UU.</p> <p>The most recent PTI for this emission unit is PTI No. 141-20.</p>	1987, 1989, 1997, 2008, 2009, 2015, 06-04-2021	FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS

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EU2504-19	Mixing process in 8240 Kettle with product. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and UU. The most recent PTI for this emission unit is PTI No. 142-20.	1987, 1989, 1997, 2008, 2009, 2015, 06-04-2021	FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EU2504-20	The Bis H process consisting of reaction followed by two-pass distillation to remove impurities. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. The most recent PTI for this emission unit is PTI No. 143-20.	1987, 1989, 1997, 2008, 2009, 2015, 6-25-2021	NA FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EU2505-06	200 gallon Myers change can mixer used to produce emulsion and silicone blends. Emissions are controlled by baghouse FL2-25703 and condenser DV25714. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart UU. The most recent PTI for this emission unit is PTI No. 161-20.	2017, 09-29-2021	FGMONMACT
EU2505-07	Myers change can mixer (200 gallons) producing emulsion and silicone blends. Emissions are controlled by condenser 25714 and baghouse FL2-25703. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. The most recent PTI for this emission unit is PTI No. 159-20.	8-2018, 9-29-2021	FGMONMACT
EU2703-01	Hydrosilylation and alkoxylation process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. The most recent PTI for this emission unit is PTI No. 155-80H.	2001, 1999, 2003, 06-25-2021	FGTHROX, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
EU2703-03	Chloropropyl trichlorosilane process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart EEEE. EU2703-03 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.	1985, 1992, 2000, 11-16-2021	FGTHROX, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A

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	The most recent PTI for this emission unit is PTI No. 920-84C.		
EU2703-08	9140 Batch Kettle and associated equipment. This kettle is used for batch production of several materials and also used as a neutralization kettle for highly acidic products and alkoxylation startup material. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, and the equipment leak provisions of 40 CFR Part 63, Subpart UU. The most recent PTI for this emission unit is PTI No. 155-20.	1997, 11-16-2021	FGMONMACT, FGTHROX, FGSITEBLOWER, FGHAP2012A2A
EU2703-09	9250 Batch Kettle. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart MMM and FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. The most recent PTI for this emission unit is PTI No. 157-20.	1989, 12-07-2021	FGMONMACT, FGHAP2012A2A , FGTHROX
EU2703-13	22270 Batch Kettle Process. Emissions are controlled by Scrubbers 9254 and 9255, Condenser 22274, and FGTHROX. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. The most recent PTI for this emission unit is PTI No. 190-20.	Pre-2010, 11-30-2021	FGMONMACT, FGTHROX, FGHAP2012A2A
EU2703-17	9025C dedicated waste tank in 2703 building. This emission unit vents to FGTHROX and, when FGTHROX is not operating, scrubbers 9390 A and B. Emissions from transfers from the tank to tank trucks will be controlled by vapor balance back to the tank. The most recent PTI for this emission unit is PTI No. 26-14A 14B .	03-24-2014, 03-14-2022	FGTHROX, FGSITEBLOWER FGMONMACT
EU2901-12	Distillation pilot process consisting of distillation column and ancillary equipment. Control consists of a cryogenic condenser. The most recent PTI for this emission unit is PTI No. 125-10A.	2000, 2010	NA
EU2901-16	2901 B Module Twin Screw Extruder located in the 2901 building. The extruder operates under vacuum. This emission unit is subject	2015	FGMONMACT, FGHAP2012A2A

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	<p>to the requirements of 40 CFR Part 63, Subpart FFFF.</p> <p>The most recent PTI for this emission unit is PTI No. 180-15A.</p>		
EU303-01	<p>Phenyl methyl fluids and resin hydrolysis and polymerization. This emission unit vents to either the condenser 3475, carbon beds, FGTHROX, or FGSITESCRUBBERS. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 158-20.</p>	1999, 12-22-2021	FGTHROX, FGSITESCRUBBERS, FGMONMACT, FGHAP2012A2A
EU303-02	<p>Polymer and resin surge, mixing, filtration, and blending. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 15-22.</p>	1999, 02-10-2022	FGTHROX, FGSITESCRUBBERS, FGMONMACT, FGHAP2012A2A
EU303-06	<p>Batch and semi continuous polymer and resin processing including reactors, distillation columns, strippers, receivers, storage tanks, accumulators, separators, vacuum pumps, condensers, adsorbers, filters, and related equipment. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU303-06 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 160-20A.</p>	1996, 09-23-2021, 11-10-2022	FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
EU303-09	<p>Flake resin hydrolysis process. Emissions are vented through FGTHROX, solids hopper 3460, FGSITESCRUBBERS, cyclone 3446, as well as other vents. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU303-09 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 726-78C.</p>	1979, 1983, 2001, 11-08-2021	FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A

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EU303-11	T57 waste tank. This emission unit is exempt from air permit to install requirements (R 336.1201) pursuant to Rule 284. This emission unit is subject to the requirements of 40 CFR Part 61, Subparts A, J, and V.	NA	FGLEAKDETECTION, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGHAP2012A2A
EU303-15	1600 Batch Kettle batch manufacturing process consisting of an agitated, jacketed kettle, water trap, receiver, blending and filtration, and product packaging. Emissions are controlled by FGTHROX (as well as FGSITESCRUBBERS, condenser 1637, or condenser 1602 during periods where FGTHROX is out of operation or when total or partial diversion is necessary for any safety-related or operational scenarios). This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU303-15 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 146-16A.	1996, 2002, 2016, 10-03-2022	FGSITESCRUBBERS, FGTHROX, FGMONMACT
EU303-16	1650 Batch Kettle batch manufacturing process consisting of an agitated, jacketed kettle, water trap, receiver, blending and filtration, and product packaging. Emissions are controlled by FGTHROX (as well as FGSITESCRUBBERS, condenser 1637, or condenser 3420 during periods where FGTHROX is out of operation or when total or partial diversion is necessary for any safety-related or operational scenarios). This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU303-16 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 147-16A.	1996, 2002, 2016, 10-03-2022	FGSITESCRUBBERS, FGTHROX, FGMONMACT
EU303-19	Phenyl methyl polymerization semi-continuous process consisting of an agitated kettle, water trap, storage tanks, distillation column, receivers, filters, vacuum pumps, and related equipment. Some equipment vents through condenser 3469 or FGTHROX; other equipment vents through condenser 3475 to either carbon beds or FGTHROX. The site scrubbers are used as control equipment if the THROX is not in operation.	1975, 08-20-2021, 11-14-2022	FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A

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	<p>This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.</p> <p>The most recent PTI for this emission unit is PTI No. 166-20A.</p>		
EU304-02	<p>Alkylsilane process including reactors, distillation columns, condensers, scrubber, storage tanks, tanker station, and related equipment. Tanks that do not vent include 259. This emission unit vents to FGTHROX and FGSITESCRUBBERS. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU304-02 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 616-92B.</p>	05-31-1996, 03-05-2020	FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT
EU311-01	<p>HCl/MeCl recovery process including scrubbers, tanks, columns, vaporizer, absorber, compressor and related equipment. Several processes on-site vent to this recovery process. Emissions are controlled by two sets of control device trains, each operating in series, that vent through an absorber (2810/24101) and then a vent scrubber (2812/24102). This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU311-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 01-08A.</p>	05-01-1996, 2008, 03-09-2022	FGMONMACT, FGHAP2012A2A
EU321-01	<p>40x Resin process including a reaction loop, capping reactor, 3 separators, 2 columns, and ancillary equipment. Emissions from neutralization activities can vent to FGTHROX or FGSITESCRUBBERS. During FGTHROX downtime, Scrubbers 7170, 4776, and 11472 will continue to achieve Group 1 control for HCl. An activated carbon bed is also used for emission control. The process does not release emissions through SV321-001, SV321-019, SV321-021, or SV321-069 during normal operations. This emission unit is subject to the miscellaneous chemical manufacturing NESHAP in 40 CFR Part 63, Subparts A and FFFF.</p>	11-22-1995, 2013, 06-28-2021	FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A

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	The most recent PTI for this emission unit is PTI No. 174-12B.		
EU321-02	<p>Capped resin manufacturing process including jacketed reactors, process condensers, a receiver, and auxiliary equipment. During FGTHROX downtime, Group 1 MON processes are shut down. Non-Group 1 processes may continue to operate and vent locally or to FGSITESCUBBERS. This EU is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.</p> <p>The most recent PTI for this emission unit is PTI No. 176-20.</p>	1988, 06-28-2021	FGTHROX, FGSITESCUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
EU321-07	<p>Mixing process in 5132 Kettle producing organo-compatible silicones products. Emissions are vented through FGTHROX, FGSITESCUBBERS, as well as other vents. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 179-20.</p>	12-21-2021	FGMONMACT, FGTHROX, FGSITESCUBBERS, FGHAP2012A2A
EU321-11	<p>Capped resin manufacturing process including jacketed reactors, process condensers, a receiver, and auxiliary equipment. During FGTHROX downtime, Group 1 MON processes are shut down. Non-Group 1 processes may continue to operate and either vent locally or to FGSITESCUBBERS. This EU is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.</p> <p>The most recent PTI for this emission unit is PTI No. 175-20.</p>	2009, 06-28-2021	FGTHROX, FGSITESCUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
EU321-12	<p>Cosmetic wax manufacturing process consisting of a reactor, process condenser, receiver, and auxiliary equipment. The process vents through one of two scrubbers operating in parallel. Exhaust then goes through two polishing scrubbers before going to FGTHROX, FGSITESCUBBERS, or 321 Carbon Beds.</p> <p>The most recent PTI for this emission unit is PTI No. 38-22.</p>	1992, 04-06-2022	FGTHROX, FGSITESCUBBERS, FGMONMACT

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EU322-01	<p>LP-1 process (vinylchlorosilane) including reactors, distillation equipment, storage tanks, condensers, and related equipment. Emissions are controlled by Scrubber 22452. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF as well as the equipment leak provisions in 40 CFR 63, Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 134-20.</p>	1999, 06-28-2021	FGHAP2012A2A FGMONMACT
EU322-02	<p>HP-7 process producing silane products. Emissions are controlled by FGTHROX (as well as scrubber 22452 during periods where FGTHROX is out of operation or when total or partial diversion is necessary for any safety-related or operational scenarios). This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 132-20A.</p>	1996, 08-20-2021, 02-11-2022	FGMONMACT, FGHAP2012A2A FGTHROX
EU322-03	<p>Silizane manufacturing process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF.</p> <p>The most recent PTI for this emission unit is PTI No. 296-07.</p>	1999, 1994, 1992, 1991, 1984	FGMONMACT, FGHAP2012A2A
EU322-04	<p>HP-6 process producing silane products. Emissions are controlled by FGTHROX (as well as scrubber 22452 during periods where FGTHROX is out of operation or when total or partial diversion is necessary for any safety-related or operational scenarios). This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 133-20A.</p>	08-31-2000, 08-20-2021, 02-11-2022	FGMONMACT, FGHAP2012A2A , FGTHROX
EU322-06	<p>Siloxane catalyst process. EU322-06 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 308-94B.</p>	1994 7-10-2019 7-27-2021	NA
EU322-11	<p>Methylvinylchlorosilane crude distillation process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart UU.</p>	2000, 2004, 06-25-2021	FGMONMACT, FGHAP2012A2A

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	The most recent PTI for this emission unit is PTI No. 146-20.		
EU324-01	4820 batch kettle process producing silane and siloxane products. Emissions are controlled by service water condenser 4818 and chilled condensers 4804 and 4807. The chilled condensers alternate in operation. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. EU324-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 15-13A.	1996, 2008, 2013, 06-29-2021	FGMONMACT, FGHAP2012A2A
EU324-08	5617 batch kettle process producing silane and siloxane products, controlled by condenser 5618 and, if pulling vacuum, chilled condensers 4804 and 4807, which alternate in operation. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU. The chilled condensers alternate in operation. EU324-08 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 14-13A.	2012, 10-18-2021	FGMONMACT
EU324-11	Batch distillation kettle 4895 including 4896 distillation column and 24924/24925/4898 overhead receivers. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU. The most recent PTI for this emission unit is PTI No. 152-20.	05-01-1981, 08-11-2021	FGMONMACT
EU324-18	25156 batch kettle in 324 building, consisting of a reactor, heat exchanger, and a receiver. Emissions are controlled by a service water cooled condenser and two parallel chilled condensers. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU. The most recent PTI for this emission unit is PTI No. 19-14C.	2014, 06-25-2021	FGMONMACT
EU325-01	TCS (trichlorosilane) vent recovery system. EU325-01 receives vents from different processes to recover TCS. EU325-01 is	1997, 2009	FG325-01, FG337SCRUBBER, FGTHROX,

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	<p>located in 317 building. This emission unit typically vents to the carbon bed and venturi scrubber system described in FG325-01; however, the emission unit may vent to the 337 wet scrubber in the event the venturi scrubber system is down.</p> <p>The most recent PTI for this emission unit is PTI No. 44-06B.</p>		FGSITESCRUBBERS, FGSITEBLOWER,
EU325-03	<p>Solids recovery system. EU325-03 receives vents from different processes to recover silicon. EU325-03 is located in 348 building.</p> <p>The most recent PTI for this emission unit is PTI No. 44-06.</p>	1997	NA
EU340-01	<p>Calcium chloride process including condensers, scrubbers, columns, vaporizers, storage tanks, compressor, and related equipment. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU340-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 34-04B.</p>	1999, 2004	FGMONMACT, FGHAP2012A2A , FGLEAKDETECTION
EU340-03	<p>T53 Methanol storage tank, AQD Rule 290 emission unit. This emission unit is subject to the requirements of 40 CFR Part 60, Subparts A and Kb and 40 CFR Part 63, Subpart EEEE.</p>	NA	FGRULE290, FGOLDFACILITY, FGHAP2012A2A , FGMONMACT
EU356-01	<p>Hydrochloric Acid (HCl) production plant with a packed bed scrubber (24388) and venturi scrubber (24386), capable of producing both anhydrous HCl and aqueous HCl. Production and storage of liquid HCl product at a concentration of 30 weight percent or greater during normal operations is subject to the requirements of the Hydrochloric Acid Production NESHAP, 40 CFR Part 63, Subpart NNNNN. Columns 24350 and 24370 and vessels 24358, 24360, and 24362 are only used to produce anhydrous HCl. Absorbers 24387 and 26018 are only used to produce aqueous HCl. Tanks 24345 and 24346 and the packed bed and venturi scrubbers are used during production of both anhydrous and aqueous HCl.</p> <p>The most recent PTI for this emission unit is PTI No. 29-07D.</p>	2008, 2013, 2020	FGHCLMACT

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU356-02	Rail car transfer station No. 9E with packed bed scrubber (24401), capable of either loading rail cars with aqueous HCl or unloading aqueous HCl from rail cars. Loading rail cars with liquid HCl product at a concentration of 30 weight percent or greater during normal operations is subject to the requirements of the Hydrochloric Acid Production NESHAP, 40 CFR Part 63, Subpart NNNNN. The most recent PTI for this emission unit is PTI No. 29-07C.	2008, 2013	FGHCLMACT
EU356-03	Rail car unloading station No. 10E with packed bed scrubber (24344), capable of unloading aqueous HCl from rail cars. The most recent PTI for this emission unit is PTI No. 29-07C.	2008, 2013	NA
EU501-01	Intermediate viscosity (IV) and very low viscosity (VLV) silicone fluid manufacturing process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. The most recent PTI for this emission unit is PTI No. 158-87B.	1997	FGMONMACT, FGHAP2012A2A
EU501-02	1107 hydrolysis process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU501-02 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 126-03A.	1978, 1986, 1988, 1989, 1991, 2003	FGMONMACT, FGHAP2012A2A
EU501-05	Crosslinkers manufacturing process consisting of jacketed reactors, condensers, mixers, pumps, and vacuum equipment, and product packaging. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. The most recent PTI for this emission unit is PTI No. 24-23	1953, 02-06-2023	FGMONMACT
EU501-12	Small Emulsion Polymer (EP) process. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. The most recent PTI for this emission unit is PTI No. 154-20.	05-14-2021	FGMONMACT, FGHAP2012A2A

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU501-49	<p>Low viscosity fluids and 3-component fluids process including reactors, tanks, condensers and a vacuum system. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, and the equipment leak provisions of 40 CFR part 63, Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 437-90C.</p>	1998, 10-03-2014, 06-29-2021	FGMONMACT, FGHAP2012A2A
EU502-01	<p>Methyl vent system consisting of emissions from tanks T-100, T-102, T-150, T-151, T-208, T-20841, and T-25-100, emissions from maintenance procedures involving portable storage containing methyltrichlorosilane, methylchlorosilane, dimethyldichlorosilane, dimethylchlorosilane, trimethylchlorosilane, phenyltrichlorosilane, and ethyltrichlorosilane, and the vent from the Cabot Mix Tank operation. This emission unit is subject to the requirements of 40 CFR Part 60, Subparts A and Kb and 40 CFR Part 61, Subparts A, J, and V. This emission unit vents to the 337 Spray Scrubber System or to the dry vent tank of the THROX System. The dry vent tank is either sent to the THROX System burner or diverted to the Site Scrubber System. Emissions from loading stations 9G, 10G, DVST-28, and DVST 56 also have the option to vent directly to the Site Scrubber System via the "Bulk Move Vent" described in EU502-07.</p> <p>The most recent PTI for this emission unit is PTI No. 131-15.</p>	1999, 2008	FG304VENTRECOVERY, FG337SCRUBBER, FG325-01, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGHAP2012A2A
EU502-04	<p>Container Maintenance and Wash area for the High Volume Silanes production facility. Includes nitrogen purge for some containers. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and the equipment leak provisions of 40 CFR Part 63, Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 18-18A.</p>	5-14-2018, 05-28-2021	FGSITEBLOWER, FGTHROX, FGMONMACT
EU502-07	<p>Trichlorosilane (TCS) distillation and associated equipment for distillation of TCS into various grades (electronic-, chemical- and plant-grade). This emission unit is subject to the requirements of 40 CFR Part 60, Subparts A and Kb. This emission unit vents to both the 304 vent recovery system</p>	1999, 2007	FG304VENTRECOVERY, FG337SCRUBBER, FG325-01, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER,

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
	<p>and the 337 wet scrubber in series. In the event 304 vent recovery goes down, the emission unit vents to the air pollution control (APC) train described in FG325-01. This APC train is comprised of a carbon bed and scrubber system which operate in series to control emissions.</p> <p>The most recent PTI for this emission unit is PTI No. 185-07B.</p>		
EU502-09	<p>Chlorosilane waste tank 25403 for phenyl supply chain located in the 502 tank farm. This emission unit vents to the site THROX and, when the THROX is not operating, the site scrubbers. Emissions from transfers from the tank to tank trucks and rail cars will be controlled by THROX or vapor balance back to the tank.</p> <p>The most recent PTI for this emission unit is PTI No. 91-14.</p>	NA (not installed as of 2-5-2015).	FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER
EU502-11	<p>Chlorosilane waste tank 256 in the 2502 tank farm, with nominal capacity of 20,000 gallons. The tank receives liquid waste from various emission units at the facility and can be unloaded to either tank trucks or railcars. The tank typically vents to the site thermal oxidizer (THROX). In the event the THROX is offline, the tank vents to one of the parallel site scrubbers. If both the THROX and the site scrubbers are unavailable, the tank vents to one of the 337 tower scrubbers.</p> <p>The most recent PTI for this emission unit is PTI No. 132-15.</p>	2015	FGTHROX, FGSITESCRUBBERS, FG337SCRUBBER
EU505-01	<p>Resin and coating manufacturing including reactors, kettles, condensers, scrubber, drum off, vacuum system, and related equipment. This emission unit is subject to the requirements of 40 CFR Part 61, Subparts A, J, and V, and 40 CFR Part 63, Subpart-FFFF. Tanks 508 and 509 are subject to Subpart FFFF.</p> <p>The most recent PTI for this emission unit is PTI No. 169-12B.</p>	01-19-2000, 2007, 2013, 05-07-2021	FGLEAKDETECTION, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
EU505-04	<p>23390 batch reactor and manufacturing process containing a receiver, filters, carbon beds, vacuum pump, condensers, storage tanks, and other associated equipment.</p>	2016, 04-07-2022	FGMONMACT, FGHAP2012A2A , FGLEAKDETECTION

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
	<p>Emissions are controlled by condensers DV5-510 and DV23414 and scrubber DV23401. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF.</p> <p>The most recent PTI for this emission unit is PTI No. 200-15A.</p>		
EU505-11	<p>Batch resin process with emissions controlled by condenser 6553 and either the site scrubbers or FGTHROX. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts A and FFFF, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU, as well as to the requirements of 40 CFR Part 61, Subparts A, J, and V.</p> <p>The most recent PTI for this emission unit is PTI No. 162-20.</p>	01-19-2000, 2007, 2013, 05-12-2021	FGLEAKDETECTION, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
EU508-01	<p>Phenyltrichlorosilane (PhSiCl₃) and diphenyldichloro-silane (Ph₂SiCl₂) processes, which include production, storage, and transfer activities. Emissions are controlled by FGTHROX (as well as FGSITESCRUBBERS or FG337SCRUBBER during periods where FGTHROX is out of operation or when total or partial diversion is necessary for any safety-related or operational scenarios). This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 84-08D.</p>	1996, 2008, 2012, 04-11-2022	FG337SCRUBBER, FGTHROX, FGSITESCRUBBERS, FGMONMACT, FGHAP2012A2A
EU515-01	<p>The emission unit involves all activities associated with production, storage and transfer of Phenylmethylchlorosilane (PhMeSiCl₂) and Diphenylmethylchlorosilane (Ph₂MeSiCl). The unit can vent as follows:</p> <p><i>456 MgCl₂ Bin:</i> This unit vents through a baghouse via SV515-002 as MgCl₂ powder is transferred to the bin from the 515 MgCl₂ Drying unit.</p> <p><i>515 Toluene Scrubber:</i> Multiple units vent to the 515 Toluene Scrubber (10530). These vents are pre-treated by glycol condenser HX-10541. The Reactors, 513 Tank Farm, 516 Distillation, 515 MgCl₂ Filtration and 515 MgCl₂ Drying units all vent to the 515</p>	1997,2004, 2008, 2012, 04-07-2022	FGLEAKDETECTION, FGTHROX, FGSITESCRUBBERS, FGMONMACT, FGHAP2012A2A , FGOLDFACILITY

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
	<p>Toluene Scrubber. 655 column within 516 Distillation utilizes HX-10657 if FGTHROX burner is unavailable. The Toluene Scrubber vent is normally sent to FGTHROX and vented via SV2512-001, SV2512-002 or SV2514-006. If FGTHROX is unavailable emissions will vent through the 515 Toluene Scrubber and out SV515-003 while the process is shutting down.</p> <p><i>515 MgCl2 Quenching:</i> MgCl2 powder from 456 bin can be sent to the 515 MgCl2 Quenching unit and vented via SV515-006.</p> <p><i>515 MgCl2 Trailer Loading:</i> MgCl2 powder from 456 bin can be sent to the 515 MgCl2 Trailer Loading unit and vented via SV515-004.</p> <p><i>Reactors:</i> The reactors can vent N2 from Mg chip transfer operations via SV515-007 and SV515-008.</p> <p>EU515-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 812-91D.</p>		
EU601-01	<p>Alkoxylation process including kettle, condensers, storage tanks, distillation columns, bulk container filling equipment, scrubbers, and other related equipment. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU. EU601-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 534-77H .</p>	1977, 2000, 2009, 11-15-2021	FGTHROX, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
EU602-07	<p>The 63 Unit is a continuous process making silicone gum. Condensers 6186 and 6188 control emissions from the reactor and from product stripping. This emission unit is subject to the miscellaneous organic chemical manufacturing NESHAP in 40 CFR Part 63, Subparts A and FFFF, and to the equipment leak provisions of Subpart UU.</p> <p>The most recent PTI for this emission unit is PTI No. 151-20.</p>	2000, 05-14-2021	FGMONMACT

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU604-08	Fluoro cyclics process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU604-08 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 466-73E.	2000	FGMONMACT
EU800-01	800 block tank farm consisting of storage and transfer operations for on-site waste liquids. Emissions are controlled by a nitrogen blanket. The most recent PTI for this emission unit is PTI No. 334-88E.	1999	FGLEAKDETECTION
EURULE290	Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278, 278a, and 290. Emission units installed/modified before December 20, 2016, may show compliance with Rule 290 in effect at the time of installation/modification. Some emission units are subject to the requirements of 40 CFR Part 63, Subparts FFFF and EEEE, and 40 CFR Part 61, Subparts J and V.	NA	FGRULE290, FG304VENTRECOVERY, FGTHROX, FGSITEBLOWER, FGSITESCRUBBERS, FGMONMACT, FGOLDFACILITY, FGLEAKDETECTION
EUCOLDCLEANER	Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, 278a and Rule 281(2)(h) or Rule 285(2)(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.	NA	FGCOLDCLEANER
EURULE604	Any existing or future storage vessels subject to the requirements of R 336.1604 (Rule 604). Storage vessels subject to AQD Rule 604 are those which store any organic compound having a true vapor pressure of more than 1.5 psia, but less than 11 psia, at actual storage conditions in any fixed roof stationary vessel of more than 40,000 gallon capacity.	NA	FGRULE604
EURULE605	Any existing or future storage vessels subject to the requirements of R 336.1605 (Rule 605). Storage vessels subject to AQD Rule 605 are those which store any organic compound having a true vapor pressure of 11 or more psia at actual storage conditions in any stationary vessel of more than 40,000 gallon capacity.	NA	FGRULE605
EURULE703	Any new or future storage vessels subject to the requirements of R 336.1703 (Rule 703). Storage vessels subject to AQD Rule 703 are	NA	FGRULE703

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
	those which receive gasoline from a delivery vessel into any new stationary vessel of more than 2,000 gallon capacity located at any gasoline dispensing facility.		
EUBOILER12	103 MMBTU/hr natural gas fired boiler with low-NOx burners.	2006	FG432BOILERS
EUBOILER13	103 MMBTU/hr natural gas fired boiler with low-NOx burners.	2006	FG432BOILERS
EUBOILER14	103 MMBTU/hr natural gas fired boiler with low-NOx burners.	2006	FG432BOILERS
EUBOILER2515	25.1 MMBTU/hr boiler capable of burning natural gas, synthetic gas, or a blended mixture of both. This boiler is located in 2515 building and decommissioned but not dismantled. 40 CFR Part 63, Subpart DDDDD may be applicable to EUBOILER2515 if EUBOILER2515 is operated.	2009	FGPEM&BLR
EUEMERGENCIRICE <500	Each existing or new compression ignition emergency stationary reciprocating internal combustion engines (RICE) located at a major source of HAP emissions as identified within 40 CFR Part 63, Subpart ZZZZ, 63.6590(a)(1), less than or equal to 500 brake hp, and is exempt from the requirements of Rule 201 pursuant to Rules 282(2)(b) or 285(2)(g).	NA	FGEMERGENCIRICE<500HP
EU2515-01	An electrically powered plasma arc gasifier known as a "plasma enhanced melter (PEM)" with ancillary equipment. The most recent PTI for this emission unit is PTI No. 175-09A.	2008	FGTHROX, FGPEM&BLR

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**EU108-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

Platinum catalyst manufacturing process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF.

The most recent PTI for this emission unit is PTI No. 622-92D.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Carbon adsorption system consisting of two carbon drums in series
- Hydrogen chloride (HCl) scrubber (tank 20734)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	11.6 pph ²	Hourly	EU108-01	SC IV.1, VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1225
2. VOC	0.7 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month.	EU108-01	SC IV.1, IV.3, VI.1, VI.2, VI.3, & VI.4	R 336.1702(a), R 336.1225, R 336.1201

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU108-01 unless the carbon adsorption system is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the carbon adsorption system includes exhausting emissions directed to the system through two carbon drums connected in series and replacing activated carbon in the system based on the weight gain of the second of the two drums. The permittee shall put a fresh drum in the second drum position before the weight gain of the second drum exceeds 30 pounds over the "as received" weight of the drum.² (R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall not produce Platinum II unless the HCl scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the HCl scrubber includes replacing the scrubbing solution before beginning each batch of Platinum II production.² (R 336.1224, R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall keep records as required to demonstrate compliance with the emission limits specified in SC I.1 and I.2. Emission totals shall be calculated using the method described in Appendix 7, Section 7.1. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission totals specified in SC I.2.² (R 336.1225, R 336.1702(a))
2. The permittee shall maintain records, in a satisfactory manner, of carbon replacement for the carbon adsorption system.² (R 336.1910)
3. The permittee shall maintain batch production records in sufficient detail to demonstrate compliance with SC IV.1 and IV.2.² (R 336.1910)
4. The permittee shall monitor and record, in a satisfactory manner, the weight gain of the second carbon drum over its "as received" weight on a continuous basis. For this condition, monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. With the exception of calibration, quality assurance, and maintenance activities, this record shall also include actions taken to correct and prevent a reoccurrence of each event.² (R 336.1910)

See Appendix 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV108-001	2 ²	39 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV108-002	10 ²	35 ²	R 336.1225, 40 CFR 52.21(c) & (d)

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IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU109-02
EMISSION UNIT CONDITIONS**

DESCRIPTION

Mixing process in 2207 Kettle with product. Emissions are vented through scrubber 2214 and condenser 24472 as well as other vents. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 174-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Scrubber (2214)
- Condenser (24472)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	1.47 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU109-02	SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1702(a)
2. Hydrocarbons C7-C9 (CAS No. 68920-06-9)	0.70 tpy ¹	12-month rolling time period as determined at the end of each calendar month	EU109-02	SC VI.6	R 336.1225

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU109-02 unless the exit coolant temperature of condenser 24472 is at a maximum of 10°C or less.² (R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall not operate EU109-02 unless the liquid flow rate of condenser 24472 is at a minimum of 3 gallons per minute.² (R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall not operate EU109-02 when vents are directed to scrubber 2214 unless the liquid flow rate of scrubber 2214 is at a minimum of 2.75 gallons per minute.² (R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU109-02 unless scrubber 2214 and condenser 24472 are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through SC III.3 that apply to the scrubber and condenser.² (R 336.1225, R 336.1702(a), R 336.1910)

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2. The permittee shall equip and maintain condenser 24472 with an exit coolant temperature indicating device. The permittee shall calibrate the exit coolant temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall equip and maintain scrubber 2214 and condenser 24472 with liquid flow indicating devices. The permittee shall calibrate each liquid flow indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the exit coolant temperature of condenser 24472 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of condenser 24472 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1225, R 336.1702(a), R 336.1910)
4. When venting to scrubber 2214, the permittee shall monitor and record, on a continuous basis, the scrubber 2214 liquid flow rate with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
5. The permittee shall calculate the VOC emission rate from EU109-02 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
6. The permittee shall calculate the Hydrocarbons C7-C9 (CAS No. 68920-06-9) emission rate from EU109-02 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.¹ (R 336.1225)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV109-010 ^a (Kettle 2207 Vent)	2 ²	40 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV109-021 (Vacuum Pump 4474 Vent)	2 ²	41 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV109-022 (Process Vent)	24 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV109-029 (Waste Tank 5967 Vent)	2 ²	28 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV109-009 (Scrubber 2214 Vent)	2 ²	39 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU109-04
EMISSION UNIT CONDITIONS**

DESCRIPTION

2262 process producing silane products. Emissions are controlled by scrubber 2267 and condenser 24472 as well as other vents. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 156-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Scrubber (2267)
- Condenser (24472)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	2.35 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU109-04	SC VI.2, SC VI.3, SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU109-04 unless the exit coolant temperature of condenser 24472 is at a maximum of 10°C or less.² (R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall not operate EU109-04 unless the liquid flow rate of condenser 24472 is at a minimum of 3 gallons per minute.² (R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall not operate EU109-04 when vents are directed to scrubber 2267 unless the liquid flow rate of scrubber 2267 is at a minimum of 2.75 gallons per minute.² (R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU109-04 unless scrubber 2267 and condenser 24472 are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through SC III.3 that apply to the scrubber and condenser.² (R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall equip and maintain condenser 24472 with an exit coolant temperature indicating device. The permittee shall calibrate the exit coolant temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1225, R 336.1702(a), R 336.1910)

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3. The permittee shall equip and maintain scrubber 2267 and condenser 24472 with liquid flow indicating devices. The permittee shall calibrate each liquid flow indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1702(a))**
2. The permittee shall monitor and record, on a continuous basis, the exit coolant temperature of condenser 24472 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of scrubber 2267 and condenser 24472 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall calculate the VOC emission rate from EU109-04 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

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VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-106-029 (Waste Tank 5967 Vent)	2 2	28 2	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV-109-019 (Kettle 2262 Vent)	2 2	41 2	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV-109-021 (Condenser 24472 Vent)	2 2	41 2	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV-109-022 (Process Vent)	24 2	56 2	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV-109-018a (Scrubber 2267 Vent)	2 2	39 2	R 336.1225, 40 CFR 52.21(c) & (d)

^a This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU207-03
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Liquid silicone rubber (LSR) rubber manufacturing batch mixer process. Emissions are controlled by venturi scrubber 22426 and water scrubbers 22412 and 23828. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 156-06E.

Flexible Group ID: FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Venturi scrubber (22426).
- Water scrubbers (22412 and 23828).

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	23.6 pph ^{2,**}	Hourly	EU207-03	SC V.1, VI.2	R 336.1702(a)
2. VOC	26.3 tpy ^{2,**}	12-month rolling time period as determined at the end of each calendar month	EU207-03	SC VI.2 & VI.3	R 336.1702(a)
3. Non-VOC completely methylated siloxanes *	54.3 tpy ¹	12-month rolling time period as determined at the end of each calendar month	EU207-03	SC VI.2 & VI.4	R 336.1224
4. Ammonia	3.6 pph ^{1,**}	Hourly	EU207-03	SC V.1, VI.2	R 336.1224, R 336.1225
5. PM	0.10 lbs/1,000 lbs exhaust gas ^{2,+}	Hourly	Equipment venting from SV 207-018	SC V.1, VI.2	R 336.1331
6. PM	0.10 lbs/1,000 lbs exhaust gas ^{2,+}	Hourly	Equipment venting from SV 207-035	SC V.1, VI.2	R 336.1331

* "Non-VOC completely methylated siloxanes" refers to the combined emissions of all compounds falling into the category of "cyclic, branched, or linear completely methylated siloxanes" excluded from being VOC by the definition of "volatile organic compounds" in Rule 122 (R 336.1122), such as hexamethyldisiloxane.

** This emission limit includes emissions from all vents listed in SC VIII.1-2 and does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

+ Dry gas basis

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The water makeup rate of water scrubber 22412 shall be at least 0.2 gallons per minute, or a different rate demonstrated during testing, when EU207-03 is venting through this scrubber.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)
2. The recycle liquid flow rate of the venturi scrubber (22426) shall be at least 15 gallons per minute, or a different rate demonstrated during testing, when EU207-03 is venting through this scrubber.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)
3. The water makeup rate of water scrubber 23828 shall be at least 0.7 gallons per minute, or a different rate demonstrated during testing, when EU207-03 is venting through this scrubber.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)
4. The recycle liquid flow rate of water scrubber 23828 shall be at least 20 gallons per minute, or a different rate demonstrated during testing, when EU207-03 is venting through this scrubber.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)
5. The temperature of the recycle liquid entering water scrubber 23828 shall not exceed 68°F, or a different temperature demonstrated during testing, when EU207-03 is venting through this scrubber.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU207-03 unless the vent is routed through scrubber system No. 1 (comprised of scrubber 22426 and scrubber 22412) and/or scrubber system No. 2 (comprised of water scrubber 23828) and all the scrubbers in use are installed, maintained, and operated in a satisfactory manner. Satisfactory operation of each scrubber includes meeting the requirements of SC III.1 through III.5 that apply to the scrubber.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)
2. The permittee shall equip and maintain packed column scrubber 22412 with a water makeup flow indication device.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)
3. The permittee shall equip and maintain venturi scrubber 22426 with a recycle liquid flow indication device.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)
4. The permittee shall equip and maintain packed-bed scrubber 23828 with a water makeup and recycle liquid flow indication devices.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)
5. The permittee shall equip and maintain water scrubber 23828 with a temperature indication device capable of monitoring the temperature of the recycle liquid entering the scrubber.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request from the AQD District Supervisor, the permittee may be required to verify the VOC, PM, and/or ammonia emission rates from EU207-03 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
Ammonia	40 CFR Part 63, Appendix A

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An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702, R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the following parameters with instrumentation acceptable to the AQD:
 - a. water makeup rate for water scrubbers 22412 and 23828
 - b. recycle liquid temperature of water scrubber 23828
 - c. recycle liquid flow rate for water scrubber 23828
 - d. recycle liquid flow rate of venturi scrubber 22426

For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910)

3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU207-03 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period non-VOC completely methylated siloxanes emissions for EU207-03 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.¹ (R 336.1224)

See Appendix 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

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- The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV207-018 (Scrubber 1: DV22426/22412)	2 ²	60 ²	R 336.1225, 40 CFR 52.21(c)&(d)
2. SV207-035 (Scrubber 2: DV23828)	2 ²	62 ²	R 336.1225, 40 CFR 52.21(c)&(d)

IX. OTHER REQUIREMENT(S)

- The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and HHHHH, as they apply to EU207-03.² **(40 CFR Part 63, Subparts A & HHHHH)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU207-13
EMISSION UNIT CONDITIONS**

DESCRIPTION

Batch mixer/reactor process. Emissions are controlled by condenser 19251 and dust collector 12912. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. [EU207-13 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.](#)

The most recent PTI for this emission unit is PTI No. 169-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser (19251)
- Dust collector (12912). [This device is a CAM subject unit for Particulate.](#)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	1.7 tpy ^{2,1}	12-month rolling time period as determined at the end of each calendar month	EU207-13	SC VI.2, VI.4	R 336.1702(a)
2. PM	0.68 pph ²	Hourly	EU207-13	SC V.1, SC VI.3	R 336.1331
3. PM10	0.68 pph ²	Hourly	EU207-13	SC V.1, SC VI.3	40 CFR 52.21 (c)&(d)
4. PM2.5	0.68 pph ²	Hourly	EU207-13	SC V.1, SC VI.3	40 CFR 52.21 (c)&(d)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU207-13 unless the exit gas temperature of the glycol condenser (19251) is 40°F or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall not operate EU207-13 unless the pressure drop across the dust collector (12912) is 0.5 inches water or more but not more than 10 inches of water.² (**R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c)&(d)**)

[3. Proper operation for the dust collector \(12912\) means that the pressure drop is maintained within a range of 0.5 to 10 inches water. An excursion is a pressure drop reading outside the range defined in this condition or demonstrated during testing. Upon detecting an excursion of the pressure drop limit, the permittee shall restore operation of the dust collector \(12912\) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. \(40 CFR 64.2\(c\)\(2\), 40 CFR 64.7\(d\)\)](#)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU207-13 unless the glycol condenser (19251) and dust collector (12912) are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 and III.2 that apply to the condenser and dust collector.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c)&(d))**
2. The permittee shall equip and maintain the glycol condenser (19251) with an exit gas temperature indicator. The permittee shall calibrate the exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall equip and maintain the dust collector (12912) with a continuous pressure drop indicator. The permittee shall calibrate the pressure drop indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c)&(d))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Upon request from the AQD District Supervisor, the permittee may be required to verify the PM, PM10, and/or PM2.5 emission rates from EU207-13 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² **(R 336.1331, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c)&(d))**

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. **(R 336.1213(3))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c)&(d))**
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of the glycol condenser (19251) with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall record, on a per shift basis, the pressure drop across the dust collector (12912) with instrumentation acceptable to the AQD. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c)&(d))**

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4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU207-13 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
5. For the dust collector (12912), upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))
6. For the dust collector (12912), except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and require zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.3(c)(3), 40 CFR 64.7(c))
7. For the dust collector (12912), the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))
8. The permittee shall equip and maintain the dust collector (12912) with a pressure drop indicator. (40 CFR 64.6(c)(1)(i)(ii))
9. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**
5. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedance and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))
6. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))
7. Each semiannual report of monitoring deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV207-001 (Dust Collector & Condenser Vent)	30 ²	87 ²	R 336.1225, 40 CFR 52.21(c)&(d)

IX. OTHER REQUIREMENT(S)

1. ~~4.~~ The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and HHHHH, as they apply to EU207-13.2. **(40 CFR Part 63, Subparts A & HHHHH)**
2. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))

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3. [The permittee shall comply with all requirements of 40 CFR Part 64. \(40 CFR Part 64\)](#)

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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EU207-14 EMISSION UNIT CONDITIONS

DESCRIPTION

Mixer 4 process producing silicone rubber products. Emissions are controlled by dust collector 12912 and condenser 19251. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. [EU207-14 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.](#)

The most recent PTI for this emission unit is PTI No. 177-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser (19251)
- Dust Collector (12912). [This device is a CAM subject unit for Particulate.](#)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	8.34 tpy ^{2*}	12-month rolling time period as determined at the end of each calendar month	EU207-14	SC VI.2, SC VI.4	R 336.1702(a)
2. PM	0.68 pph ²	Hourly	EU207-14	SC V.1, SC VI.3	R 336.1331
3. PM10	0.68 pph ²	Hourly	EU207-14	SC V.1, SC VI.3	40 CFR 52.21(c) & (d)
4. PM2.5	0.68 pph ²	Hourly	EU207-14	SC V.1, SC VI.3	40 CFR 52.21(c) & (d)

* This emission limit includes emissions from all vents listed in SC VIII.1 and does not include fugitive emissions (i.e. emissions from leaking valves, flanges etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU207-14 unless the exit gas temperature of the glycol condenser (19251) is 40°F or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall not operate EU207-14 unless the pressure drop across the dust collector (12912) is 0.5 inches water or more but not more than 10 inches of water.² (**R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d)**)

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3. Proper operation for the dust collector (12912) means that the pressure drop is maintained within a range of 0.5 to 10 inches water. An excursion is a pressure drop reading outside the range defined in this condition or demonstrated during testing. Upon detecting an excursion of the pressure drop limit, the permittee shall restore operation of the dust collector (12912) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.2(c)(2), 40 CFR 64.7(d))

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU207-14 unless the glycol condenser (19251) and dust collector (12912) are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through SC III.2 that apply to the condenser and dust collector.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))
2. The permittee shall equip and maintain the glycol condenser (19251) with an exit gas temperature indicator. The permittee shall calibrate the exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall equip and maintain the dust collector (12912) with a continuous pressure drop indicator. The permittee shall calibrate the pressure drop indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify PM, PM10, and PM2.5 emission rates from EU207-14 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 60, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))

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2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of the glycol condenser (19251) with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall record, on a per shift basis, the pressure drop across the dust collector (12912) with instrumentation acceptable to the AQD. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**
4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU207-14 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a))**
5. For the dust collector (12912), upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))
6. For the dust collector (12912), except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and require zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.3(c)(3), 40 CFR 64.7(c))
7. For the dust collector (12912), the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))
8. The permittee shall equip and maintain the dust collector (12912) with a pressure drop indicator. (40 CFR 64.6(c)(1)(i)(ii))
9. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

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3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**
5. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedance and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))
6. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))
7. Each semiannual report of monitoring deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)²

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-207-001 (Dust Collector & Condenser Vent)	30 ²	87 ²	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and HHHHH, as they apply to EU207-18.² **(40 CFR Part 63, Subparts A & HHHHH)**
2. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))
3. The permittee shall comply with all requirements of 40 CFR Part 64. (40 CFR Part 64)

Footnotes:

- ¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
- ² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU207-15
EMISSION UNIT CONDITIONS**

DESCRIPTION

Silicone rubber manufacturing process conducted in Mixer 5. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. [EU207-15 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.](#)

The most recent PTI for this emission unit is PTI No. 172-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser (19251)
- Dust Collector (12912). [This device is a CAM subject unit for Particulate.](#)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	8.3 tpy ² *	12-month rolling time period as determined at the end of each calendar month.	EU207-15	SC VI.2, VI.4	R 336.1702(a)
2. PM	0.68 pph ²	Hourly	EU207-15	SC V.1, VI.3	R 336.1331
3. PM10	0.68 pph ²	Hourly	EU207-15	SC V.1, VI.3	40 CFR 52.21 (c) & (d)
4. PM2.5	0.68 pph ²	Hourly	EU207-15	SC V.1, VI.3	40 CFR 52.21 (c) & (d)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU207-15 unless the exit gas temperature of the glycol condenser (19251) is 40°F or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall not operate EU207-15 unless the pressure drop across the dust collector (12912) is 0.5 inches water or more but not more than 10 inches of water.² (**R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d)**)
3. [Proper operation for the dust collector \(12912\) means that the pressure drop is maintained within a range of 0.5 to 10 inches water. An excursion is a pressure drop reading outside the range defined in this condition or demonstrated during testing. Upon detecting an excursion of the pressure drop limit, the permittee shall restore operation of the dust collector \(12912\) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. \(40 CFR 64.2\(c\)\(2\), 40 CFR 64.7\(d\)\)](#)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU207-15 unless the glycol condenser (19251) and dust collector (12912) are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through III.2 that apply to the condenser and dust collector.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))
2. The permittee shall equip and maintain the glycol condenser (19251) with an exit gas temperature indicator. The permittee shall calibrate the exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall equip and maintain the dust collector (12912) with a continuous pressure drop indicator. The permittee shall calibrate the pressure drop indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request from the AQD District Supervisor, the permittee shall verify the PM, PM10, and/or PM2.5 emission rates from EU207-15 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1331, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of the glycol condenser (19251) with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall record, on a per shift basis, the pressure drop across the dust collector (12912) with instrumentation acceptable to the AQD. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))

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4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU207-15 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
5. For the dust collector (12912), upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))
6. For the dust collector (12912), except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and require zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.3(c)(3), 40 CFR 64.7(c))
7. For the dust collector (12912), the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))
8. The permittee shall equip and maintain the dust collector (12912) with a pressure drop indicator. (40 CFR 64.6(c)(1)(i)(ii))
9. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**
5. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedance and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))
6. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))
7. Each semiannual report of monitoring deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV207-001 (Dust Collector and Condenser Vent)	30 ²	87 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and HHHHH, as they apply to EU207-15.² **(40 CFR Part 63, Subparts A & HHHHH)**
2. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))

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3. [The permittee shall comply with all requirements of 40 CFR Part 64. \(40 CFR Part 64\)](#)

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU207-16
EMISSION UNIT CONDITIONS**

DESCRIPTION

Silicone rubber manufacturing process conducted in Mixer 6. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. [EU207-16 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.](#)

The most recent PTI for this emission unit is PTI No. 171-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser (19251)
- Dust Collector (12912). [This device is a CAM subject unit for Particulate.](#)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	4.8 tpy ² *	12-month rolling time period as determined at the end of each calendar month.	EU207-16	SC VI.2, VI.4	R 336.1702(a)
2. PM	0.68 pph ²	Hourly	EU207-16	SC V.1, VI.3	R 336.1331
3. PM10	0.68 pph ²	Hourly	EU207-16	SC V.1, VI.3	40 CFR 52.21 (c) & (d)
4. PM2.5	0.68 pph ²	Hourly	EU207-16	SC V.1, VI.3	40 CFR 52.21 (c) & (d)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU207-16 unless the exit gas temperature of the glycol condenser (19251) is 40°F or less.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall not operate EU207-16 unless the pressure drop across the dust collector (12912) is 0.5 inches water or more but not more than 10 inches of water.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**
3. [Proper operation for the dust collector \(12912\) means that the pressure drop is maintained within a range of 0.5 to 10 inches water. An excursion is a pressure drop reading outside the range defined in this condition or demonstrated during testing. Upon detecting an excursion of the pressure drop limit, the permittee shall restore operation of the dust collector \(12912\) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. \(40 CFR 64.2\(c\)\(2\), 40 CFR 64.7\(d\)\)](#)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU207-16 unless the glycol condenser (19251) and dust collector (12912) are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through III.2 that apply to the condenser and dust collector.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))
2. The permittee shall equip and maintain the glycol condenser (19251) with an exit gas temperature indicator. The permittee shall calibrate the exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall equip and maintain the dust collector (12912) with a continuous pressure drop indicator. The permittee shall calibrate the pressure drop indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request from the AQD District Supervisor, the permittee shall verify the PM, PM10, and/or PM2.5 emission rates from EU207-16, by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. (R 336.1331, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of the glycol condenser (19251) with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall record, on a per shift basis, the pressure drop across the dust collector (12912) with instrumentation acceptable to the AQD. The permittee shall keep all records on file at the facility and make them

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available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU207-16 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
5. For the dust collector (12912), upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))
6. For the dust collector (12912), except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and require zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.3(c)(3), 40 CFR 64.7(c))
7. For the dust collector (12912), the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))
8. The permittee shall equip and maintain the dust collector (12912) with a pressure drop indicator. (40 CFR 64.6(c)(1)(i)(ii))
9. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**
5. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedance and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))
6. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))
7. Each semiannual report of monitoring deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV207-001 (Dust Collector and Condenser Vent)	30 ²	87 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and HHHHH, as they apply to EU207-16.² **(40 CFR Part 63, Subparts A & HHHHH)**
2. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))

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3. [The permittee shall comply with all requirements of 40 CFR Part 64. \(40 CFR Part 64\)](#)

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU207-17
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Silicone rubber manufacturing process conducted in Mixer 7. Emissions are controlled by dust collector 12912 and condenser 19251. When manufacturing methoxy-treated products, emissions are routed through the IPA scrubber 19298 and condenser 19296 during stripping and cool down. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF, HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. [EU207-17 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.](#)

The most recent PTI for this emission unit is PTI No. 173-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Glycol Condenser (19251)
- Dust Collector (12912). [This device is a CAM subject unit for Particulate.](#)
- IPA Packed column scrubber (19298)
- Glycol condenser (19296)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	9.5 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU207-17	SC VI.2, SC VI.4, SC VI.5, SC VI.6	R 336.1702(a)
2. PM	0.68 pph ²	Hourly	EU207-17 (from SV207-001)	SC V.1, SC VI.3,	R 336.1331
3. PM10	0.68 pph ²	Hourly	EU207-17 (from SV207-001)	SC V.1, SC VI.3,	40 CFR 52.21 (c) & (d)
4. PM2.5	0.68 pph ²	Hourly	EU207-17 (from SV207-001)	SC V.1, SC VI.3,	40 CFR 52.21 (c) & (d)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU207-17 unless the exit gas temperature of the glycol condenser (19251) is 40°F or less.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall not operate EU207-17 unless the pressure drop across the dust collector (12912) is 0.5 inches of water or more but not more than 10 inches of water.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

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3. When manufacturing methoxy-treated products, the permittee shall not operate EU207-17 unless the exit gas temperature from the glycol condenser (19296) remains below 15°C.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. When manufacturing methoxy-treated products, the permittee shall maintain a minimum liquid flow rate of 20 pounds per minute in the packed column scrubber (19298).² **(R 336.1224, R 336.1225, R 336.1702, R 336.1910)**
5. Proper operation for the dust collector (12912) means that the pressure drop is maintained within a range of 0.5 to 10 inches water. An excursion is a pressure drop reading outside the range defined in this condition or demonstrated during testing. Upon detecting an excursion of the pressure drop limit, the permittee shall restore operation of the dust collector (12912) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.2(c)(2), 40 CFR 64.7(d))

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU207-17 unless the glycol condenser (19251) and dust collector (12912) are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through III.2 that apply to the condenser and dust collector.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**
2. When manufacturing methoxy-treated products, the permittee shall not operate EU207-17 unless the IPA packed column scrubber (19298) and glycol condenser (19296) are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.3 through III.4 that apply to the condenser and scrubber. The packed column scrubber (19298) must use isopropanol as the scrubbing liquid.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall equip and maintain the glycol condenser (19251) with a continuous exit gas temperature indicator. The permittee shall calibrate the exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall equip and maintain the dust collector (12912) with a continuous pressure drop indicator. The permittee shall calibrate the pressure drop indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**
5. The permittee shall equip and maintain the IPA packed column scrubber (19298) with a low flow switch with a minimum flow rate alarm of 20 pounds per minute.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
6. The permittee shall equip and maintain the glycol condenser (19296) with a continuous exit gas temperature indicator. The permittee shall calibrate the temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Upon request from the AQD District Supervisor, the permittee may be required to verify the PM, PM10, and PM2.5 emission rates from EU207-17, by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing,

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the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1331, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of the glycol condenser (19251) with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall record, on a per shift basis, the pressure drop across the dust collector (12912) with instrumentation acceptable to the AQD. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))
4. When manufacturing methoxy-treated products, the permittee shall monitor and record, on a continuous basis, the packed column scrubber (19298) liquid flow rate and the glycol condenser (19296) exit gas temperature with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
5. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU207-17 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
6. The permittee shall keep records for when methoxy-treated products are being manufactured on a monthly basis. These records shall include dates, times, and duration of batches processed; and other records necessary to demonstrate compliance with the emission limits specified in this table. The permittee shall keep all records on file at the facility and make them available to the AQD upon request.² (R 336.1702(a))
7. [For the dust collector \(12912\), upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant specific emissions unit \(including the control device and associated capture system\) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance \(other than those caused by excused startup or shutdown conditions\). \(40 CFR 64.7\(d\)\)](#)

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8. For the dust collector (12912), except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and require zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.3(c)(3), 40 CFR 64.7(c))
9. For the dust collector (12912), the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))
10. The permittee shall equip and maintain the dust collector (12912) with a pressure drop indicator. (40 CFR 64.6(c)(1)(i)(ii))
11. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. (R 336.1213(3)(c), R 336.2001(5))
5. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedance and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))
6. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))
7. Each semiannual report of monitoring deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))

See Appendix 8

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VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV207-001 (Dust Collector and Condenser Vent)	30 ²	87 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV207-014 ^a (Treated Condenser Vent)	1 ²	46 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV207-028 ^a (Feed Tank Vent)	1 ²	50 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

^a This stack is not required to discharge unobstructed vertically upwards

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart HHHHH, as they apply to EU207-17.² **(40 CFR Part 63, Subparts A and HHHHH)**
2. [If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. \(40 CFR 64.7\(e\)\)](#)
3. [The permittee shall comply with all requirements of 40 CFR Part 64. \(40 CFR Part 64\)](#)

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU207-18
EMISSION UNIT CONDITIONS**

DESCRIPTION

Mixer 8 process producing silicone rubber products. Emissions are controlled by dust collector 12912 and condenser 19251. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. [EU207-18 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.](#)

The most recent PTI for this emission unit is PTI No. 170-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser (19251)
- Dust Collector (12912). [This device is a CAM subject unit for Particulate.](#)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	4.79 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU207-18	SC VI.2, SC VI.4	R 336.1702(a)
2. PM	0.68 pph ²	Hourly	EU207-18	SC V.1, SC VI.3	R 336.1331
3. PM10	0.68 pph ²	Hourly	EU207-18	SC V.1, SC VI.3	40 CFR 52.21(c) & (d)
4. PM2.5	0.68 pph ²	Hourly	EU207-18	SC V.1, SC VI.3	40 CFR 52.21(c) & (d)

* This emission limit includes emissions from all vents listed in SC VIII.1 and does not include fugitive emissions (i.e. emissions from leaking valves, flanges etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU207-18 unless the exit gas temperature of the glycol condenser (19251) is 40°F or less.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall not operate EU207-18 unless the pressure drop across the dust collector (12912) is 0.5 inches water or more but not more than 10 inches of water.² (R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))
3. [Proper operation for the dust collector \(12912\) means that the pressure drop is maintained within a range of 0.5 to 10 inches water. An excursion is a pressure drop reading outside the range defined in this condition or demonstrated during testing. Upon detecting an excursion of the pressure drop limit, the permittee shall restore operation of the dust collector \(12912\) to its normal or usual manner of operation as expeditiously as practicable](#)

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[in accordance with good air pollution control practices for minimizing emissions. \(40 CFR 64.2\(c\)\(2\), 40 CFR 64.7\(d\)\)](#)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU207-18 unless the glycol condenser (19251) and dust collector (12912) are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through III.2 that apply to the condenser and dust collector.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))
2. The permittee shall equip and maintain the glycol condenser (19251) with an exit gas temperature indicator. The permittee shall calibrate the exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall equip and maintain the dust collector (12912) with a continuous pressure drop indicator. The permittee shall calibrate the pressure drop indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify PM, PM10, and PM2.5 emission rates from EU207-18 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 60, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of the glycol condenser (19251) with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

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3. The permittee shall record, on a per shift basis, the pressure drop across the dust collector (12912) with instrumentation acceptable to the AQD. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

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4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU207-18 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
5. For the dust collector (12912), upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))
6. For the dust collector (12912), except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and require zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.3(c)(3), 40 CFR 64.7(c))
7. For the dust collector (12912), the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))
8. The permittee shall equip and maintain the dust collector (12912) with a pressure drop indicator. (40 CFR 64.6(c)(1)(i)(ii))
9. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**
5. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedance and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))

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6. [Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. \(40 CFR 64.9\(a\)\(2\)\(ii\)\)](#)

7. [Each semiannual report of monitoring deviations shall include a description of the actions taken to implement a QIP during the reporting period \(if appropriate\). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. \(40 CFR 64.9\(a\)\(2\)\(iii\)\)](#)

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-207-001 (Dust Collector & Condenser Vent)	30 ²	87 ²	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and HHHHH, as they apply to EU207-18.² (40 CFR Part 63, Subparts A & HHHHH)

2. [If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. \(40 CFR 64.7\(e\)\)](#)

3. [The permittee shall comply with all requirements of 40 CFR Part 64. \(40 CFR Part 64\)](#)

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU207-19
EMISSION UNIT CONDITIONS**

DESCRIPTION

Silicone rubber manufacturing process conducted in Mixer 9. Emissions are controlled by dust collector 12912 and condenser 19251. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF, HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. [EU207-19 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.](#)

The most recent PTI for this emission unit is PTI No. 180-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser (19251)
- Dust Collector (12912). [This device is a CAM subject unit for Particulate.](#)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	4.8 tpy ² *	12-month rolling time period as determined at the end of each calendar month	EU207-19	SC VI.2, SC VI.4	R 336.1702(a)
2. PM	0.68 pph ²	Hourly	EU207-19	SC V.1, SC VI.3	R 336.1331
3. PM10	0.68 pph ²	Hourly	EU207-19	SC V.1, SC VI.3	40 CFR 52.21 (c) & (d)
4. PM2.5	0.68 pph ²	Hourly	EU207-19	SC V.1, SC VI.3	40 CFR 52.21 (c) & (d)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU207-19 unless the exit gas temperature of the glycol condenser (19251) is 40°F or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall not operate EU207-19 unless the pressure drop across the dust collector (12912) is 0.5 inches water or more but not more than 10 inches of water.² (**R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d)**)
3. [Proper operation for the dust collector \(12912\) means that the pressure drop is maintained within a range of 0.5 to 10 inches water. An excursion is a pressure drop reading outside the range defined in this condition or demonstrated during testing. Upon detecting an excursion of the pressure drop limit, the permittee shall restore operation of the dust collector \(12912\) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. \(40 CFR 64.2\(c\)\(2\), 40 CFR 64.7\(d\)\)](#)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU207-19 unless the glycol condenser (19251) and dust collector (12912) are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through III.2 that apply to the condenser and dust collector.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))
2. The permittee shall equip and maintain the glycol condenser (19251) with an exit gas temperature indicator. The permittee shall calibrate the exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall equip and maintain the dust collector (12912) with a continuous pressure drop indicator. The permittee shall calibrate the pressure drop indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request from the AQD District Supervisor, the permittee may be required to verify the PM, PM10, and PM2.5 emission rates from EU207-19, by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. (R 336.1331, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of the glycol condenser (19251) with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall record, on a per shift basis, the pressure drop across the dust collector (12912) with instrumentation acceptable to the AQD. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))

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4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU207-19 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
5. For the dust collector (12912), upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))
6. For the dust collector (12912), except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and require zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.3(c)(3), 40 CFR 64.7(c))
7. For the dust collector (12912), the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))
8. The permittee shall equip and maintain the dust collector (12912) with a pressure drop indicator. (40 CFR 64.6(c)(1)(i)(ii))
9. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**
5. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedance and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))
6. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))
7. Each semiannual report of monitoring deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV207-001 (Dust Collector and Condenser Vent)	30 ²	87 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart HHHHH, as they apply to EU207-19.² **(40 CFR Part 63, Subpart A and Subpart HHHHH)**
2. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))

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3. [The permittee shall comply with all requirements of 40 CFR Part 64. \(40 CFR Part 64\)](#)

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU212-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

Batch reaction process consisting of the 6054 batch kettle (an agitated, jacketed kettle), a heater, a receiver, and a service water cooled heat exchanger located in 212 building. Emissions are controlled by chilled condenser 6060. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF.

The most recent PTI for this emission unit is PTI No. 63-14B.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

Chilled condenser 6060

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	4.5 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU212-01	SC VI.3	R 336.1702(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU212-01, except for drum off, unless the chilled condenser 6060 exhaust gas temperature is 20°C or less.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU212-01, except for drum off, unless the condenser is installed, maintained, and operated in a satisfactory manner, which includes meeting the requirements of SC III.1.2² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall equip and maintain chilled condenser 6060 with an exhaust gas temperature indicator. The permittee shall calibrate the exhaust gas temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

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VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1225, R 336.1702(a), R 336.1910)
2. While EU212-01 is venting to chilled condenser 6060, the permittee shall monitor and record, in a satisfactory manner, the chilled condenser 6060 exhaust gas temperature on a continuous basis with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU212-01 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV212-007(Condenser 6060)	2 ²	38 ²	R 336.1225 40 CFR 52.21(c)&(d)
2. SV212-018 (Drum off)	24 ²	44 ²	R 336.1225 40 CFR 52.21(c)&(d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

**EU212-02
EMISSION UNIT CONDITIONS**

DESCRIPTION

20500 Polymer Process, with process emissions controlled by condenser 20539. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 144-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser 20539

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	2.0 tpy *.2	12-month rolling time period as determined at the end of each calendar month	EU212-02	SC VI.2, VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU212-02, except for product drum off and product transfers to storage tanks, unless the condenser 20539 vapor outlet temperature is 45 degrees Celsius or less.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU212-02, except for product drum off and product transfers to storage tanks, unless condenser 20539 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the condenser 20539 vapor outlet temperature with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU212-02 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV212-001 ^a (Condenser 20539)	2 ²	51 ²	R 336.1225, 40 CFR 52.21(c)&(d)
2. SV212-018 (Drum Off)	24 ²	44 ²	R 336.1225, 40 CFR 52.21(c)&(d)
3. SV212-015 (Tank 6044)	2 ²	28 ²	R 336.1225, 40 CFR 52.21(c)&(d)
4. SV212-011 (Tank 6090/6091)	2 ²	28 ²	R 336.1225, 40 CFR 52.21(c)&(d)
5. SV212-012 ^a (Tank 6052)	2 ²	21 ²	R 336.1225, 40 CFR 52.21(c)&(d)
6. SV212-016 ^a (Tank 6053)	2 ²	34 ²	R 336.1225, 40 CFR 52.21(c)&(d)

^a This stack is not required to discharge unobstructed vertically upwards.

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and HHHHH, as they apply to EU212-02.² **(40 CFR Part 63, Subparts A & HHHHH)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

**EU212-03
EMISSION UNIT CONDITIONS**

DESCRIPTION

Cold blend mixing process in 6019 Kettle with a man-way loading vent and a product drum-off vent. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 145-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	1.31 tpy* ²	12-month rolling time period as determined at the end of each calendar month	EU212-03	SC VI.2	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e. emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1702(a))

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

2. The permittee shall calculate the VOC emission rate from EU212-03 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV212-003 (Manway Vent)	24 ²	49 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV212-006 ^A (Kettle 6019 Vent)	2 ²	22 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV212-018 (Drum Off Vent)	24 ²	44 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^A This vent may discharge downwards.

IX. OTHER REQUIREMENTS

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and HHHHH, as they apply to EU212-03.² **(40 CFR Part 63, Subparts A & HHHHH)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

**EU212-05
EMISSION UNIT CONDITIONS**

DESCRIPTION

Cold blend mixing process in 6009 Gum Kettle with a man-way loading vent and a product drum-off. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 108-18A.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOCs	5.80 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU212-05	SC VI.2	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1225, R 336.1702(a))

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

- The permittee shall calculate the VOC emission rate from EU212-05 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a))**

VII. REPORTING

- Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
- Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV212-003 (Manway Loading Vent)	24 ²	49 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV212-004 ^a (Kettle 6009 Atmospheric Vent)	4 ²	24 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV212-018 (Drum Off Vent)	24 ²	44 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^aThis stack is not required to discharge unobstructed vertically upwards

IX. OTHER REQUIREMENT(S)

- The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart HHHHH, as they apply to EU212-05.² **(40 CFR Part 63, Subpart A and Subpart HHHHH)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU212-12
EMISSION UNIT CONDITIONS**

DESCRIPTION

Batch reaction process consisting of the 20400 batch kettle (an agitated, jacketed kettle), a trap, a receiver, and two heat exchangers located in 212 building. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, UU, and HHHHH.

The most recent PTI for this emission unit is PTI No. 48-14C.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

Chilled condenser HX20407

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	1.9 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU212-12	SC V.1, VI.2, VI.3, VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. While the EU212-12 is venting to chilled condenser HX20407, the permittee shall not operate EU212-12 unless the chilled condenser HX20407 coolant temperature is 33°C or less.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU212-12 unless the emissions are routed to chilled condenser HX20407 and the condenser is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1, except as allowed by SC IV.2 and SC IV.3.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee may vent EU212-12 through SV212-003, while bypassing chilled condenser HX20407, for up to three hours per day.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee may vent EU212-12 through SV212-018, while bypassing chilled condenser HX20407, for drum off of final products.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall equip and maintain chilled condenser HX20407 with an exit gas temperature indicator. The permittee shall calibrate the exit gas temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify VOC emission rates from EU212-12 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOCs	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1205(3), R 336.1702(a))
2. While EU212-12 is venting to chilled condenser HX20407, the permittee shall monitor and record, in a satisfactory manner, the chilled condenser HX20407 coolant temperature on a continuous basis. Monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time, and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the VOC emission rate from EU212-12, using a method acceptable to the AQD District Supervisor, on file at the facility and make them available to the Department upon request.² (R 336.1205(3), R 336.1702(a))
4. The permittee shall keep, in a satisfactory manner, daily records of the time that EU212-12 vents through SV212-003 and SV212-018. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))

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- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV212-003 (Manway Vent)	24 ²	32 ²	R 336.1225 40 CFR 52.21 (c) & (d)
2. SV212-018 (Drum off Vent)	24 ²	42 ²	R 336.1225 40 CFR 52.21 (c) & (d)
3. SV212-023 ^A (Vent for Condenser HX-20407)	2.0 ²	42 ²	R 336.1225 40 CFR 52.21 (c) & (d)

^A This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

- The permittee shall comply with the applicable provisions of 40 CFR Part 63, Subpart HHHHH (Coatings MACT) as they apply to EU212-12.² **(40 CFR Part 63, Subpart HHHHH)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU2504-13
EMISSION UNIT CONDITIONS**

DESCRIPTION

Siloxane Kettles process consisting of three jacketed batch kettles and ancillary equipment. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611.

The most recent PTI for this emission unit is PTI No. 153-20.

Flexible Group ID: [NAFGTHROX](#), [FGSITESCRUBBERS](#), [FGSITEBLOWER](#)

POLLUTION CONTROL EQUIPMENT

• Vent recovery system consisting of two parallel condenser trains. Each condenser train includes two shell-and tube condensers, the first (24608 & 24610) using service water as coolant, and the second (24609 & 24611) using a chilled mix of water and glycol as coolant. The condenser trains (24608/24609 and 24610/24611) typically operate in parallel, but only one set of condensers is required to operate at any given time.

- [FGTHROX](#)
- [FGSITESCRUBBERS](#)

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I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	2.0 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU2504-13	SC VI.2, VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate equipment in EU2504-13 that exhausts to the vent recovery system unless the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-13 emissions are being exhausted is 40°F or less.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

2. The permittee shall not operate equipment in EU2504-13 that exhausts to either [FGTHROX](#) or [FGSITESCRUBBERS](#) unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

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- a. [FGTHROX](#) is operated in accordance with the requirements of [FGTHROX](#).
- b. [Site Scrubber #1](#) is operated in accordance with the requirements of [FGSITESCRUBBERS](#).
- c. [Site Scrubber #2](#) is operated in accordance with the requirements of [FGSITESCRUBBERS](#).

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IV. DESIGN/EQUIPMENT PARAMETER(S)

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1. The permittee shall not operate equipment in EU2504-13 that exhausts to the vent recovery system unless the vent recovery system is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes operating one service water condenser and one chilled water/glycol condenser in series and includes meeting the requirements of SC III.1.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

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2. The permittee shall equip and maintain each condenser (24608, 24609, 24610, and 24611) with a coolant outlet temperature indicator. The permittee shall calibrate the coolant outlet temperature indicators in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCRRUBBERS unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a).
 - b. FGSITESCRRUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b) or (c).

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall monitor and record, on a continuous basis, the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-13 exhausts with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2504-13 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

ROP No: MI-ROP-A4043-2019b
 Expiration Date: February 20, 2024
 PTI No: MI-PTI-A4043-2019b

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2504-001 (Ventilation for new press filters and NH3 cylinder)	27 ²	49 ²	R 336.1225, 40 CFR 52.21(c)&(d)
2. SV2504-002 (Filter Press Ventilation)	27 ²	47 ²	R 336.1225, 40 CFR 52.21(c)&(d)
3. SV2504-004 (FC-24 ventilation and IPA Steambox)	10 ²	43 ²	R 336.1225, 40 CFR 52.21(c)&(d)
4. SV2504-005 (New side filters, new side cat adders, both E DO, Bis H sampling ventilation)	20 ²	55 ²	R 336.1225, 40 CFR 52.21(c)&(d)
5. SV2504-007 (South Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c)&(d)
6. SV2504-014 (Old Side Nedermans, SDO, MDO, TDO)	10 ²	40 ²	R 336.1225, 40 CFR 52.21(c)&(d)
7. SV2504-015 (Old Side Precoat Tanks)	10 ²	43 ²	R 336.1225, 40 CFR 52.21(c)&(d)
8. SV2504-025 (23050 Filters, RWK Filters, W DO)	10 ²	54 ²	R 336.1225, 40 CFR 52.21(c)&(d)
9. SV2504-031 (North Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c)&(d)
10. SV2514-006 (THROX)	54 ²	90 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)
11. SV2512-001 (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)
12. SV2512-002 (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU2504-14
EMISSION UNIT CONDITIONS**

DESCRIPTION

Batch reaction process consisting of jacketed batch kettle DV19840, a receiver, and vacuum system. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart UU.

The most recent PTI for this emission unit is PTI No. 137-20.

Flexible Group ID: FGMONMACT, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

- Vent recovery system consisting of two parallel condenser trains. Each condenser train includes two shell-and-tube condensers, the first condenser of each train (24608 & 24610) uses service water as coolant, and the second condenser of each train (24609 & 24611) uses a chilled mix of water and glycol as coolant. The condenser trains (24608/24609 and 24610/24611) typically operate in parallel, but only one set of condensers is required to operate at any given time.

- FGTHROX
- FGSITESCRUBBERS

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I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	0.87 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU2504-14	SC V.1, VI.2, SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2504-14, except for packaging and filtering operations, unless the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-14 emissions are being exhausted is 40°F or less.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

2. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCRUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

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- a. FGTHROX is operated in accordance with the requirements of FGTHROX.
- b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCRUBBERS.
- c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCRUBBERS.

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ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2504-14, except for packaging and filtering operations, unless the vent recovery system is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes operating one service water condenser and one chilled water/glycol condenser in series and includes meeting the requirements of SC III.1.2 **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

2. The permittee shall equip and maintain each condenser (24608, 24609, 24610, and 24611) with a coolant outlet temperature indicator. The permittee shall calibrate the coolant outlet temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

3. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

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a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a).

b. FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b) or (c).

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify the VOC emission rates from EU2504-14 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

2. The permittee shall monitor and record, on a continuous basis, the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-14 exhausts with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2504-14 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

ROP No: MI-ROP-A4043-2019b
 Expiration Date: February 20, 2024
 PTI No: MI-PTI-A4043-2019b

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-2504-005 (New side filters & cat adders vent)	20 ²	55 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV-2504-007 (South condenser vent)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV-2504-010 (Lab hood vent)	10 ²	31 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV-2504-012 (Catalyst hood vent)	16 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV-2504-014 (Old side nedermans)	10 ²	40 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV-2504-031 (North condenser vent)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV2514-006 (THROX)	54 ²	90 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)
8. SV2512-001 (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)
9. SV2512-002 (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)

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IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU2504-15
EMISSION UNIT CONDITIONS**

DESCRIPTION

Batch reaction process consisting of jacketed batch kettle DV19860, a receiver, and vacuum system. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart UU.

The most recent PTI for this emission unit is PTI No. 138-20.

Flexible Group ID: FGMONMACT, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

- Vent recovery system consisting of two parallel condenser trains. Each condenser train includes two shell-and-tube condensers, the first condenser of each train (24608 & 24610) uses service water as coolant, and the second condenser of each train (24609 & 24611) uses a chilled mix of water and glycol as coolant. The condenser trains (24608/24609 and 24610/24611) typically operate in parallel, but only one set of condensers is required to operate at any given time.

- FGTHROX
- FGSITESCRUBBERS

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I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	0.92 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU2504-15	SC V.1, VI.2, SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2504-15, except for packaging and filtering operations, unless the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-15 emissions are being exhausted is 40°F or less.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

2. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCRUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

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- a. FGTHROX is operated in accordance with the requirements of FGTHROX.
- b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCRUBBERS.
- c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCRUBBERS.

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ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2504-15, except for packaging and filtering operations, unless the vent recovery system is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes operating one service water condenser and one chilled water/glycol condenser in series and includes meeting the requirements of SC III.1.2 (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

2. The permittee shall equip and maintain each condenser (24608, 24609, 24610, and 24611) with a coolant outlet temperature indicator. The permittee shall calibrate the coolant outlet temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

3. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCRUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

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a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a).

b. FGSITESCRUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b) or (c).

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify the VOC emission rates from EU2504-15 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

2. The permittee shall monitor and record, on a continuous basis, the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-15 exhausts with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2504-15 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-2504-005 (New side filters & cat adders vent)	20 ²	55 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV-2504-007 (South condenser vent)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV-2504-010 (Lab hood vent)	10 ²	31 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV-2504-012 (Catalyst hood vent)	16 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV-2504-014 (Old side nedermans)	10 ²	40 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV-2504-031 (North condenser vent)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV2514-006 (THROX)	54 ²	90 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)
8. SV2512-001 (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)
9. SV2512-002 (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)

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IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU2504-16
EMISSION UNIT CONDITIONS**

DESCRIPTION

Mixing process in 8200 Kettle with product. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.

The most recent PTI for this emission unit is PTI No. 139-20.

Flexible Group ID: FGMONMACT, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

- Vent recovery system consisting of two parallel condenser trains. Each condenser train includes two shell-and-tube condensers, the first condenser of each train (24608 & 24610) uses service water as coolant, and the second condenser of each train (24609 & 24611) uses a chilled mix of water and glycol as coolant. The condenser trains (24608/24609 and 24610/24611) typically operate in parallel, but only one set of condensers is required to operate at any given time.

- FGTHROX
- FGSITESCRUBBERS

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I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	1.58 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU2504-16	SC V.1, SC VI.2, SC VI.3	R 336.1702

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2504-16, except for packaging and filtering operations, unless the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-16 emissions are being exhausted is 40°F or less.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

2. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCRUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

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- a. FGTHROX is operated in accordance with the requirements of FGTHROX.
- b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCRUBBERS.
- c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCRUBBERS.

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ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2504-16, except for packaging and filtering operations, unless the vent recovery system is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes operating one service water condenser and one chilled water/glycol condenser in series and includes meeting the requirements of SC III.1.2 **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

2. The permittee shall equip and maintain each condenser (24608, 24609, 24610, and 24611) with a coolant outlet temperature indicator. The permittee shall calibrate the coolant outlet temperature indicators in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCRRUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a).
 - b. FGSITESCRRUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b) or (c).

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify the VOC emission rate from EU2504-16 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1225, R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-16 exhausts with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2504-16 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

ROP No: MI-ROP-A4043-2019b
 Expiration Date: February 20, 2024
 PTI No: MI-PTI-A4043-2019b

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2504-006 (Old Side Cat Adders)	10 ²	42 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV2504-007 (South Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV2504-010 (Lab Hood)	10 ²	31 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV2504-012 (Catalyst Prep Hood)	16 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV2504-014 (Old Side Nedermans)	10 ²	40 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV2504-031 (North Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. <u>SV2514-006 (THROX)</u>	<u>54²</u>	<u>90²</u>	<u>40 CFR 336.1225, 40 CFR 52.21(c)&(d)</u>
8. <u>SV2512-001 (Site Scrubber)</u>	<u>6²</u>	<u>67²</u>	<u>40 CFR 336.1225, 40 CFR 52.21(c)&(d)</u>
9. <u>SV2512-002 (Site Scrubber)</u>	<u>6²</u>	<u>67²</u>	<u>40 CFR 336.1225, 40 CFR 52.21(c)&(d)</u>

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU2504-17
EMISSION UNIT CONDITIONS**

DESCRIPTION

Mixing process in 8210 Kettle with product. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.

The most recent PTI for this emission unit is PTI No. 140-20.

Flexible Group ID: FGMONMACT, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

• Vent recovery system consisting of two parallel condenser trains. Each condenser train includes two shell-and tube condensers, the first condenser of each train (24608 & 24610) uses service water as coolant, and the second condenser of each train (24609 & 24611) uses a chilled mix of water and glycol as coolant. The condenser trains (24608/24609 and 24610/24611) typically operate in parallel, but only one set of condensers is required to operate at any given time.

- FGTHROX
- FGSITESCRUBBERS

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I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	0.56 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU2504-17	SC V.1, SC VI.2, SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2504-17, except for packaging and filtering operations, unless the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-17 emissions are being exhausted is 40°F or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

2. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCRUBBERS unless one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

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- a. FGTHROX is operated in accordance with the requirements of FGTHROX.
- b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCRUBBERS.
- c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCRUBBERS.

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ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2504-17, except for packaging and filtering operations, unless the vent recovery system is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes operating one service water condenser and one chilled water/glycol condenser in series and includes meeting the requirements of SC III.1.2 **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

2. The permittee shall equip and maintain each condenser (24608, 24609, 24610, and 24611) with a coolant outlet temperature indicator. The permittee shall calibrate the coolant outlet temperature indicators in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a).
 - b. FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b) or (c).

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify VOC emission rates from EU2504-17 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1225, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-17 exhausts with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2504-17 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

- Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
- Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2504-002 (Filter Press Ventilation)	27 ²	47 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV2504-006 (Old Side Cat Adders)	10 ²	42 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV2504-007 (South Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV2504-010 (Lab Hood)	10 ²	31 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV2504-012 (Catalyst Prep Hood)	16 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV2504-014 (Old Side Nedermans, SDO, MDO, TDO)	10 ²	40 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV2504-015 (Old Side Precoat Tanks)	10 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV2504-031 (North Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
9. SV2514-006 (THROX)	54 ²	90 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)
10. SV2512-001 (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)
11. SV2512-002 (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

General Business

**EU2504-18
EMISSION UNIT CONDITIONS**

DESCRIPTION

Mixing process in 8220 Kettle with product. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and UU.

The most recent PTI for this emission unit is PTI No. 141-20.

Flexible Group ID: FGMONMACT, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

- Vent recovery system consisting of two parallel condenser trains. Each condenser train includes two shell-and tube condensers, the first condenser of each train (24608 & 24610) uses service water as coolant, and the second condenser of each train (24609 & 24611) uses a chilled mix of water and glycol as coolant. The condenser trains (24608/24609 and 24610/24611) typically operate in parallel, but only one set of condensers is required to operate at any given time.
- FGTHROX
- FGSITESCRUBBERS

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I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	0.53 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU2504-18	SC V.1, SC VI.2, SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2504-18, except for packaging and filtering operations, unless the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-18 emissions are being exhausted is 40°F or less.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCRUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCRUBBERS.
 - c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCRUBBERS.

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IV. DESIGN/EQUIPMENT PARAMETER(S)

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

1. The permittee shall not operate EU2504-18, except for packaging and filtering operations, unless the vent recovery system is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes operating one service water condenser and one chilled water/glycol condenser in series and includes meeting the requirements of SC III.1.2 **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

2. The permittee shall equip and maintain each condenser (24608, 24609, 24610, and 24611) with a coolant outlet temperature indicator. The permittee shall calibrate the coolant outlet temperature indicators in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

3. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

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a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a).

b. FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b) or (c).

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify VOC emission rates from EU2504-18 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

2. The permittee shall monitor and record, on a continuous basis, the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-18 exhausts with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2504-18 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. (R 336.1213(3)(c), R 336.2001(5))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2504-006 (Old Side Cat Adders)	10 ²	42 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV2504-007 (South Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV2504-010 (Lab Hood)	10 ²	31 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV2504-012 (Catalyst Prep Hood)	16 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV2504-014 (Old Side Nedermans, SDO, MDO, TDO)	10 ²	40 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV2504-031 (North Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV2514-006 (THROX)	54 ²	90 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)
8. SV2512-001 (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)
9. SV2512-002 (Site Scrubber)	6 ²	67 ²	40 CFR 336.1225, 40 CFR 52.21(c)&(d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU2504-19
EMISSION UNIT CONDITIONS**

DESCRIPTION

Mixing process in 8240 Kettle with product. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and UU.

The most recent PTI for this emission unit is PTI No. 142-20.

Flexible Group ID: FGMONMACT, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

- Vent recovery system consisting of two parallel condenser trains. Each condenser train includes two shell-and tube condensers, the first condenser of each train (24608 & 24610) uses service water as coolant, and the second condenser of each train (24609 & 24611) uses a chilled mix of water and glycol as coolant. The condenser trains (24608/24609 and 24610/24611) typically operate in parallel, but only one set of condensers is required to operate at any given time.
- FGTHROX
- FGSITESCRUBBERS

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I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	1.30 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU2504-19	SC VI.2, SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2504-19, except for packaging and filtering operations, unless the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-19 emissions are being exhausted is 40°F or less.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

2. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCRUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

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- a. FGTHROX is operated in accordance with the requirements of FGTHROX.
- b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCRUBBERS.
- c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCRUBBERS.

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IV. DESIGN/EQUIPMENT PARAMETER(S)

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

1. The permittee shall not operate EU2504-19, except for packaging and filtering operations, unless the vent recovery system is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes operating one service water condenser and one chilled water/glycol condenser in series and includes meeting the requirements of SC III.1.2 **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

2. The permittee shall equip and maintain each condenser (24608, 24609, 24610, and 24611) with a coolant outlet temperature indicator. The permittee shall calibrate the coolant outlet temperature indicators in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a).
 - b. FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b) or (c).

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify VOC emission rates from EU2504-19 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-19 exhausts with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2504-19 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2504-006 (Old Side Cat Adders)	10 ²	42 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV2504-007 (South Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV2504-010 (Lab Hood)	10 ²	31 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV2504-012 (Catalyst Prep Hood)	16 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV2504-014 (Old Side Nedermans, SDO, MDO, TDO)	10 ²	40 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV2504-031 (North Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. <u>SV2514-006</u> (THROX)	<u>54²</u>	<u>90²</u>	<u>40 CFR 336.1225,</u> <u>40 CFR 52.21(c)&(d)</u>
8. <u>SV2512-001</u> (Site Scrubber)	<u>6²</u>	<u>67²</u>	<u>40 CFR 336.1225,</u> <u>40 CFR 52.21(c)&(d)</u>
9. <u>SV2512-002</u> (Site Scrubber)	<u>6²</u>	<u>67²</u>	<u>40 CFR 336.1225,</u> <u>40 CFR 52.21(c)&(d)</u>

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IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU2504-20
EMISSION UNIT CONDITIONS**

DESCRIPTION

The Bis H process consisting of reaction followed by two-pass distillation to remove impurities. Emissions are controlled by a vent recovery system consisting of two parallel condenser trains, condensers 24608/24609 and condensers 24610/24611.

The most recent PTI for this emission unit is PTI No. 143-20.

Flexible Group ID: [NAFGTHROX](#), [FGSITESCRUBBERS](#), [FGSITEBLOWER](#)

POLLUTION CONTROL EQUIPMENT

• Vent recovery system consisting of two parallel condenser trains. Each condenser train includes two shell-and tube condensers, the first condenser of each train (24608 & 24610) uses service water as coolant, and the second condenser of each train (24609 & 24611) uses a chilled mix of water and glycol as coolant. The condenser trains (24608/24609 and 24610/24611) typically operate in parallel, but only one set of condensers is required to operate at any given time.

- [FGTHROX](#)
- [FGSITESCRUBBERS](#)

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I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	3.1 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU2504-20	SC VI.2, VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2504-20 unless the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-20 emissions are being exhausted is 40°F or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

2. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCRUBBERS unless one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

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- a. FGTHROX is operated in accordance with the requirements of FGTHROX.
- b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCRUBBERS.
- c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCRUBBERS.

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IV. DESIGN/EQUIPMENT PARAMETER(S)

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

1. The permittee shall not operate EU2504-20 unless the vent recovery system is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes operating one service water condenser and one chilled water/glycol condenser in series and meeting the requirements of SC III.1.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall equip and maintain each condenser (24608, 24609, 24610, and 24611) with a coolant outlet temperature indicator. The permittee shall calibrate the coolant outlet temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall not operate equipment in EU2504-13 that exhausts to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a).
 - b. FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b) or (c).

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the coolant outlet temperature of the chilled water/glycol condenser train (24608/24609 or 24610/24611) through which EU2504-20 exhausts with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2504-20 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2504-007 (South Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c)&(d)
2. SV2504-031 (North Vent Condenser Discharge)	2 ²	74 ²	R 336.1225, 40 CFR 52.21(c)&(d)
3. <u>SV2514-006 (THROX)</u>	<u>54²</u>	<u>90²</u>	<u>40 CFR 336.1225,</u> <u>40 FR 52.21(c)&(d)</u>
4. <u>SV2512-001 (Site Scrubber)</u>	<u>6²</u>	<u>67²</u>	<u>40 CFR 336.1225,</u> <u>40 FR 52.21(c)&(d)</u>
5. <u>SV2512-002 (Site Scrubber)</u>	<u>6²</u>	<u>67²</u>	<u>40 CFR 336.1225,</u> <u>40 CFR 52.21(c)&(d)</u>

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ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

**EU2505-06
EMISSION UNIT CONDITIONS**

DESCRIPTION

200 gallon Myers change can mixer used to produce emulsion and silicone blends. Emissions are controlled by baghouse FL2-25703 and condenser DV25714. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart UU.

The most recent PTI for this emission unit is PTI No. 161-20.

Flexible Group ID: FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Service Water Condenser (DV25714)
- Baghouse (FL2-25703)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	0.7 tpy* ²	Based on a 12-month rolling time period as determined at the end of each calendar month.	EU2505-06	SC V.1, SC VI.2, SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2505-06 unless the exit gas temperature of the condenser (DV25714) is 60°C or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2505-06 unless the condenser (DV25714) and baghouse (FL2-25703) are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 and VI.3 apply to the condenser and dust collector.² (**R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d)**)
2. The permittee shall equip and maintain the condenser (DV25714) with an exit gas temperature indicator. The permittee shall calibrate the exit gas temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request from the AQD District Supervisor, the permittee may be required to verify the VOC emission rates from EU2505-06 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of the condenser (DV25714) with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall perform, and record the results of, a monthly visible emission observation of SV2505-016 during routine operating conditions as an indicator of satisfactory operation. This observation need not be performed using Method 9. If abnormal visible emissions are observed, the permittee shall take corrective actions as necessary to ensure the baghouse (FL2-25703) is operating in a satisfactory manner. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))
4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2505-06 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))

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- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2505-015 (condenser vent)	6 ²	31 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV2505-016 (baghouse vent)	8 ²	22 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV2505-022 ^A (flaker room/SEB warehouse)	30.5 x 30.5 ²	23 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

^A. This stack is not required to be discharged unobstructed vertically upwards to the ambient air

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU2505-07
EMISSION UNIT CONDITIONS**

DESCRIPTION

Myers change can mixer (200 gallons) producing emulsion and silicone blends. Emissions are controlled by condenser 25714 and baghouse FL2-25703. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 159-20.

Flexible Group ID: FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Condenser 25714
- Baghouse FL2-25703

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	0.7 tpy* ²	12-month rolling time period as determined at the end of each calendar month	EU2505-07	SC VI.2, VI.5	R 336.1702(a)
2. PM	1.39 pph ²	Hourly	EU2505-07	SC VI.3, VI.4	R 336.1331, 40 CFR 52.21(c)&(d)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2505-07 activities exhausting to the condenser (25714) unless the exit gas temperature of the condenser (25714) is 60°C or less.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2505-07 activities exhausting to the condenser (25714) unless the condenser (25714) is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall not operate EU2505-07 activities exhausting to the baghouse (FL2-25703) unless the baghouse (FL2-25703) is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c)&(d))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c)&(d))**
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of the condenser (25714) with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall perform, and record the results of, a monthly visible emission observation of SV2505-07 during routine operating conditions as an indicator of satisfactory operation. This observation need not be performed using Method 9. If abnormal visible emissions are observed, the permittee shall take corrective actions as necessary to ensure the baghouse (FL2-25703) is operating in a satisfactory manner. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c)&(d))**
4. The permittee shall keep, in a satisfactory manner acceptable to the AQD District Supervisor, records of all visible emission readings for SV2505-016. At a minimum, records shall include the date, time, name of observer/reader, whether the reader is certified, status of visible emissions, and records of maintenance performed when visible emissions were observed. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c)&(d))**
5. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2505-07 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

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VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2505-015 (Condenser vent)	6 ²	31 ²	R 336.1225, 40 CFR 52.21(c)&(d)
2. SV2505-016 (Baghouse vent)	8 ²	22 ²	R 336.1225, 40 CFR 52.21(c)&(d)
3. SV2505-022 (Flaker Room/SEB Warehouse)	30.5 x 30.5 ²	23 ²	R 336.1225, 40 CFR 52.21(c)&(d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU2703-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

Hydrosilylation and alkoxylation process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 155-80H.

Flexible Group ID: FGTHROX, FGSITEBLOWER, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Shell and tube condensers (9214 and 9228).
- PP S/D (Pilot Plant Shutdown) scrubber (9163).
- Spray tower scrubbers (9208).
- Activated carbon drums (23228 and 23229)
- FGTHROX

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	3.19 pph* ²	Hourly	EU2703-01	SC V.1, VI.2	R 336.1702(a)
2. VOC	2.58 tpy* ²	12-month rolling time period as determined at the end of each calendar month.	EU2703-01	SC V.1, VI.2, VI.3	R 336.1702(a)
3. Methallyl Chloride (CAS 563-47-3)	0.025 pph* ¹	Hourly	EU2703-01	SCV.1	R 336.1225

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2703-01 when exhausting to the condensers (9214 and 9228) unless the coolant return temperature of the condensers (9214 and 9228) is -10°C or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. Except while manufacturing a compound that emits methallyl chloride, the permittee shall not operate EU2703-01 unless the liquid flow rate of the spray tower scrubber (9208) is 6 gallons per minute or more.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
3. In the event of venting to the PP S/D scrubber (9163), the permittee shall not operate EU2703-01 unless the liquid flow rate of the PP S/D scrubber (9163) is 6 gallons per minute or more.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

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4. The permittee shall not operate EU2703-01 while manufacturing a compound that emits methallyl chloride unless one of the following conditions are met:² **(R 336.1225, R 336.1702(a), R 336.1910)**
 - a. The first tote of activated carbon drums (23228 and 23229) is replaced whenever the second tote's weight increases by 50 pounds and the second tote becomes the first tote.
 - b. The equipment exhaust is routed to FGTHROX and FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of FGTHROX.
5. The permittee shall not operate EU2703-01 when exhausting to FGTHROX unless FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of FGTHROX.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2703-01 unless the condensers (9214 and 9228) are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. Except while manufacturing a compound that emits methallyl chloride, the permittee shall not operate EU2703-01 unless the spray tower scrubber (9208) is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. In the event of venting to the PP S/D scrubber (9163), the permittee shall not operate EU2703-01 unless the PP S/D scrubber (9163) is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.3.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. While manufacturing a compound that emits methallyl chloride, the permittee shall not operate EU2703-01 unless FGTHROX or the activated carbon drums (23228 and 23229) is/are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.4.² **(R 336.1225, R 336.1702(a), R 336.1910)**
5. The permittee shall not operate EU2703-01 unless FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.5.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
6. The permittee shall equip and maintain the condensers (9214 and 9228) with coolant return temperature indicators. The permittee shall calibrate the coolant return temperature indicators in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
7. The permittee shall equip and maintain the scrubbers (9208 and 9163) with liquid flow rate indicators. The permittee shall calibrate the liquid flow rate indicators in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
8. The permittee shall equip and maintain activated carbon drums (23228 and 23229) with scales that measure each carbon tote's weight whenever the carbon adsorption system is operating. The permittee shall calibrate the scales in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Upon request from the AQD District Supervisor, the permittee shall verify the VOC and/or methallyl chloride emission rates from EU2703-01, by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

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Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A
Methallyl chloride	40 CFR Part 63, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a))
2. The permittee shall monitor and record, on a continuous basis, the coolant return temperature of the condensers (9214 and 9228), the liquid flow rate of the scrubbers (9208 and 9163), and the weight of each activated carbon tote (23228 and 23229) with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2703-01 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
4. The permittee shall keep, in a satisfactory manner, records of the date and time of each use of PP S/D scrubber (9163). The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
5. The permittee shall keep, in a satisfactory manner, records of the date and time a compound that emits methallyl chloride is manufactured. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1225, R 336.1702(a), R 336.1910)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))

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- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2703-064 (Carbon drums vent)	2 ²	82 ²	R 336.1225 40 CFR 52.21 (c) & (d)
2. SV2703-063 (Scrubber vent)	2 ²	84 ²	R 336.1225 40 CFR 52.21 (c) & (d)
3. SV2703-021 ^A (9008 tank vent)	1 ²	36 ²	R 336.1225 40 CFR 52.21 (c) & (d)
4. SV2703-048 ^A (Tank 9021C vent)	1 ²	22 ²	R 336.1225 40 CFR 52.21 (c) & (d)
5. SV2703-037 ^A (Waste tank 9010 vent)	1 ²	26 ²	R 336.1225 40 CFR 52.21 (c) & (d)
6. SV2703-043 ^A (PP S/D scrubber 9163)	2 ²	101 ²	R 336.1225 40 CFR 52.21 (c) & (d)
7. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225 40 CFR 52.21 (c) & (d)

^A. This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU2703-03
EMISSION UNIT CONDITIONS**

DESCRIPTION

Chloropropyl trichlorosilane process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart UU. ~~EU2703-03 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.~~

The most recent PTI for this emission unit is PTI No. 920-84C.

Flexible Group ID: FGTHROX, FGSITEBLOWER, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Venturi scrubbers 9390 A and B (scrubbers alternate in operation and act as backup for one another).
- FGTHROX

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	6.7 tpy*. ²	Based on a 12-month rolling time period as determined at the end of each calendar month	EU2703-03	SC VI.2, VI.3	R 336.1225, R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2703-03 unless one of the following is true.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. EU2703-03 emissions are exhausted to 9390 A or B scrubber and the water flow rate for the scrubber in use is 6.0 gallons per minute or greater.
 - b. EU2703-03 emissions are exhausted to FGTHROX and FGTHROX is installed, maintained, and operated in a satisfactory manner as provided in the Special Conditions for FGTHROX.
2. The permittee shall not load the allyl chloride storage tank unless a vapor-tight connection between the allyl chloride storage tank and the loading vessel is established and maintained whenever allyl chloride is being loaded.² **(R 336.1225, R 336.1702(a), R 336.1910)**
3. ~~Proper operation of scrubbers 9390 A and B means the total scrubber water flow rate for scrubbers 9390 A and B shall not be less than 6.0 gallons per minute, respectively. An excursion is a flow rate less than 6.0 gallons per minute. An excursion is a liquid flow rate less than the operational parameter limit or outside the acceptable range defined in this condition or demonstrated during testing. Upon detecting an excursion of total scrubber water flow rate limit, the permittee shall restore operation of scrubbers 9390 A and B to the normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~

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IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2703-03 while exhausting emissions to 9390 A and B scrubbers unless the scrubber in use is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 that apply to the scrubbers.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall equip and maintain scrubber 9390 A and scrubber 9390 B with a total scrubber water flow rate indicator. The permittee shall calibrate the total scrubber water flow rate indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, ~~40 CFR 64.6(c)(1)(i), 40 CFR 64.6(c)(1)(iii)~~)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the total scrubber water flow rate for the scrubber in use of scrubbers 9390 A and 9390 B with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(1))
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2703-03 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
4. ~~For venturi scrubbers 9390 A and B, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))~~
5. ~~For venturi scrubbers 9390 A and B, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.6(c)(3), 40 CFR 64.7(c))~~

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~~6. For venturi scrubbers 9390 A and B, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))~~

~~7. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))~~

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- ~~4. Each semiannual report of monitoring and deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no excursions and/or exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))~~
- ~~5. Each semiannual report of monitoring and deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))~~
- ~~4. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))~~

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air.

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2703-011 (9390 A and B CPTC Scrubber Vent) ^A	2 ²	78 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c)&(d)

^A This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

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IX. OTHER REQUIREMENT(S)

1. ~~If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))~~
2. The permittee shall comply with all requirements of 40 CFR Part 64. ~~(40 CFR Part 64)NA~~

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Footnotes:

- ¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
- ²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU2703-08
EMISSION UNIT CONDITIONS**

DESCRIPTION

9140 Batch Kettle and associated equipment. This kettle is used for batch production of several materials and also used as a neutralization kettle for highly acidic products and alkoxylation startup material. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, and the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 155-20.

Flexible Group ID: FGMONMACT, FGTHROX, FGSITEBLOWER, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Scrubber 9254
- Scrubber 9255
- FGTHROX

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOCs	11.83 tpy* ²	12-month rolling time period as determined at the end of each calendar month	EU2703-08	SC VI.2, SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2703-08 unless one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
 - a. When exhausting to scrubber 9254, the scrubber liquid flow rate of scrubber 9254 is 4 gallons per minute or more.
 - b. When exhausting to scrubber 9255, the scrubber liquid flow rate of scrubber 9255 is 4 gallons per minute or more.
 - c. When exhausting to FGTHROX, FGTHROX is operated in accordance with the requirements of FGTHROX.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2703-08 unless one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
 - a. When exhausting to scrubber 9254, scrubber 9254 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(a).
 - b. When exhausting to scrubber 9255, scrubber 9255 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(b).

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- c. When exhausting to FGTHROX, FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(c).
2. The permittee shall equip and maintain each scrubber (9254 and 9255) with a liquid flow rate indicator. The permittee shall calibrate each liquid flow rate indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
2. When exhausting to either scrubber (9254 or 9255), the permittee shall monitor and record, on a continuous basis, the scrubber liquid flow rate of the scrubber to which exhaust is being directed with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2703-08 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2703-004 (Scrubber 9255)	1.5 ²	65 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV2703-005 (Scrubber 9254)	2 ²	65 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV2703-008 ^a (Kettle Room Drum-off)	14 ²	57 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
4. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

^a This stack is not required to be discharged unobstructed vertically upwards to the ambient air

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU2703-09
EMISSION UNIT CONDITIONS**

DESCRIPTION

9250 Batch Kettle. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart MMM and FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 157-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#), FGTHROX

POLLUTION CONTROL EQUIPMENT

- Scrubber (9255)
- Scrubber (9254)
- FGTHROX

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	9.47 pph ^{*.2}	Hourly	EU2703-09	SC V.1, VI.2	R 336.1702(a)
2. VOC	3.82 tpy ^{*.2}	12-month rolling time period as determined at the end of each calendar month.	EU2703-09	SC VI.2, VI.3	R 336.1702(a)
3. PM	0.24 lb/hr ²	Hourly	EU2703-09	SC V.1, VI.2	R 336.1331
4. PM10	0.24 lb/hr ²	Hourly	EU2703-09	SC V.1, VI.2	40 CFR 52.21 (c) & (d)
5. PM2.5	0.24 lb/hr ²	Hourly	EU2703-09	SC V.1, VI.2	40 CFR 52.21 (c) & (d)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2703-09 unless one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21 (c) & (d)**)
 - a. When exhausting to scrubber 9254, the scrubber liquid flow rate of scrubber 9254 is 4 gallons per minute or more.
 - b. When exhausting to scrubber 9255, the scrubber liquid flow rate of scrubber 9255 is 4 gallons per minute or more.
 - c. When exhausting to FGTHROX, FGTHROX is installed, maintained, and operated in accordance with the requirements of FGTHROX.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2703-09 unless the scrubbers (9255 and 9254) or FGTHROX are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the applicable requirements of SC III.1.² (**R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d)**)

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2. The permittee shall equip and maintain each scrubber (9255 and 9254) with a liquid flow rate indicator. The permittee shall calibrate each liquid flow rate indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request from the AQD District Supervisor, the permittee shall verify the VOC, PM, PM10, and/or PM2.5 emission rates from EU2703-09, by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), 40 CFR 52.21(c) & (d))
2. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of each scrubber (9255 and 9254) with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), 40 CFR 52.21(c) & (d))
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2703-09 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))

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3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2703-004 ^A (Scrubber 9255 vent)	1.5 ²	65 ²	R 336.1225 40 CFR 52.21 (c) & (d)
2. SV2703-005 ^A (Scrubber 9254 vent)	2 ²	65 ²	R 336.1225 40 CFR 52.21 (c) & (d)
3. SV2703-007 ^A (Scrubber 9253 receiver vent)	1 ²	57 ²	R 336.1225 40 CFR 52.21 (c) & (d)
4. SV2703-008 ^A (Kettle room drum-off vent)	14 ²	57 ²	R 336.1225 40 CFR 52.21 (c) & (d)
5. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225 40 CFR 52.21 (c) & (d)

^A. This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart MMM for Pesticide Active Ingredient Industry by the initial compliance date, as they apply to EU2703-09.² **(40 CFR Part 63, Subpart A and Subpart MMM)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU2703-13
EMISSION UNIT CONDITIONS**

DESCRIPTION

22270 Batch Kettle Process. Emissions are controlled by Scrubbers 9254 and 9255, Condenser 22274, and FGTHROX. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 190-20.

Flexible Group ID: FGMONMACT, FGTHROX, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Scrubbers 9254 and 9255 (only one is used at any time)
- Condenser 22274
- FGTHROX

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	14.9 pph ^{*.2}	Hourly	EU2703-13	SCV.1, VI.2	R 336.1702(a)
2. VOC	7.0 tpy ^{*.2}	12-month rolling time period as determined at the end of each calendar month	EU2703-13	SC VI.2, VI.3, VI.4	R 336.1702(a)
3. PM	0.67 lb/hr ²	Hourly	EU2703-13	SC V.1, VI.2	R 336.1331
4. PM10	0.67 lb/hr ²	Hourly	EU2703-13	SC V.1, VI.2	40 CFR 52.21 (c) & (d)
5. PM2.5	0.67 lb/hr ²	Hourly	EU2703-13	SC V.1, VI.2	40 CFR 52.21 (c) & (d)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Unless the exception in SC III.3 applies, the permittee shall not operate equipment in EU2703-13 that exhausts to Scrubbers 9254 and 9255 unless the water flow rate for the scrubber in use is 4 gallons per minute or more.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. Unless the exception in SC III.4 applies, the permittee shall not operate equipment in EU2703-13 while exhausting to Condenser 22274 unless the coolant flow rate to the condenser is 4 gallons per minute or more.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee may operate equipment in EU2703-13 that exhausts to Scrubbers 9254 and 9255 when neither scrubber is operating in a satisfactory manner as long as all of the following conditions are true.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. The equipment exhaust is routed to FGTHROX.
 - b. FGTHROX is installed, maintained, and operated in a satisfactory manner.

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4. The permittee may operate equipment that exhausts to Condenser 22274 when the condenser is not operating in a satisfactory manner as long as all of the following conditions are true.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. The equipment exhaust is routed to FGTHROX.
 - b. FGTHROX is installed, maintained, and operated in a satisfactory manner.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. Except as allowed in SC III.3, the permittee shall not operate equipment in EU2703-13 that exhausts to Scrubbers 9254 and 9255 unless the scrubber in use is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through III.4 that apply to the scrubber in use.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. Except as allowed in SC III.4, the permittee shall not operate equipment in EU2703-13 while exhausting to Condenser 22274 unless the condenser is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through III.4 that apply to the condenser.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall equip and maintain Scrubbers 9254 and 9255 with devices to continuously monitor and record each scrubber's water flow rate. The permittee shall calibrate each device in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall equip and maintain Condenser 22274 with a device to continuously monitor and record the coolant flow rate to the condenser. The permittee shall calibrate the device in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Upon request of the AQD District Supervisor, the permittee shall verify the VOC, PM, PM10, and/or PM2.5 emission rates from EU2703-13 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² **(R 336.1224, R 336.1225, R 336.2001, R 336.2003, R 336.2004)**

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. **(R 336.1213(3))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

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2. The permittee shall monitor and record, on a continuous basis, the water flow rates for Scrubber 9254 and for Scrubber 9255 with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall monitor and record, on a continuous basis, the coolant flow rate to Condenser 22274 with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2703-13 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. (R 336.1213(3)(c), R 336.2001(5))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2703-004 (9255 Scrubber) ^A	1.5 ²	65 ²	R 336.1225, 40 CFR 52.21(c)&(d)
2. SV2703-005 (9254 Scrubber) ^A	2 ²	65 ²	R 336.1225, 40 CFR 52.21(c)&(d)
3. SV2703-008 (Kettle Room Drum-Off) ^A	14 ²	57 ²	R 336.1225, 40 CFR 52.21(c)&(d)
4. SV2703-052 (22270 Kettle Vent) ^A	2 ²	57 ²	R 336.1225, 40 CFR 52.21(c)&(d)
5. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c)&(d)

^A This stack is not required to discharge unobstructed vertically upwards.

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IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU2703-17
EMISSION UNIT CONDITIONS**

DESCRIPTION

9025C dedicated waste tank in 2703 building.

The most recent PTI for this emission unit is PTI No. 26-~~44A14B~~.

Flexible Group ID: FGTHROX, FGSITEBLOWER, FGMONMACT

POLLUTION CONTROL EQUIPMENT

- This emission unit vents to FGTHROX and, when FGTHROX is not operating, scrubbers 9390 A and B.
- Emissions from transfers from the tank to tank trucks will be controlled by vapor balance back to the tank.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	0.184 tpy* ²	12-month rolling time period as determined at the end of each calendar month	EU2703-17	SC VI.2, VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2703-17 unless one of the following is true.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. EU2703-17 emissions are exhausted to 9390 A or B scrubber and the water flow rate for the scrubber in use is 6.0 gallons per minute or greater.
 - b. EU2703-17 emissions are exhausted to FGTHROX and FGTHROX is installed, maintained, and operated in a satisfactory manner as provided in the Special Conditions for FGTHROX.
2. The permittee shall not load any tank truck from EU2703-17 unless the vapor balance system is installed, maintained, and operated in a satisfactory manner.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2703-17 unless the scrubbers (either scrubber 9390 A or B) or FGTHROX are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the applicable requirements of SC III.1.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall equip and maintain scrubber 9390 A and scrubber 9390 B with a total scrubber water flow rate indicator. The permittee shall calibrate the total scrubber water flow rate indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall monitor and record, on a continuous basis, the total scrubber water flow rate for the scrubber in use of scrubbers 9390 A and 9390 B with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU2703-17 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

1. The permittee shall notify the Department if a change in land use occurs for property classified as industrial or public roadway, where this classification was relied upon to demonstrate compliance with Rule 225(1). The permittee shall submit the notification to the AQD District Supervisor, within 30 days of the actual land use change. Within 60 days of the land use change, the permittee shall submit to the AQD District Supervisor a plan for complying with the requirements of Rule 225(1). The plan shall require compliance with Rule 225(1) no later than one year after the due date of the plan submittal.¹ **(R 336.1225(4))**
2. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
3. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
4. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

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VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2703-011 (9390 A and B CPTC Scrubber Vent) ^A	2 ²	78 ²	R 336.1225, 40 CFR 52.21(c)&(d)
2. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c)&(d)
3. SV2517-001 (TOX vent) ^B	30 ²	102 ²	R 336.1225 40 CFR 52.21(c) & (d)

^A. This stack is not required to be discharged unobstructed vertically upwards to the ambient air

^B. This EU may exhaust from SV2517-001 after that stack has been installed

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU2901-12
EMISSION UNIT CONDITIONS**

DESCRIPTION

Distillation pilot process consisting of distillation column and ancillary equipment.

The most recent PTI for this emission unit is PTI No. 125-10A.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Cryogenic condenser

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	7.5 TPY ²	12-month rolling time period as determined at the end of each calendar month	EU2901-12	SC VI.3	R 336.1205(3), R 336.1702(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2901-12 unless the cryogenic condenser coolant temperature is -40°C or less, except during the phase separator cleanout operation.² (R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU2901-12 unless the cryogenic condenser is installed, maintained, and operated in a satisfactory manner, except during the phase separator cleanout operation.² (R 336.1225, R 336.1702(a))
2. The permittee shall equip and maintain the cryogenic condenser with a coolant temperature indicator.² (R 336.1225, R 336.1720(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall monitor and record, in a satisfactory manner, the cryogenic condenser's coolant temperature on a continuous basis. Monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the

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continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time, and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event.² (R 336.1225, R 336.1702(a), R 336.1910)

2. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1205(3), R 336.1702(a))
3. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the VOC emission rate from EU2901-12, using a method acceptable to the AQD District Supervisor, on file at the facility and make them available to the Department upon request.² (R 336.1205(3), R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2901-019 ^A	2 ¹	52 ¹	R 336.1225

^A This stack is not required to exhaust vertically upwards to the ambient air.

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU2901-16
EMISSION UNIT CONDITIONS**

DESCRIPTION

2901 B Module Twin Screw Extruder located in the 2901 building. The extruder operates under vacuum. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF.

The most recent PTI for this emission unit is PTI No. 180-15A.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

Xylene contact condenser 16621

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	9.9 TPY ²	12-month rolling time period as determined at the end of each calendar month	EU2901-16	SC VI.5	R 336.1702(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2901-16 unless the 16621 exhaust gas temperature is 35°C or less on an instantaneous basis.² (R 336.1225, R 336.1702(a))

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU2901-16 unless condenser 16621 is installed, maintained, and operated in a satisfactory manner.² (R 336.1225, R 336.1702(a))
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the exhaust gas temperature of condenser 16621 on a continuous basis while EU2901-16 is operating.² (R 336.1225, R 336.1702(a))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1225, R 336.1702(a))
2. The permittee shall monitor and record, in a satisfactory manner, the exhaust gas temperature of condenser 16621 on a continuous basis. Monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event.² (R 336.1225, R 336.1702(a))
3. The permittee shall calculate the VOC emission rate from EU2901-16 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1225, R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2901-010 ^A	2 ²	45 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV2901-011	12 ²	48 ²	40 CFR 52.21(c) & (d)

^A This stack is not required to exhaust vertically upwards to the ambient air.

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU303-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

Phenyl methyl fluids and resin hydrolysis and polymerization. This emission unit vents to either the condenser 3475, carbon beds, the FGTHROX, or FGSITESCUBBERS. This emission unit is subject to 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 158-20.

Flexible Group ID: FGSITESCUBBERS, FGTHROX, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser (3475)
- Carbon Beds
- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	6.52 tpy* ²	Based on a 12-month rolling time period as determined at the end of each calendar month	EU303-01	SC VI.2, SC VI.3, SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate equipment in EU303-01 that exhausts directly to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.
2. The permittee shall not operate equipment in EU303-01 that exhausts first to condenser 3475 and then to either the carbon beds, FGTHROX, or FGSITESCUBBERS unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. When exhausting to the carbon beds, the minimum exit gas temperature of condenser 3475 is 2.2°C, and the weight of the carbon drum is 23.46 kg or less.
 - b. When exhausting to FGTHROX, FGTHROX is operated in accordance with the requirements of FGTHROX.
 - c. When exhausting to Site Scrubber #1, the minimum exit gas temperature of condenser 3475 is 2.2°C, and Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - d. When exhausting to Site Scrubber #2, the minimum exit gas temperature of condenser 3475 is 2.2°C, and Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate equipment in EU303-01 that exhausts directly to either FGTHROX or FGSITESCRRUBBERS unless the one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(a).
 - b. FGSITESCRRUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(b) or (c).
2. The permittee shall not operate equipment in EU303-01 that exhausts directly to condenser 3475 and then to either the carbon beds or FGSITESCRRUBBERS unless:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. Condenser 3475 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a), and
 - b. One of the following requirements is met:
 - i. The carbon beds are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a)
 - ii. FGTHROX or FGSITESCRRUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b), (c), or (d).
3. The permittee shall equip and maintain condenser 3475 with a device to continuously monitor and record the condenser exit gas temperature. The permittee shall calibrate the exit gas temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall equip and maintain the carbon beds with a device to continuously monitor the mass of the carbon beds. The permittee shall calibrate the carbon bed mass indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall monitor and record, in a satisfactory manner, the exit gas for condenser 3475 on a continuous basis. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. When venting to the carbon beds, the permittee shall record the mass of the carbon beds, on a continuous basis, with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

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- The permittee shall calculate the VOC emission rate from EU303-01 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

- Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
- Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-303-047 (Acid Surge Tank)	2 ²	41 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV-303-055 (THROX Blower Bypass Vent)	3 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV-303-001 (DV1656 KO Bypass Vent)	6 ²	42 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV-303-057 (PhMe Fluids Carbon Bed Bypass Vent No.1)	2 ²	26 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV-303-058 (PhMe Fluids Carbon Bed Bypass Vent No.2)	2 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV-303-038 (DV3320/DV3337 Bypass Vent)	1 ²	40 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV-2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV-2512-001 (Site Scrubber)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)
9. SV-2512-002 (Site Scrubber)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)
10. SV-303-059 (Nederman Arm Vent)	8 ²	41 ²	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

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NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

General Business

**EU303-02
EMISSION UNIT CONDITIONS**

DESCRIPTION

Polymer and resin surge, mixing, filtration, and blending. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 15-22.

Flexible Group ID: FGTHROX, FGSITESCUBBERS, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	1.36 tpy* ²	Based on a 12-month rolling time period as determined at the end of each calendar month	EU303-02	SC VI.2	R 336.1702(a)
2. Vinyl Dimethylsilanol (CAS No. 5906-75-2) ¹	0.31 tpy* ¹	Based on a 12-month rolling time period as determined at the end of each calendar month	EU303-02	SC VI.3	R 336.1225

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The permittee shall not operate equipment in EU303-02 that exhausts directly to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
 - FGTHROX is operated in accordance with the requirements of FGTHROX.
 - Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.

IV. DESIGN/EQUIPMENT PARAMETER(S)

- The permittee shall not operate equipment in EU303-02 that exhausts directly to either FGTHROX or FGSITESCUBBERS unless the one of the following requirements is met:² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
 - FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(a).
 - FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(b) or (c).

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1225, R 336.1702(a))
2. The permittee shall calculate the VOC emission rate from EU303-02 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
3. The permittee shall calculate the vinyl dimethylsilanol emission rate from EU303-02 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.¹ (R 336.1225)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV303-001 (DV1656 Knock Out Tank Atmospheric Bypass Vent)	6 ²	41 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV303-010 (Local Exhaust Ventilation)	45 ²	50 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV303-011 ^a (DV1628, DV1629 and DV1617 Kettles)	2 ²	1 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV303-013 ^a (DV1630 Kettle)	2 ²	0 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV303-014 ^a (DV3305 and DV3312 Kettles)	2 ²	1 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV303-015 ^a (DV1648 Kettle)	2 ²	5 ²	R 336.1225, 40 CFR 52.21(c) & (d)

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Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
7. SV303-021 ^a (DV3314 Kettle)	2 ²	2 ²	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV303-036 (Specific Ventilation for Manways)	13 ²	44 ²	R 336.1225, 40 CFR 52.21(c) & (d)
9. SV303-037 (Specific Ventilation for Manways)	12 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
10. SV303-055 (THROX Blower Atmospheric Bypass Vent)	3 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
11. SV303-059 (Nederman Arm Vent)	8 ²	41 ²	R 336.1225, 40 CFR 52.21(c) & (d)
12. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)
13. SV2512-001 (Site Scrubber)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)
14. SV2512-002 (Site Scrubber)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU303-06
EMISSION UNIT CONDITIONS**

DESCRIPTION

Batch and semi continuous polymer and resin processing including reactors, distillation columns, strippers, receivers, storage tanks, accumulators, separators, vacuum pumps, condensers, adsorbers, filters and related equipment. This emission unit is subject to the requirements of 40 CFR Part 61, Subparts A, J, and V, and 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. [EU303-06 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.](#)

The most recent PTI for this emission unit is PTI No. 160-20A.

Flexible Group ID: FGTHROX, FGSITESCUBBERS, FGSITEBLOWER, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser (1637)
- HX Condenser (3458)
- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOCs	4.15 tpy* ²	12-month rolling time period as determined at the end of each calendar month	EU303-06	SC VI.2, SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate equipment in EU303-06 that exhausts first to condenser 1637, and then to either FGTHROX or FGSITESCUBBERS, unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. When exhausting to FGTHROX, FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. When exhausting to Site Scrubber #1, the exit gas temperature of condenser 1637 is 10°C or less and Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - c. When exhausting to Site Scrubber #1, the exit gas temperature of condenser 1637 is 10°C or less and Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.
2. The permittee shall not operate equipment in EU303-06 that exhausts first to HX condenser 3458, and then to either FGTHROX or FGSITESCUBBERS, unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. When exhausting to FGTHROX, FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. When exhausting to Site Scrubber #1, the exit gas temperature of HX condenser 3458 is 10°C or less and Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.

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- c. When exhausting to Site Scrubber #2, the exit gas temperature of HX condenser 3458 is 10°C or less and Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.
3. The permittee shall not operate equipment in EU303-06 that exhausts to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.
- ~~4. The exhaust gas temperature at the outlet of condenser 3458 on the silicone mixing process shall not exceed 50°F. An excursion of the exhaust gas temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the outlet gas temperature limit, the permittee shall restore operation of condenser 3458 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d))**~~
- ~~5. If the exhaust gas temperature at the outlet of condenser no. 1637 exceeds 50 F, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. An excursion of the exhaust gas temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the exhaust gas temperature limit, the permittee shall restore operation of condenser 1637 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(1)(i), 40 CFR 64.6(c)(2), 40 CFR 64.7(d))**~~
- ~~6. While venting to the carbon drum, if the weight of the drum exceeds 36 pounds, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. An excursion of the weight of the carbon drum is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the weight of the carbon drum limit, the permittee shall restore operation of the carbon drum to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(1)(i), 40 CFR 64.6(c)(2), 40 CFR 64.7.)**~~

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate equipment in EU303-06 that exhausts to condenser 1637 unless the condenser is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(b) or SC III.1(c).² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall not operate equipment in EU303-06 that exhausts to HX condenser 3458 unless the condenser is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b) or SC III.2(c).² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall not operate equipment in EU303-06 that exhausts to FGTHROX or FGSITESCUBBERS unless FGTHROX or FGSITESCUBBERS are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1, SC III.2, or SC III.3.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall equip and maintain each condenser (1637 and 3458) with a device to continuously monitor and record the condenser exit gas temperature. The permittee shall calibrate the exit gas temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of each condenser (1637, 3458) with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, ~~40 CFR 64.6(c)(1)(i), (ii), (iii)~~)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU303-06 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
4. ~~For condensers 1637 and 3458, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))~~
5. ~~For condensers 1637 and 3458, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.6(c)(3), 40 CFR 64.7(c))~~
6. ~~For condensers 1637 and 3458, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))~~
7. ~~The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))~~

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))

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2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- ~~4. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**~~
- ~~5. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**~~
- ~~6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**~~

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV303-001 ^a (1656 Tank Bypass)	41 ²	6 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV303-036 (Manways Ventilation)	44 ²	13 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV303-037 (Local Exhaust Ventilation)	43 ²	12 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
4. SV303-046 (1637 Condenser Bypass)	42 ²	2 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
5. SV303-049 ^a (3344 KOH Tank)	35 ²	1 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
6. SV303-055 (THROX Blower Bypass)	43 ²	3 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
7. SV2514-006 (THROX)	90 ²	54 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
8. SV2512-001 (Site Scrubber 1)	67 ²	6 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
9. SV2512-002 (Site Scrubber 2)	67 ²	6 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
10. SV2517-001 ^b (TOX Vent)	30 ²	102 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^aThis stack is not required to discharge unobstructed vertically upwards

^bThis EU may exhaust from SV2517-001 after that stack has been installed.

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IX. OTHER REQUIREMENT(S)

- ~~1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))~~
- ~~2. The permittee shall comply with all requirements of 40 CFR Part 64. (40 CFR Part 64)NA~~

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU303-09
EMISSION UNIT CONDITIONS**

DESCRIPTION

Flake resin hydrolysis process. Emissions are vented through FGTHROX, solids hopper 3460, FGSITESCUBBERS, cyclone 3446, as well as other vents. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. ~~EU303-09 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.~~

The most recent PTI for this emission unit is PTI No. 726-78C.

Flexible Group ID: FGTHROX, FGSITESCUBBERS, FGSITEBLOWER, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condensers (3458 & 24697)
- Cyclone (3446). ~~This device is a CAM subject unit for Particulate.~~
- Reverse jet fabric filter (22770). ~~This device is a CAM subject unit for Particulate.~~
- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	3.47 tpy* ²	12-month rolling time period as determined at the end of each calendar month	EU303-09	SC VI.2, SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate equipment in EU303-09 that exhausts directly to either condenser 24697, FGTHROX, or FGSITESCUBBERS unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. The exit gas temperature of condenser 24697 is 95°F or less.
 - b. FGTHROX is operated in accordance with the requirements of FGTHROX.
 - c. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - d. site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.
2. The permittee shall not operate equipment in EU303-09 that exhausts first to condenser 3458 and then to either FGTHROX, or FGSITESCUBBERS unless:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. The exit gas temperature of condenser 3458 is 10°C or less, and
 - b. One of the following requirements is met:
 - i. When exhausting to FGTHROX, FGTHROX is operated in accordance with the requirements of FGTHROX.

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- ii. When exhausting to Site Scrubber #1, Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - iii. When exhausting to Site Scrubber #2, Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.
3. The permittee shall not operate EU303-09 unless the pressure drop across cyclone 3446/reverse jet fabric filter 22770 is 0 inches water or more but not more than 20 inches water.² **(R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**
- ~~4. Proper operation of the reverse jet fabric filter (22770) means that the pressure drop is maintained within a range of 0 to 20 inches water. An excursion is a pressure drop reading outside the range defined in this condition or demonstrated during testing. Upon detecting an excursion of the pressure drop limit, the permittee shall restore operation of the reverse jet fabric filter (22770) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d))**~~

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate equipment in EU303-09 that exhausts directly to either condenser 24597, FGTHROX, or FGSITESCUBBERS unless the one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. Condenser 24697 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(a).
 - b. FGTHROX or FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(b), (c), or (d).
2. The permittee shall not operate equipment in EU303-09 that exhausts directly to condenser 3458 and then to either FGTHROX or FGSITESCUBBERS unless:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. Condenser 3458 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a), and
 - b. FGTHROX or FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b)(i), (ii), or (iii).
3. The permittee shall equip and maintain each condenser (3458 and 24697) with a device to continuously monitor and record the condenser exit gas temperature. The permittee shall calibrate the exit gas temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall not operate EU303-09 unless the cyclone/reverse jet fabric filter 3446/ 22770 are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through III.4 that apply to each control device.² **(R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**
5. The permittee shall equip and maintain cyclone/reverse jet fabric filter 3446/22770 with a pressure drop indicating device. The permittee shall calibrate pressure drop indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of condensers 3458 and 24697 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall monitor and record, on a continuous basis, the pressure drop of cyclone/reverse jet fabric filter 3446/22770 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d), 40 CFR 64.6(c)(1))**
4. The permittee shall calculate the VOC emission rate from EU303-09 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
5. ~~For the cyclone (3446) and reverse jet fabric filter (22770), upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))~~
6. ~~For the cyclone (3446) and reverse jet fabric filter (22770), except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.6(c)(3), 40 CFR 64.7(c))~~
7. ~~For the cyclone (3446), and reverse jet fabric filter (22770), the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))~~
8. ~~The permittee shall equip and maintain the cyclone (3446) and the reverse jet fabric filter (22770) with a pressure drop indicator. (40 CFR 64.6(c)(1)(i)(ii))~~

~~9. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))~~

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- ~~4. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))~~
- ~~5. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))~~
- ~~6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))~~

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV303-001 ^a (1656 Catch Tank Vent)	6 ²	41 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV303-002 (3360 Tank Vent – Maintenance Bypass Only)	2 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV303-004 (3399 Tank Vent – Maintenance Bypass Only)	1 ²	42 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV303-005 ^a (3460 Solids Hopper Vent)	3 ²	41 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV303-006 (3446 Cyclone Vent)	20 ²	46 ²	R 336.1225, 40 CFR 52.21(c) & (d)

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Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
6. SV303-007 (3416 Tank Vent – Maintenance Bypass Only)	2 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV303-037 (Nederman Arm Product Drum Off)	12 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV303-055 (THROX Blower Bypass Vent)	3 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
9. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)
10. SV2512-001 (Site Scrubber Vent)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)
11. SV2512-002 (Site Scrubber Vent)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

- ~~1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))~~
- ~~2. The permittee shall comply with all requirements of 40 CFR Part 64. (40 CFR Part 64)NA~~

Footnotes:

- ¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU303-15
EMISSION UNIT CONDITIONS**

DESCRIPTION

1600 Batch Kettle batch manufacturing process consisting of an agitated, jacketed kettle, water trap, receiver, blending and filtration, and product packaging. Emissions are controlled by FGTHROX (as well as FGSITESCUBBERS, condenser 1637, or condenser 1602 during periods where FGTHROX is out of operation or when total or partial diversion is necessary for any safety-related or operational scenarios). The process can also use a shared vacuum pump that exhausts through a glycol condenser (DV1637). This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. ~~EU303-15 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.~~

The most recent PTI for this emission unit is PTI No. 146-16A.

Flexible Group ID: FGSITESCUBBERS, FGTHROX, FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Condensers (Glycol condenser DV1637 and service water condenser DV1602). ~~These condensers are CAM subject units for VOC.~~
- FGSITESCUBBERS
- FGTHROX

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	12.1 tpy ^{2*}	12 month rolling time period as determined at the end of each calendar month	EU303-15	SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate equipment in EU303-15 that exhausts to FGTHROX unless FGTHROX is operated in accordance with the requirements of FGTHROX.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee may operate EU303-15 when FGTHROX is not operating in a satisfactory manner, as long as all of the following conditions are true.² (R 336.1224, R 336.1225, R 336.1702, R 336.1910)
 - a. The equipment exhaust is routed to either the local vents SV303-001, SV303-019, SV303-046, and SV303-055, or FGSITESCUBBERS.
 - b. When exhausting to local vents SV303-001, SV303-046, or SV303-055, emissions are routed through condenser 1637 and the minimum exit gas temperature of condenser 1637 is 10°C or less during operation under vacuum.

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- c. When exhausting to local vents SV303-001, SV303-019, or SV303-055, emissions are routed through the condenser 1602 and the maximum exit coolant temperature of condenser 1602 is 37°C or less when not operating under vacuum.
- d. When exhausting to Site Scrubber #1, Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
- e. When exhausting to Site Scrubber #2, Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.

~~3. While 1600 Batch Kettle is venting through SV303-019, the permittee shall not operate 1600 Batch Kettle unless the service water condenser DV1602 exit water temperature is 35°C or less. An excursion of the exit water temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the exit water temperature limit, the permittee shall restore operation of condenser DV1602 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~

~~4. While 1600 Batch Kettle is venting through the vacuum pump to glycol condenser DV1637, the permittee shall not operate 1600 Batch Kettle unless the glycol condenser DV1637 exit coolant temperature is 5°C or less. An excursion of the exit coolant temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the exit temperature limit, the permittee shall restore operation of condenser DV1637 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate equipment in EU303-15 that exhausts to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.
 - b. FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(d) or (e).
2. The permittee shall not operate equipment in EU303-15 that exhausts directly to condenser 1637 and then to local vents SV303-001, SV303-046, and SV303-055 unless condenser 1637 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b).² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall not operate equipment in EU303-15 that exhausts directly to condenser 1602 and then to either FGSITESCUBBERS, or local vents SV303-001, SV303-019, or SV303-055 unless condenser 1602 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(c).² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall not, during periods when FGTHROX is out of operation or when the vent to FGTHROX is diverted for any safety-related or operational reason, operate EU303-15 unless FGSITESCUBBERS, condenser 1637, or condenser 1602 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a) through (e).² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
5. The permittee shall equip and maintain condenser 1637 with a device to continuously monitor and record the condenser exit gas temperature. The permittee shall calibrate the exit gas temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(1)(i), 40 CFR 64.6(c)(1)(iii))

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6. The permittee shall equip and maintain condenser 1602 with a device to continuously monitor and record the condenser exit coolant temperature. The permittee shall calibrate the exit gas temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, ~~40 CFR 64.6(c)(1)(i), 40 CFR 64.6(c)(1)(iii)~~)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a))
2. The permittee shall monitor and record, in a satisfactory manner, the exit gas temperature for condenser 1637 on a continuous basis. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall monitor and record, in a satisfactory manner, the exit coolant temperature for condenser 1602 on a continuous basis. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall calculate the VOC emission rate from EU303-15 monthly, including the emission rate from the operational scenario as described in SC IV.4, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
- ~~5. For condensers DV1602 and DV1637, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))~~
- ~~6. For condensers DV1602 and DV1637, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.6(c)(3), 40 CFR 64.7(c))~~

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~~7. For condensers DV1602 and DV1637, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))~~

~~8. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))~~

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- ~~4. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))~~
- ~~5. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))~~
- ~~6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))~~

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV303-010 Building Exhaust	45 ²	50 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV303-019 1600 and 1650 Kettles	2 ²	36 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV303-037 Local Exhaust Ventilation	12 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV303-046 1637 Condenser	2 ²	42 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV303-001 DV1656 Knock Out Tank Atmospheric Bypass Vent	6 ²	41 ²	R 336.1225, 40 CFR 52.21(c) & (d)

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Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
6. SV303-055 THROX Blower Atmospheric Bypass Vent	3 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV2517-001 ^a (TOX)	30 ²	102 ²	R 336.1225, 40 CFR 52.21(c) & (d)
9. SV2512-001 (Site Scrubber No. 1)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)
10. SV2512-002 (Site Scrubber No. 2)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This EU may exhaust from SV2517-001 after that stack has been installed.

IX. OTHER REQUIREMENTS

~~1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))~~

~~2. The permittee shall comply with all requirements of 40 CFR Part 64. (40 CFR Part 64)~~
 NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU303-16
EMISSION UNIT CONDITIONS**

DESCRIPTION

1650 Batch Kettle batch manufacturing process consisting of an agitated, jacketed kettle, water trap, receiver, blending and filtration, and product packaging. Emissions are controlled by FGTHROX (as well as FGSITESCUBBERS, condenser 1637, or condenser 3420 during periods where FGTHROX is out of operation or when total or partial diversion is necessary for any safety-related or operational scenarios). This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. [EU303-16 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.](#)

The most recent PTI for this emission unit is PTI No. 147-16A.

Flexible Group ID: FGSITESCUBBERS, FGTHROX, FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Service water condenser DV3420 and glycol condenser DV1637. [These devices are CAM subject units for VOC.](#)
- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	12.1 tpy ²	12 month rolling time period as determined at the end of each calendar month	EU303-16	SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate equipment in EU303-16 that exhausts to FGTHROX unless FGTHROX is operated in accordance with the requirements of FGTHROX.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee may operate EU303-16 when FGTHROX is not operating in a satisfactory manner, as long as all of the following conditions are true.² (R 336.1224, R 336.1225, R 336.1702, R 336.1910)
 - a. The equipment exhaust is routed to either the local vents SV303-001, SV303-019, SV303-046, and SV303-055, or FGSITESCUBBERS.
 - b. When exhausting to local vents SV303-001, SV303-046, or SV303-055, emissions are routed through condenser 1637 and the minimum exit gas temperature of condenser 1637 is 10°C or less during operation under vacuum.
 - c. When exhausting to local vents SV303-001, SV303-019, or SV303-055, emissions are routed through the condenser 3420 and the maximum exit coolant temperature of condenser 3420 is 37°C or less when not operating under vacuum.

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- d. When exhausting to Site Scrubber #1, Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - e. When exhausting to Site Scrubber #2, Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.
3. ~~While 1650 Batch Kettle is venting through SV303-019, the permittee shall not operate 1650 Batch Kettle unless the service water condenser DV3420 exit water temperature is 35°C or less. An excursion of the exit water temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the exit water temperature limit, the permittee shall restore operation of condenser DV3420 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~
4. ~~While 1650 Batch Kettle is venting through the vacuum pump to glycol condenser DV1637, the permittee shall not operate 1650 Batch Kettle unless the glycol condenser DV1637 exit coolant temperature is 5°C or less. An excursion of the exit coolant temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the exit coolant temperature limit, the permittee shall restore operation of condenser DV1637 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate equipment in EU303-16 that exhausts to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.
 - b. FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(d) or (e).
2. The permittee shall not operate equipment in EU303-16 that exhausts directly to condenser 1637 and then to local vents SV303-001, SV303-046, and SV303-055 unless condenser 1637 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b).² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall not operate equipment in EU303-16 that exhausts directly to condenser 3420 and then to either FGSITESCUBBERS, or local vents SV303-001, SV303-019, or SV303-055 unless condenser 3420 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(c).² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall not, during periods when FGTHROX is out of operation or when the vent to FGTHROX is diverted for any safety-related or operational reason, operate EU303-16 unless FGSITESCUBBERS, condenser 1637, or condenser 3420 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a) through (e).² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
5. The permittee shall equip and maintain condenser 1637 with a device to continuously monitor and record the condenser exit gas temperature. The permittee shall calibrate the exit gas temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(1)(i)(ii), 40 CFR 64.6(c)(1)(iii))
6. The permittee shall equip and maintain condenser 3420 with a device to continuously monitor and record the condenser exit coolant temperature. The permittee shall calibrate the exit gas temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(1)(i)(ii), 40 CFR 64.6(c)(1)(iii))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a))
2. The permittee shall monitor and record, in a satisfactory manner, the exit gas temperature for condenser 1637 on a continuous basis. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(4))
3. The permittee shall monitor and record, in a satisfactory manner, the exit coolant temperature for condenser 3420 on a continuous basis. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(4))
4. The permittee shall calculate the VOC emission rate from EU303-16 monthly, including the emission rate from the operational scenario as described in SC IV.4, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
- ~~5. For condensers DV3420 and DV1637, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))~~
- ~~6. For condensers DV3420 and DV1637, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.6(c)(3), 40 CFR 64.7(c))~~
- ~~7. For condensers DV3420 and DV1637, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))~~

~~8. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))~~

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
- ~~4. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))~~
- ~~5. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))~~
- ~~6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))~~

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV303-010 Building Exhaust	45 ²	50 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV303-019 1600 and 1650 Kettles	2 ²	36 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV303-037 Local Exhaust Ventilation	12 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV303-046 1637 Condenser	2 ²	42 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV303-001 DV1656 Knock Out Tank Atmospheric Bypass Vent	6 ²	41 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV303-055 THROX Blower Atmospheric Bypass Vent	3 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV2517-001 ^a (TOX)	30 ²	102 ²	R 336.1225, 40 CFR 52.21(c) & (d)

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Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
9. SV2512-001 (Site Scrubber No. 1)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)
10. SV2512-002 (Site Scrubber No. 2)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This EU may exhaust from SV2517-001 after that stack has been installed.

IX. OTHER REQUIREMENTS

- ~~1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))~~
- ~~2. The permittee shall comply with all requirements of 40 CFR Part 64. (40 CFR Part 64)NA~~

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EU303-19
EMISSION UNIT CONDITIONS

DESCRIPTION

Phenyl methyl polymerization semi-continuous process consisting of an agitated kettle, water trap, storage tanks, distillation column, receivers, filters, vacuum pumps, and related equipment. Some equipment vents through condenser 3469 or FGTHROX; other equipment vents through condenser 3475 to either carbon beds or FGTHROX. FGSITESCUBBERS are used as control equipment if FGTHROX is not in operation. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.

The most recent PTI for this emission unit is PTI No. 166-20A.

Flexible Group ID: FGTHROX, FGSITESCUBBERS, FGSITEBLOWER, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser (3469)
- Condenser (3475)
- Carbon Beds
- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOCs	2.06 tpy ^{*.2}	12-month rolling time period as determined at the end of each calendar month	EU303-19	SC VI.2, SC VI.3, SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate equipment in EU303-19 that exhausts directly to either condenser 3469, FGTHROX, or FGSITESCUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. The exit gas temperature of condenser 3469 is 25°C or less.
 - b. FGTHROX is operated in accordance with the requirements of FGTHROX.
 - c. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - d. site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.
2. The permittee shall not operate equipment in EU303-19 that exhausts first to condenser 3475 and then to either the carbon beds, FGTHROX, or FGSITESCUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. When exhausting to the carbon beds, the exit gas temperature of condenser 3475 is 2.22°C or less and the weight of the carbon drum is 23.46 kg or less.

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- b. When exhausting to FGTHROX, FGTHROX is operated in accordance with the requirements of FGTHROX.
- c. When exhausting to Site Scrubber #1, the exit gas temperature of 3475 is 2.22°C or less and Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
- d. When exhausting to Site Scrubber #2, the exit gas temperature of 3475 is 2.22°C or less and Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate equipment in EU303-19 that exhausts directly to either condenser 3469, FGTHROX, or FGSITESCUBBERS unless the one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. Condenser 3469 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(a).
 - b. FGTHROX or FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(b), (c), or (d).
2. The permittee shall not operate equipment in EU303-19 that exhausts directly to condenser 3475 and then to either the carbon beds, FGTHROX, or FGSITESCUBBERS unless:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. Condenser 3475 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a), (c), or (d),
 - b. When exhausting to the carbon beds, the carbon beds are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a),
 - c. When exhausting to FGTHROX or FGSITESCUBBERS, FGTHROX or FGSITESCUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b), (c), or (d).
3. The permittee shall equip and maintain each condenser (3469 and 3475) with a device to continuously monitor and record the condenser exit gas temperature. The permittee shall calibrate the exit gas temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall equip and maintain the carbon beds with a device to continuously monitor the mass of the carbon drum. The permittee shall calibrate the carbon drum mass indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of each condenser (3469, 3475) with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

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3. When venting to the carbon beds, the permittee shall record the mass of the carbon drum, on a continuous basis, with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU303-19 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV303-001 ^a (1656 Tank Bypass)	6 ²	42 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV303-024 (3463 Reactor Bypass)	1 ²	57 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV303-026 ^a (3434 Volatile Tank)	1 ²	42 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
4. SV303-027 ^a (3435 Volatile Tank)	1 ²	43 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
5. SV303-055 (THROX Blower Bypass)	3 ²	43 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
6. SV303-057 (Carbon Beds Bypass #1)	2 ²	26 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
7. SV303-058 (Carbon Beds Bypass #2)	2 ²	43 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
8. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
9. SV2512-001 (Site Scrubber 1)	6 ²	67 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
10. SV2512-002 (Site Scrubber 2)	6 ²	67 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
11. SV2517-001 ^b (TOX Vent)	30 ²	102 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^aThis stack is not required to discharge unobstructed vertically upwards

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PTI No: MI-PTI-A4043-2019b

^bThis EU may exhaust from SV2517-001 after that stack has been installed.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU304-02
EMISSION UNIT CONDITIONS**

DESCRIPTION

Alkylsilane process including reactors, distillation columns, condensers, scrubber, storage tanks, tanker station, and related equipment. Tanks that do not vent include 259. This emission unit vents to FGTHROX and FGSITESCUBBERS. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU304-02 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 616-92B.

Flexible Group ID: FGTHROX, FGSITESCUBBERS, FGSITEBLOWER, FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Condensers (1154) - This is a CAM subject unit for VOCs
- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC ^A	13.10 pph ²	Hourly	EU304-02	SC VI.1	R 336.1225, R 336.1702(a)
2. VOC ^A	7.3 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU304-02	SC VI.1 & VI.2	R 336.1205, R 336.1225, R 336.1702(a)

^A. This limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the process.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The maximum coolant inlet temperature of condenser 1154 shall not exceed -13°C. An excursion of the maximum coolant inlet temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition or demonstrated during testing. Upon detecting an excursion of the maximum coolant inlet temperature limit, the permittee shall restore operation of condenser 1154 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1910, 40 CFR 64.6(c)(2), 40 CFR 64.7(d))**
2. The permittee shall not operate the process unless the condenser (1154) is installed and operating properly.² **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1910)**
3. The permittee shall equip and maintain the coolant line connected to the condenser (1154) with a temperature indication device.² **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1910, 40 CFR 64.6(c)(1)(i), (ii))**
4. The permittee shall calibrate the temperature indicator for condenser 1154 in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall monitor and record, on a continuous basis, the coolant inlet temperature of condenser 1154, with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time, and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event.² **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1910, 40 CFR 64.6(c)(1))**
2. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission limits specified in this table. These records shall be made available to the AQD upon request.² **(R 336.1205, R 336.1225, R 336.1702)**
3. For condenser 1154, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emission unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). **(40 CFR 64.7(d))**
4. For condenser 1154, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emission unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
5. For condenser 1154, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
6. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**
5. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**
6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV304-016	1 ^{A,2}	45 ^{A,2}	R 336.1224, R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV2514-006	54 ²	90 ²	R 336.1224, R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV2512-001	6 ²	65 ²	R 336.1224, R 336.1225, 40 CFR 52.21 (c) & (d)
4. SV2512-002	6 ²	65 ²	R 336.1224, R 336.1225, 40 CFR 52.21 (c) & (d)

^A. This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

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IX. OTHER REQUIREMENT(S)

1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU311-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

HCl/MeCl recovery process including scrubbers, tanks, columns, vaporizer, absorber, compressor, and related equipment. Several processes at the on-site vent to this recovery process. Emissions are controlled by two sets of control device trains, each operating in series, that vent through an absorber (2810/24101) and then a vent scrubber (2812/24102). This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart UU. [EU311-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.](#)

The most recent PTI for this emission unit is PTI No. 1-08A.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Absorbers (2810 and 24101), ~~These are CAM subject devices for Hydrogen Chloride and Methyl Chloride~~
- Packed bed scrubber (2812 and 24102) ~~These are CAM subject devices for Hydrogen Chloride and Methyl Chloride~~

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	8.7 tpy ^{*2}	12-month rolling time period as determined at the end of each calendar month	EU311-01	SC VI.3	R 336.1702(a)
2. Acetyl chloride (CAS No. 75-36-5)	5.7 tpy ^{*2}	12-month rolling time period as determined at the end of each calendar month	EU311-01	SC VI.4	R 336.1225

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate equipment in EU311-01 unless the following requirements are met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. The liquid flow rate of absorber 2810 is at a minimum of 4 gallons per minute.
 - b. The liquid flow rate of packed bed scrubber 2812 is at a minimum of 2.4 gallons per minute.
 - c. The liquid flow rate of absorber 24101 is at a minimum of 2.5 gallons per minute.
 - d. The liquid flow rate of packed bed scrubber 24102 is at a minimum of 1 gallon per minute.

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- ~~2. If the liquid flow rate of the absorber (2810) is less than 4.0 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. An excursion is a liquid flow rate less than 4.0 gallons per minute defined in this condition, or demonstrated during testing. Upon detecting an excursion of the liquid flow rate limit, the permittee shall restore operation of the absorber (2810) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~
- ~~3. If the liquid flow rate of the packed bed scrubber (2812) is less than 2.4 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. An excursion is a liquid flow rate less than 2.4 gallons per minute defined in this condition, or demonstrated during testing. Upon detecting an excursion of the liquid flow rate limit, the permittee shall restore operation of the packed bed scrubber (2812) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~
- ~~4. If the liquid flow rate of the absorber 24101 is less than 2.5 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. An excursion is a liquid flow rate less than 2.5 gallons per minute defined in this condition, or demonstrated during testing. Upon detecting an excursion of the liquid flow rate limit, the permittee shall restore operation of the absorber (24101) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~
- ~~5. If the liquid flow rate of packed bed scrubber 24102 is less than 1.0 gallon per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. An excursion is a liquid flow rate less than 1.0 gallons per minute defined in this condition, or demonstrated during testing. Upon detecting an excursion of the liquid flow rate limit, the permittee shall restore operation of the packed bed scrubber (24102) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU311-01 unless each absorber (2810/24101) and packed bed scrubber (2812/24102) is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(a)-(d).² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(1)(i))
2. The permittee shall equip and maintain each absorber (2810/24101) and packed bed scrubber (2812/24102) with a flow indicating device. The permittee shall calibrate each flow indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(1)(i), 40 CFR 64.6(c)(1)(iii))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of the absorbers (2810 and 24101) and packed bed scrubbers (2812 and 24102) through which EU311-01 exhausts with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15

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minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, ~~40 CFR 64.6(c)(4)~~)

3. The permittee shall calculate the VOC emission rate from EU311-01 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
4. The permittee shall calculate the acetyl chloride emission rate from EU311-01 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
- ~~5. For absorbers 2810 and 24101, and packed bed scrubbers 2812 and 24102, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))~~
- ~~6. For absorbers 2810 and 24101, and packed bed scrubbers 2812 and 24102, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.6(c)(3), 40 CFR 64.7(c))~~
- ~~7. For absorbers 2810 and 24101, and packed bed scrubbers 2812 and 24102, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))~~
- ~~8. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))~~

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

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4. ~~Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))~~
5. ~~Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))~~
6. ~~Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))~~

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV311-005	2 ²	119 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV311-009 (HCl scrubber vent 2812 for 311 HCl/MeCl recovery)	2 ²	118 ²	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. ~~If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))~~
2. ~~The permittee shall comply with all requirements of 40 CFR Part 64. (40 CFR Part 64)NA~~

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU321-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

40x Resin process including a reaction loop, capping reactor, 3 separators, 2 columns, and ancillary equipment. Emissions from neutralization activities can vent to FGTHROX or FGSITESCUBBERS. During FGTHROX downtime, Scrubbers 7170, 4776, and 11472 will continue to achieve Group 1 control for HCl. The process does not release emissions through SV321-001, SV321-019, SV321-021, or SV321-069 during normal operations. This emission unit is subject to the miscellaneous chemical manufacturing NESHAP in 40 CFR Part 63, Subparts A and FFFF.

The most recent PTI for this emission unit is PTI No. 174-12B.

Flexible Group ID: FGTHROX, FGSITESCUBBERS, FGSITEBLOWER, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser (24623)
- Venturi scrubber (11472, 7170, 4776)
- Scrubber 7159
- Activated carbon bed
- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOC	2.5 tpy ² *	12-month rolling time period as determined at the end of each calendar month	EU321-01	SC VI.2, VI.3, VI.4, VI.5, VI.6, VI.7	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate equipment in EU321-01 that exhausts to condenser 24623 unless the coolant return temperature of the condenser is 40°C or less.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. Except as allowed in SC III.5, the permittee shall not operate equipment in EU321-01 that exhausts to scrubber 11472 unless the scrubber liquid flow rate is 4.2 gallons per minute or more.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall not operate equipment in EU321-01 that exhausts to scrubber 7170 unless the scrubber liquid flow rate is 4.8 gallons per minute or more.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall not operate equipment in EU321-01 that exhausts to scrubber 4776 unless the scrubber liquid flow rate is 1.9 gallons per minute or more.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

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5. During periods of planned routine maintenance for scrubber 11472, the permittee may continue to store material in, and withdraw material from, storage tank DV4755. If an extension has been approved, planned routine maintenance shall not exceed 360 hours per year. Otherwise, planned routine maintenance shall not exceed 240 hours per year. This condition does not authorize adding material to storage tank DV4755 during periods of planned routine maintenance.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
6. The permittee shall not operate equipment in EU321-01 that exhausts to scrubber 7159 unless the scrubber liquid flow rate is 5.2 gallons per minute or more.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
7. The permittee shall not operate equipment in EU321-01 that exhausts to the activated carbon bed unless the first tote of activated carbon bed is replaced whenever the second tote's weight increases by 175 pounds and the second tote becomes the first tote.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
8. The permittee shall not operate equipment in EU321-01 that exhausts to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate equipment in EU321-01 that exhausts to condenser 24623 unless the condenser is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. Except as allowed in SC III.5 and 8, the permittee shall not operate equipment in EU321-01 that exhausts to scrubber 11472 unless the scrubber is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2 and III.5.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall not operate equipment in EU321-01 that exhausts to scrubbers 7170 and 4776 unless the scrubbers are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.3 and III.4.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall not operate equipment in EU321-01 that exhausts to scrubbers 7159 unless the scrubber is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.6.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
5. The permittee shall not operate equipment in EU321-01 that exhausts to FGTHROX or FGSITESCUBBERS unless FGTHROX or FGSITESCUBBERS are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.8.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
6. The permittee shall not operate equipment in EU321-01 that exhausts to the activated carbon bed unless the activated carbon bed is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.7.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
7. The permittee shall equip and maintain condenser 24623 with a device to continuously monitor and record the condenser coolant return temperature. The permittee shall calibrate the coolant return temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

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8. The permittee shall equip and maintain each of the scrubbers (11472, 7170, 4776, 7159) with a device to continuously monitor and record the scrubber liquid flow rate. The permittee shall calibrate each liquid flow rate indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
9. The permittee shall equip and maintain the activated carbon bed with scales that measure each carbon tote's weight whenever the carbon adsorption system is operating. The permittee shall calibrate the scales in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the coolant return temperature of condenser 24623 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of each scrubber with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall monitor and record, on a continuous basis, the weight of each activated carbon tote with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
5. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU321-01 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))
6. The permittee shall keep a record of the number of hours per month and per year that planned routine maintenance occurs for scrubber 11472 while material is stored in storage tank DV4755. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1910, R 336.1910)

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- The permittee shall keep a record of any extension approval of planned routine maintenance for scrubber 11472 and of any requirements accompanying the approval. If the extension approval has an expiration date, the permittee shall keep this record on file at the facility for a period of five years after the approval expires. If the extension has no expiration, the permittee shall keep this record on file at the facility for five years after the HCl scrubber is removed from service. The permittee shall make all records available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1910, R 336.1910)

VII. REPORTING

- Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
- Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV321-002 ^A 24623 Condenser Vent	1.5 ²	82 ²	R 336.1225 40 CFR 52.21(c)&(d)
2. SV321-004 ^A 15100 EBB Column Vent	2 ²	68 ²	R 336.1225 40 CFR 52.21(c)&(d)
3. SV321-012 ^A 4774 Tank Vent	1 ²	4 ²	R 336.1225 40 CFR 52.21(c)&(d)
4. SV321-013 ^A 5126 IPA recovery Column	2 ²	52 ²	R 336.1225 40 CFR 52.21(c)&(d)
5. SV321-065 ^A 24419 Tank Vent	1 ²	25 ²	R 336.1225 40 CFR 52.21(c)&(d)
6. SV321-070 ^A 25803 A/B Tank Vent	1 ²	27 ²	R 336.1225 40 CFR 52.21(c)&(d)
7. SV321-044 ^A Scrap Solvent Tank 6900	1 ²	9 ²	R 336.1225 40 CFR 52.21(c)&(d)
8. SV321-046 ^A Scrap Solvent Tank 690	1 ²	9 ²	R 336.1225 40 CFR 52.21(c)&(d)
9. SV321-047 ^A Scrap Solvent Tank 6903	1 ²	10 ²	R 336.1225 40 CFR 52.21(c)&(d)
10. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
11. SV2512-001 (Site Scrubber #1)	6 ²	67 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
12. SV2512-002 (Site Scrubber #2)	6 ²	67 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

^A. This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

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IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU321-02
EMISSION UNIT CONDITIONS**

DESCRIPTION

Capped resin manufacturing process including jacketed reactors, process condensers, a receiver, and auxiliary equipment. During FGTHROX downtime, Group 1 MON processes are shut down. Non-Group 1 processes may continue to operate and vent locally or to FGSITESCUBBERS. This EU is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.

The most recent PTI for this emission unit is PTI No. 176-20.

Flexible Group ID: FGTHROX, FGSITESCUBBERS, FGSITEBLOWER, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Scrubber 7158
- Scrubber 7170
- Scrubber 4776
- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	0.56 tpy ² *	12-month rolling time period as determined at the end of each calendar month	EU321-02	SC VI.2, SC VI.3, SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate equipment in EU321-02 that exhausts to scrubber 7158 unless the scrubber liquid flow rate is 3 gallons per minute or more.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall not operate equipment in EU321-02 that exhausts to scrubber 7170 unless the service water flow rate is 4.8 gallons per minute or more.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall not operate equipment in EU321-02 that exhausts to scrubber 4776 unless the scrubber liquid flow rate is 1.9 gallons per minute or more.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall not operate equipment in EU321-02 that exhausts to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.

5. The permittee shall not exhaust any equipment in EU321-02 through scrubber 11476.² (R 336.1224, R 336.1225, R 336.1702(a))

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate equipment in EU321-02 that exhausts to scrubber 7158 unless the scrubber is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall not operate equipment in EU321-02 that exhausts to scrubber 7170 unless the scrubber is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall not operate equipment in EU321-02 that exhausts to scrubber 4776 unless the scrubber is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.3.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall not operate equipment in EU321-02 that exhausts to FGTHROX or FGSITESCUBBERS unless FGTHROX or FGSITESCUBBERS are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.4.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
5. The permittee shall equip and maintain each of the scrubbers (7158, 7170, 4776) with a device to continuously monitor and record the scrubber liquid flow rate. The permittee shall calibrate each liquid flow rate indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of each scrubber (7158, 7170, 4776) with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU321-02 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))

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2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV321-006 ^a (4719 Storage Tanks)	1 ²	32 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV321-022 ^a (5194/5196 Storage Tanks)	1 ²	8 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV321-044 ^a (Scrap Solvent Tank 6900)	1 ²	9 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
4. SV321-045 ^a (6924 Storage Tank)	1 ²	3 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
5. SV321-046 ^a (Scrap Solvent Tank 6901)	1 ²	9 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
6. SV321-047 ^a (Scrap Solvent Tank 6903)	1 ²	10 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
7. SV321-056 (Nederman Arms)	15 ²	60 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
8. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
9. SV2512-001 (Site Scrubber #1)	6 ²	67 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
10. SV2512-002 (Site Scrubber #2)	6 ²	67 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

^a This stack is not required to discharge unobstructed vertically upwards.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU321-07
EMISSION UNIT CONDITIONS**

DESCRIPTION

Mixing process in 5132 Kettle producing organo-compatible silicones products. Emissions are vented through FGTHROX, FGSITESCUBBERS, as well as other vents. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 179-20.

Flexible Group ID: FGMONMACT, FGTHROX, FGSITESCUBBERS, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condensers (5143)
- Carbon Totes
- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	2.01 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU321-07	SC VI.2, SC VI.3, SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate equipment in EU321-07 that exhausts directly to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.
2. The permittee shall not operate equipment in EU321-07 that exhausts first to condenser 5143 and then to either the carbon totes, FGTHROX, or FGSITESCUBBERS unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. When exhausting to the carbon beds, the maximum coolant return temperature of condenser 5143 is 5°C, and the weight of the carbon totes is 80.3 kg or less.
 - b. When exhausting to FGTHROX, FGTHROX is operated in accordance with the requirements of FGTHROX.
 - c. When exhausting to Site Scrubber #1, the max coolant return temperature of condenser 5143 is 5°C, and Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - d. When exhausting to Site Scrubber #2, the max coolant return temperature of condenser 5143 is 5°C, and Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate equipment in EU321-07 that exhausts directly to either FGTHROX or FGSITESCRRUBBERS unless the one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(a).
 - b. FGSITESCRRUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(b) or (c).
2. The permittee shall not operate equipment in EU321-07 that exhausts directly to condenser 5143 and then to either the carbon beds or FGSITESCRRUBBERS unless:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. Condenser 5143 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a), and
 - b. One of the following requirements is met:
 - i. The carbon beds are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a)
 - ii. FGTHROX or FGSITESCRRUBBERS is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b), (c), or (d).
3. The permittee shall equip and maintain condenser 5143 with a device to continuously monitor and record the condenser coolant return temperature. The permittee shall calibrate the coolant return temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1205, R 336.1224, R 336.1225)**
2. The permittee shall monitor and record, on a continuous basis, the coolant return temperature of condenser 5143 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. When venting to the carbon beds, the permittee shall record the mass of the carbon totes, on a continuous basis, with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall calculate the VOC emission rate from EU321-07 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

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 Expiration Date: February 20, 2024
 PTI No: MI-PTI-A4043-2019b

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV2512-001 (Site Scrubber)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV2512-002 (Site Scrubber)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV321-044 ^a (Scrap Solvent Tank 6900)	1 ²	9 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV321-046 ^a (Scrap Solvent Tank 6901)	1 ²	9 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV321-047 ^a (Scrap Solvent Tank 6903)	1 ²	10 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV321-056 (Blower Vent for Nederman Arms)	15 ²	60 ²	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV321-069 ^a (321 Carbon Beds)	2 ²	46 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU321-11
EMISSION UNIT CONDITIONS**

DESCRIPTION

Capped resin manufacturing process including jacketed reactors, process condensers, a receiver, and auxiliary equipment. During FGTHROX downtime, Group 1 MON processes are shut down. Non-Group 1 processes may continue to operate and either vent locally or to FGSITESCRUBBERS. This EU is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.

The most recent PTI for this emission unit is PTI No. 175-20.

Flexible Group ID: FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Scrubber 7158
- Scrubber 7170
- Scrubber 4776
- Condenser 5141
- FGTHROX
- FGSITESCRUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOCs	0.44 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU321-11	SC VI.2, SC VI.3, SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate equipment in EU321-11 that exhausts to scrubber 7158 unless the scrubber liquid flow rate is 3 gallons per minute or more.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall not operate equipment in EU321-11 that exhausts to scrubber 7170 unless the service water flow rate is 4.8 gallons per minute or more.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall not operate equipment in EU321-11 that exhausts to scrubber 4776 unless the scrubber liquid flow rate is 1.9 gallons per minute or more.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall not operate equipment in EU321-11 that exhausts to condenser 5141 unless the coolant return temperature is 2°C or less.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

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5. The permittee shall not operate equipment in EU321-11 that exhausts to either FGTHROX or FGSITESCUBBERS unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - c. Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate equipment in EU321-11 that exhausts to scrubber 7158 unless the scrubber is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall not operate equipment in EU321-11 that exhausts to scrubber 7170 unless the scrubber is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall not operate equipment in EU321-11 that exhausts to scrubber 4776 unless the scrubber is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.3.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall not operate equipment in EU321-11 that exhausts to condenser 5141 unless the condenser is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.4.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
5. The permittee shall not operate equipment in EU321-11 that exhausts to FGTHROX or FGSITESCUBBERS unless FGTHROX or FGSITESCUBBERS are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.5.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
6. The permittee shall equip and maintain each scrubber (7158, 7170, 4776) with a device to continuously monitor and record the scrubber liquid flow rate. The permittee shall calibrate each liquid flow rate indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
7. The permittee shall equip and maintain condenser 5141 with a device to continuously monitor and record the coolant return temperature. The permittee shall calibrate the coolant return temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

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2. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of each scrubber (7158, 7170, 4776) with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall monitor and record, on a continuous basis, the coolant return temperature of condenser 5141 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU321-11 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV321-006 ^a (4719 Storage Tanks)	1 ²	32 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV321-022 ^a (5194/5196 Storage Tanks)	1 ²	8 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV321-044 ^a (Scrap Solvent Tank 6900)	1 ²	9 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
4. SV321-045 ^a (6924 Storage Tank)	1 ²	3 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
5. SV321-046 ^a (Scrap Solvent Tank 6901)	1 ²	9 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
6. SV321-047 ^a (Scrap Solvent Tank 6903)	1 ²	10 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
7. SV321-056 (Nederman Arms)	15 ²	60 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
8. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

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Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
9. SV2512-001 (Site Scrubber #1)	6 ²	67 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
10. SV2512-002 (Site Scrubber #2)	6 ²	67 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

^a This stack is not required to discharge unobstructed vertically upwards.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EU321-12
EMISSION UNIT CONDITIONS

DESCRIPTION

Cosmetic wax manufacturing process consisting of a reactor, process condenser, receiver, and auxiliary equipment. The process vents through one of two scrubbers operating in parallel. Exhaust then goes through two polishing scrubbers before going to FGTHROX, FGSITESCUBBERS, or 321 Carbon Beds.

The most recent PTI for this emission unit is PTI No. 38-22.

Flexible Group ID: FGTHROX, FGSITESCUBBERS, FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Scrubber 24756
- Scrubber 7158
- Polishing Scrubber 7170
- Polishing Scrubber 4776
- Glycol Condenser 5141
- 321 Carbon Beds
- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOCs	0.31 tpy ^{*.2}	12-month rolling time period as determined at the end of each calendar month	EU321-12	SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1702(a)
2. VOCs	16.0 pph ^{*.2}	Hourly	EU321-12	SC V.1, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate equipment in EU321-12 that exhausts to scrubber 24756 unless the scrubber water flow rate is 1.0 gallon per minute (gpm) or more.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall not operate equipment in EU321-12 that exhausts to glycol condenser 5141 and scrubber 7158 unless the following requirements are met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. The coolant exit temperature of glycol condenser 5141 is 2°C or less.
 - b. The scrubber water flow rate of scrubber 7158 is 2.7 gpm or more.

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3. The permittee shall not operate EU321-12 unless the following requirements are met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. The scrubber water flow rate for polishing scrubber 7170 is 4.8 gpm or more,
 - b. The scrubber water flow rate for polishing scrubber 4776 is 1.6 gpm or more.
4. The permittee shall not operate EU321-12 unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. When exhausting to FGTHROX, FGTHROX is operated in accordance with the requirements of FGTHROX.
 - b. When exhausting to Site Scrubber #1, Site Scrubber #1 is operated in accordance with the requirements of FGSITESCUBBERS.
 - c. When exhausting to Site Scrubber #2, Site Scrubber #2 is operated in accordance with the requirements of FGSITESCUBBERS.
 - d. When exhausting to the 321 carbon beds, the adsorbed weight of the carbon totes is 80.3 kg or less.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate equipment in EU321-12 that exhausts to scrubber 24756 unless it is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall not operate equipment in EU321-12 that exhausts to glycol condenser 5141 and scrubber 7158 unless they are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a) for glycol condenser 5141 and SC III.2(b) for scrubber 7158.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall not operate EU321-12 unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. When exhausting to FGTHROX, FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.4(a).
 - b. When exhausting to Site Scrubber #1, Site Scrubber #1 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.4(b).
 - c. When exhausting to Site Scrubber #2, Site Scrubber #2 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.4(c).
 - d. When exhausting to the 321 carbon beds, the 321 carbon beds are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.4(d).
4. The permittee shall equip and maintain glycol condenser 5141 with a device to continuously monitor and record the coolant exit temperature. The permittee shall calibrate the coolant exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
5. The permittee shall equip and maintain each scrubber (24756, 7158, 7170, and 4776) with a separate device to continuously monitor and record the scrubber water flow rate. The permittee shall calibrate each scrubber water flow rate indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
6. The permittee shall equip and maintain the carbon beds with a device to continuously monitor the weight of the carbon totes. The permittee shall calibrate the carbon tote weight indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Upon request of the AQD District Supervisor, the permittee shall verify VOC emission rates from EU321-12 by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60, Appendix A. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² **(R 336.1702, R 336.2001, R 336.2003, R 336.2004)**
2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. **(R 336.1213(3))**

See Appendix 5

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall monitor and record, on a continuous basis, the coolant exit temperature of glycol condenser 5141 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall monitor and record, on a continuous basis, the scrubber water flow rate for each scrubber (24756, 7158, 7170, and 4776) with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. When venting to the carbon beds, the permittee shall record the adsorbed weight of the carbon drum, on a continuous basis, with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
5. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU321-12 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV321-044 ^a (Scrap Solvent Tank 6900)	1 ²	9 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV321-056 (Blower Vent for Nederman Arms)	15 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV321-069 ^a (321 Carbon Beds)	2 ²	46 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV2512-001 (Site Scrubber No. 1)	6 ²	65 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV2512-002 (Site Scrubber No. 2)	6 ²	65 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV2517-001 ^b (TOX Vent)	30 ²	102 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This stack is not required to discharge unobstructed vertically upwards to the ambient air.
^b This EU may exhaust from SV2517-001 after that stack has been installed.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU322-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

LP-1 process including reactors, distillation equipment, storage tanks, condensers, and related equipment. Emissions are controlled by Scrubber 22452. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF as well as the equipment leak provisions in 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 134-20.

Flexible Group ID: [FGHAP2012A2A](#), FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Scrubber 22452

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	8.4 pph * ²	Hourly	EU322-01	SC V.1, VI.2	R 336.1702(a)
2. VOC	32.5 tpy * ²	12-month rolling time period as determined at the end of each calendar month	EU322-01	SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU322-01 unless the liquid flow rate of scrubber 22452 is 10.0 gallons per minute or more.² (R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU322-01 unless scrubber 22452 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² (R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall equip and maintain scrubber 22452 with a liquid flow indicating device. The permittee shall calibrate the liquid flow indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify the VOC emission rates from EU322-01 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

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Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1702, R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of scrubber 22452 with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU322-01 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. (R 336.1213(3)(c), R 336.2001(5))

See Appendix 8

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VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV322-004 (Scrubber 22452) ^A	3 ²	68 ²	R 336.1225, 40 CFR 52.21(c)&(d)

^A This stack is not required to discharge unobstructed vertically upwards.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU322-02
EMISSION UNIT CONDITIONS**

DESCRIPTION

HP-7 process producing silane products. Emissions are controlled by the FGTHROX (as well as scrubber 22452 during periods where FGTHROX is out of operation or when total or partial diversion is necessary for any safety-related or operational scenarios). This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 132-20A.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Scrubber (22452)
- FGTHROX

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	10.9 pph ^{*2}	Hourly	EU322-02	SC V.1 SC VI.2	R 336.1702(a)
2. VOC	7.66 tpy ^{*2}	12-month rolling time period as determined at the end of each calendar month	EU322-02	SC VI.2 SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not exhaust emissions from EU322-02 to scrubber 22452 unless the liquid flow rate is at a minimum of 10.0 gallons per minute.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall not operate EU322-02 unless FGTHROX is operated in accordance with the requirements of FGTHROX, except as described in SC IV.1.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not, during periods when FGTHROX is out of operation or when the vent to FGTHROX is diverted for any safety-related or operational reason, operate EU322-02 unless scrubber 22452 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall equip and maintain scrubber 22452 with a liquid flow indicating device. The permittee shall calibrate the liquid flow indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

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3. The permittee shall not operate EU322-02, except as described in SC IV.1, unless FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Upon request of the AQD District Supervisor, the permittee shall verify VOC emission rates from EU322-02 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² **(R 336.1224, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)**

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. **(R 336.1213(3))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1702(a))**
2. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of scrubber 22452 with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall calculate the VOC emission rate from EU322-02 monthly, including the emission rate from the operational scenario as described in SC IV.1, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

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- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV322-004 ^a (Scrubber 22452 Vent)	3 ²	68 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU322-03
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Silizane manufacturing process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF.

The most recent PTI for this emission unit is PTI No. 296-07.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

Condensers (6391, 6392, 7604, 7605, 7623)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	11.2 pph ²	Hourly	EU322-03	SC VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1201
2. VOC	0.8 tpy ²	12-month rolling time period*	EU322-03	SC VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1201
3. Hexane	3.6 pph ²	Hourly	Equipment venting to SV322-014	SC VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1201
4. Hexane	0.1 tpy ²	12-month rolling time period*	Equipment venting to SV322-014	SC VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1201
5. Ammonia	70.0 pph ¹	Hourly	Equipment venting to SV322-011	SC VI.1, VI.2, & VI.3	R 336.1224, R 336.1225, R 336.1901
6. Ammonia	179.3 tpy ¹	12-month rolling time period*	Equipment venting to SV322-011	SC VI.1, VI.2, & VI.3	R 336.1224, R 336.1225, R 336.1901

* as determined at the end of each calendar month

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The coolant outlet temperature for condenser Nos. 6391 and 6392 shall not exceed 30°F.² (R 336.1702(a), R 336.1910, R 336.1201)
- The process gas outlet temperature from condenser No. 7623 shall not exceed 30°F.² (R 336.1702(a), R 336.1910, R 336.1201)
- The coolant exit temperature for the condensers (7604, 7605) shall not exceed 40°F.² (R 336.1910, R 336.1201)

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IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate the process unless the condensers (6391, 6392 and 7623) are installed and operating properly.² **(R 336.1702(a), R 336.1201)**
2. The permittee shall not operate the process unless the condensers (7604, 7605) are installed and operating properly.² **(R 336.1702(a), R 336.1201)**
3. The permittee shall equip and maintain the condensers (6391, 6392) associated with vent stack numbers SV322-011 and SV322-014 with a temperature instrument to monitor the coolant's outlet temperature.² **(R 336.1702(a), R 336.1910, R 336.1201)**
4. The permittee shall equip and maintain the condenser (7623) associated with vent stack number SV322-013 with a temperature instrument to monitor the process gas outlet temperature.² **(R 336.1702(a), R 336.1910, R 336.1201)**
5. The permittee shall equip and maintain the condensers (7604, 7605) with a coolant exit temperature instrument.² **(R 336.1910, R 336.1201)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall monitor and record, on a continuous basis, the outlet temperature for condensers 6391 and 6392 and, the process gas outlet temperature from condenser 7623 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.² **(R 336.1910)**
2. The permittee shall monitor and record, on a continuous basis, the exit temperature for condensers 7604 and 7605 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is an instantaneous data point recorded at least once every 15 minutes.² **(R 336.1910)**
3. The permittee shall keep records as required to demonstrate compliance with the emission limits specified in this table. Emission totals shall be calculated using the method described in Appendix 7, Section 7.7. A monthly summary of these emissions shall be made available to the AQD upon request. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission totals specified in this table.² **(R 336.1224, R 336.1702(a), R 336.1201)**

See Appendix 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

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See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted: SV322-013 has an offset with a drain cut.

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV322-011	15 ¹	80 ¹	R 336.1225
2. SV322-012	1.5 ¹	42 ¹	R 336.1225
3. SV322-013	2 ¹	42 ¹	R 336.1225
4. SV322-014	1.5 ¹	42 ¹	R 336.1225
5. SV322-015	1 ¹	26 ¹	R 336.1225
6. SV322-017	25 ¹	43 ¹	R 336.1225
7. SV322-025	1 ¹	42 ¹	R 336.1225

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU322-04
EMISSION UNIT CONDITIONS**

DESCRIPTION

HP-6 process producing silane products. Emissions are controlled by FGTHROX (as well as scrubber 22452 during periods where FGTHROX is out of operation or when total or partial diversion is necessary for any safety-related or operational scenarios). This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 133-20A.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#), FGTHROX

POLLUTION CONTROL EQUIPMENT

- Scrubber (22452)
- FGTHROX

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	8.5 pph ^{*,2}	Hourly	EU322-04	SC V.1 SC VI.2	R 336.1702(a)
2. VOC	7.63 tpy ^{*,2}	12-month rolling time period as determined at the end of each calendar month	EU322-04	SC VI.2 SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not exhaust emissions from EU322-04 to scrubber 22452 unless the liquid flow rate is at a minimum of 10.0 gallons per minute.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall not operate EU322-04 unless FGTHROX is operated in accordance with the requirements of FGTHROX, except as described in SC IV.1.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not, during periods when FGTHROX is out of operation or when the vent to FGTHROX is diverted for any safety-related or operational reason, operate EU322-04 unless scrubber 22452 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee shall equip and maintain scrubber 22452 with a liquid flow indicating device. The permittee shall calibrate the liquid flow indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

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3. The permittee shall not operate EU322-04, except as described in SC IV.1, unless FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Upon request of the AQD District Supervisor, the permittee shall verify VOC rates from EU322-04 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² **(R 336.1224, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)**

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. **(R 336.1213(3))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1702(a))**
2. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of scrubber 22452 with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall calculate the VOC emission rate from EU322-04 monthly, including the emission rate from the operational scenario as described in SC IV.1, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

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- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV322-004 ^a (Scrubber 22452 Vent)	3 ²	68 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

**EU322-06
EMISSION UNIT CONDITIONS**

DESCRIPTION

Siloxane catalyst process. ~~EU322-06 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.~~

The most recent PTI for this emission unit is PTI No. 308-94B.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Condenser 4507. ~~This device is a CAM subject unit for VOC.~~

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	4.0 tpy ^{*2}	12-month rolling time period as determined at the end of each calendar month	EU322-06	SC VI.2, SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU322-06 unless the coolant exit temperature of condenser (4507) is 50°F or less.² **(R 336.1225, R 336.1702(a), R 336.1910)**

~~2. If the coolant exit temperature of condenser 4507 exceeds 50°F, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. An excursion of the coolant exit temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the coolant exit temperature limit, the permittee shall restore operation of condenser 4507 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d))**~~

~~3. The permittee shall calibrate the temperature indicator for condenser 4507 in a satisfactory manner. **(40 CFR 64.6(e)(1)(iii))**~~

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU322-06 unless the condenser (4507) is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² **(R 336.1225, R 336.1702(a), R 336.1910)**

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- The permittee shall equip and maintain condenser 4507 with a coolant exit temperature indicator. The permittee shall calibrate the coolant exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

- The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
- The permittee shall monitor and record, on a per shift basis, the coolant exit temperature for condenser 4507 with instrumentation acceptable to the AQD District Supervisor. For the purpose of this condition, "on a per shift basis" is defined as an instantaneous data point recorded at least once every eight hours. The permittee may record block average values for eight hour or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
- The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU322-06 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1225, R 336.1702(a))
- The permittee shall monitor and record, on a per shift basis, the coolant exit temperature for condenser 4507 with instrumentation acceptable to the AQD. (40 CFR 64.6(c)(1), R 336.1213(3))
- ~~For condenser 4507, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))~~
- ~~For condenser 4507, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.6(c)(3), 40 CFR 64.7(c))~~
- ~~For condenser 4507, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))~~

~~8. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))~~

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- ~~4. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))~~
- ~~5. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))~~
- ~~6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))~~

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted: SV322-013 has an offset with a drain cut. SV322-024 is 45 degrees down.

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1.SV322-024 (Condenser 4507) ^A	2 ²	42 ²	R 336.1225, 40 CFR 52.21(c)&(d)

^A This stack is required to discharge vertically upward but is allowed to be equipped with a flapper-type rain protection device.

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IX. OTHER REQUIREMENT(S)

1. ~~If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))~~
2. ~~The permittee shall comply with all requirements of 40 CFR Part 64. (40 CFR Part 64)NA~~

Footnotes:

- ¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
- ²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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PTI No: MI-PTI-A4043-2019b

**EU322-11
EMISSION UNIT CONDITIONS**

DESCRIPTION

Methylvinylidichlorosilane crude distillation process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart UU.

The most recent PTI for this emission unit is PTI No. 146-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Condenser 6384
- Scrubber 22452

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	37.3 pph ² *	Hourly	EU322-11	SC V.1, VI.2, VI.3, VI.5	R 336.1702(a)
2. VOC	13.4 tpy ² *	Based on a 12-month rolling time period as determined at the end of each calendar month.	EU322-11	SC V.1, VI.2, VI.3, VI.4, VI.5	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU322-11 unless the coolant exit temperature of condenser 6384 is -15°C or less.² **(R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall not operate EU322-11 unless the liquid flow rate through scrubber 22452 is 10 gallons per minute or more.² **(R 336.1225, R 336.1702(a), R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU322-11 unless condenser 6384 and scrubber 22452 are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes complying with the requirements of SC III.1 and III.2.² **(R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall equip and maintain condenser 6384 with a coolant exit temperature indicator. The permittee shall calibrate the coolant exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1225, R 336.1702(a), R 336.1910)**

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3. The permittee shall equip and maintain scrubber 22452 with a liquid flow indicator. The permittee shall calibrate the liquid flow rate indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1225, R 336.1702(a), R 336.1910)

VI. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify the VOC emission rates from EU322-11 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1702, R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1225, R 336.1702(a))
2. The permittee shall monitor and record, on a continuous basis, the coolant exit temperature of condenser 6384 with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of scrubber 22452 with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU322-11 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1225, R 336.1702(a))

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5. The permittee shall keep records as required to demonstrate compliance with the emission limits specified in this table. A monthly summary of these emissions shall be made available to the AQD upon request. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from EU322-11 for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission totals specified in this table. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1225, R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. (R 336.1213(3)(c), R 336.2001(5))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV322-004 ^A - Vent for Scrubber 22452	3 ²	68 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

^A This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU324-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

4820 batch kettle process producing silane and siloxane products. Emissions are controlled by service water condenser 4818 and chilled condensers 4804 and 4807. The chilled condensers alternate in operation. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU. ~~EU324-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.~~

The most recent PTI for this emission unit is PTI No. 15-13A.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Service Water Condenser (4818)
- Chilled Condensers (4804 and 4807)

Service water condenser 4818 and chilled condensers 4804 and 4807. The chilled condensers alternate in operation. ~~These devices are CAM subject units for VOC.~~

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	9.56 tpy ^{*2}	12-month rolling time period as determined at the end of each calendar month	EU324-01	SC VI.2 SC VI.3	R 336.1225, R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU324-01 unless the exit coolant temperature of each condenser (4804 and 4807) is -8°C or less.² (R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall not operate EU324-01 unless the exit coolant temperature of the service water condenser 4818 is 40°C or less.² (R 336.1225, R 336.1702(a), R 336.1910)
- ~~3. The permittee shall not vent EU324-01 to the atmosphere through chilled condenser 4804 unless the coolant exit temperature of the condenser -8°C or less. An excursion of the coolant exit temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the coolant exit temperature limit, the permittee shall restore operation of chilled condenser 4804 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~

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4. ~~The permittee shall not vent EU324-01 to the atmosphere through chilled condenser 4807 unless the coolant exit temperature of the condenser -8°C or less. An excursion of the coolant exit temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the coolant exit temperature limit, the permittee shall restore operation of chilled condenser 4807 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c))(2), 40 CFR 64.7(d)~~
5. ~~The permittee shall not vent EU324-01 to the atmosphere through service water condenser 4818 unless the coolant exit temperature of the condenser 40°C or less. An excursion of the coolant exit temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the coolant exit temperature limit, the permittee shall restore operation of service water condenser 4818 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~
6. ~~If any of the condenser coolant exit temperatures specified in SC III.1 to SC III.3 is exceeded, when venting to the atmosphere, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. Exceeding any of these parameters is an excursion. (40 CFR 64.6(c)(2))~~
7. ~~The permittee shall calibrate the temperature indicators for condensers 4804, 4807, and 4818 in a satisfactory manner. (40 CFR 64.6(c)(1)(iii))~~

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU324-01 unless the chilled condensers (4804 and 4807), which alternate in operation, and service water condenser 4818 are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 and III.2 that apply to the condensers.² (R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall equip and maintain service water condenser 4818 and chilled condensers 4804 and 4807 with condenser coolant exit temperature indicators. The permittee shall calibrate the temperature indicators for each condenser (4804, 4807, and 4818) in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1225, R 336.1702(a), R 336.1910, ~~40 CFR 64.6(c)(1)(i) and (iii)~~)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, in a satisfactory manner, the exit temperatures for chilled condensers 4804 and 4807 and service water condenser 4818 on a continuous basis. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1225, R 336.1702(a), R 336.1910, ~~40 CFR 64.6(c)(1)~~)
3. The permittee shall calculate the VOC emission rate from EU324-01 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1225, R 336.1702)

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4. ~~For service water condenser 4818 and chilled condensers 4804 and 4807, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (40 CFR 64.7(d))~~
5. ~~For service water condenser 4818 and chilled condensers 4804 and 4807, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. (40 CFR 64.6(c)(3), 40 CFR 64.7(c))~~
6. ~~For service water condenser 4818 and chilled condensers 4804 and 4807, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))~~
7. ~~The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. (40 CFR 64.7(b))~~

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. ~~Each semiannual report of monitoring and deviations shall include summary information on the number, duration, and cause of excursions and/or exceedances and the corrective actions taken. If there were no excursions and/or exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (40 CFR 64.9(a)(2)(i))~~
5. ~~Each semiannual report of monitoring and deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (40 CFR 64.9(a)(2)(ii))~~
6. ~~Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. (40 CFR 64.9(a)(2)(iii))~~

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV324-005 ^a (DV5638 203 Tank)	1 ²	0.93 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV324-006 ^a (DV5632 204 Tank)	1 ²	0.6 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV324-033 (Bldg 328 Vent Drum Off)	8 ²	3 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV324-039 ^a (DV5636 Waste Tank)	1 ²	0.6 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV324-042 ^a (DV4820 Reactor Vent)	2 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV324-048 ^a (DV4804 & DV4807 Condensers)	4 ²	50 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

~~1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))~~

~~2. The permittee shall comply with all requirements of 40 CFR Part 64. (40 CFR Part 64)NA~~

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU324-08
EMISSION UNIT CONDITIONS**

DESCRIPTION

5617 batch kettle process producing silane and siloxane products, controlled by condenser 5618 and, if pulling vacuum, chilled condensers 4804 and 4807, which alternate in operation. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU. ~~EU324-08 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.~~

The most recent PTI for this emission unit is PTI No. 14-13A.

Flexible Group ID: FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Service Water Condenser (5618)
- Chilled Condenser (4804)
- Chilled Condenser (4807)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOCs	0.20 tpy ^{*.2}	12-month rolling time period as determined at the end of each calendar month	EU324-08	SC VI.2, SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU324-08 unless the service water exit temperature of condenser 5618 is 30°C or less.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall not conduct vacuum stripping in EU324-08 unless:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. When exhausting to chilled condenser 4804, the coolant exit temperature of chilled condenser 4804 is minus 13°C (-13°C) or less.
 - b. When exhausting to chilled condenser 4807, the coolant exit temperature of chilled condenser 4807 is minus 13°C (-13°C) or less.
- ~~3. An excursion of the coolant exit temperature is the exceedance of the operational parameter limit or acceptable range defined in SC III.2, or demonstrated during testing. Upon detecting an excursion of the coolant exit temperature limit, the permittee shall restore operation of chilled condenser 4804 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d))**~~

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~~4. An excursion of the coolant exit temperature is the exceedance of the operational parameter limit or acceptable range defined in SC III.2, or demonstrated during testing. Upon detecting an excursion of the coolant exit temperature limit, the permittee shall restore operation of chilled condenser 4807 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~

~~5. An excursion of the coolant exit temperature is the exceedance of the operational parameter limit or acceptable range defined in SC III.1, or demonstrated during testing. Upon detecting an excursion of the coolant exit temperature limit, the permittee shall restore operation of service water condenser 5618 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))~~

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU324-08 unless service water condenser 5618 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall not conduct vacuum stripping in EU324-08 unless one of the following requirements is met:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
 - a. Chilled condenser 4804 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(a).
 - b. Chilled condenser 4807 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2(b).
3. The permittee shall equip and maintain service water condenser 5618 with a device to continuously monitor and record the condenser service water exit temperature. The permittee shall calibrate the service water exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. When conducting vacuum stripping, the permittee shall equip and maintain chilled condensers 4804 and 4807 with a device to continuously monitor and record the condenser coolant exit temperature of the condenser to which the exhaust is being directed. The permittee shall calibrate the coolant exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

~~5. The permittee shall equip and maintain service water condenser 5618 and chilled condensers 4804 and 4807 with condenser coolant exit temperature indicators. (40 CFR 64.6(c)(1)(i),(ii))~~

~~6. The permittee shall calibrate the temperature indicator for condensers 5618, 4804, and 4807 in a satisfactory manner. (40 CFR 64.6(c)(1)(iii))~~

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

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2. The permittee shall monitor and record, on a continuous basis, the service water exit temperature of condenser 5618 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. When conducting vacuum stripping, the permittee shall monitor and record, on a continuous basis, the coolant exit temperature of condensers 4804 and 4807 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU324-08 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
- ~~5. The permittee shall monitor and record, in a satisfactory manner, the coolant exit temperatures for chilled condensers 4804 and 4807 and service water condenser 5618 on a continuous basis. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. **(40 CFR 64.6(c)(1))**~~
- ~~6. For service water condenser 5618 and chilled condensers 4804 and 4807, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). **(40 CFR 64.7(d))**~~
- ~~7. For service water condenser 5618 and chilled condensers 4804 and 4807, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**~~
- ~~8. For service water condenser 5618 and chilled condensers 4804 and 4807, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**~~
- ~~9. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**~~

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- ~~4. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**~~
- ~~5. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**~~
- ~~6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**~~

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV324-005 ^a (5638 203 Fluid Tank)	1 ²	0.93 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV324-006 ^a (5632 204 Fluid Tank)	1 ²	0.6 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV324-033 (328 Building Vent System on Drum-off Filter Housing)	8 ²	3 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
4. SV324-039 ^a (5636 Waste Tank)	1 ²	0.6 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
5. SV324-046 ^a (Condenser 5618)	2 ²	52 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
6. SV324-048 ^a (Condensers 4804/4807)	4 ²	50 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

^a This stack is not required to discharge unobstructed vertically upwards

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IX. OTHER REQUIREMENT(S)

1. ~~If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (40 CFR 64.7(e))~~
2. ~~The permittee shall comply with all requirements of 40 CFR Part 64. (40 CFR Part 64)NA~~

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU324-11
EMISSION UNIT CONDITIONS**

DESCRIPTION

Batch distillation kettle 4895 including 4896 distillation column and 24924/24925/4898 overhead receivers. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.

The most recent PTI for this emission unit is PTI No. 152-20.

Flexible Group ID: FGMONMACT

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	11.34 lb/hr*.2	Hourly	EU324-11	SC V.1	R 336.1702(a)
2. VOC	3.37 tpy*.2	12-month rolling time period as determined at the end of each calendar month	EU324-11	SC V.1, VI.2	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request from the AQD District Supervisor, the permittee may be required to verify the VOC emission rates from EU324-11 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD

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must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1224, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)

- The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

- The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a))
- The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU324-11 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

- Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
- Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
- The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. (R 336.1213(3)(c), R 336.2001(5))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV324-022 ^A (Condenser HX1-4895)	1.5 ²	54 ²	R 336.1225 40 CFR 52.21 (c) & (d)
2. SV324-027 ^A (324 South side exhaust fan)	20 ²	3 ²	R 336.1225 40 CFR 52.21 (c) & (d)
3. SV324-035 ^A (4806 vacuum pump)	3 ²	53 ²	R 336.1225 40 CFR 52.21 (c) & (d)
4. SV324-039 ^A (5636 waste tank)	1 ²	0.6 ²	R 336.1225 40 CFR 52.21 (c) & (d)

^A. This stack is not required to be discharged unobstructed vertically upwards to the ambient air

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IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU324-18
EMISSION UNIT CONDITIONS**

DESCRIPTION

25156 batch kettle in 324 building, consisting of a reactor, heat exchanger, and a receiver. Emissions are controlled by a service water cooled condenser and two parallel chilled condensers. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and UU.

The most recent PTI for this emission unit is PTI No. 19-14C.

Flexible Group ID: FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Service water cooled condenser (25159) vents to SV324-054 or operates in series with the chilled condenser pair (4804/4807).
- Chilled condenser pair (4804/4807) that vents to SV324-048. The condensers operate in parallel, but only one at a time, sharing a common coolant line and temperature monitor.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	65.06 pph ² *	Hourly	EU324-18	SC V.1, VI.2, VI.3	R 336.1702(a)
2. VOC	23.03 tpy ² *	Based on a 12-month rolling time period as determined at the end of each calendar month.	EU324-18	SC V.1, VI.2, VI.3, VI.4	R 336.1205(3) R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. Except when producing 204 fluid, the permittee shall not operate EU324-18 unless the chilled condenser pair (4804/4807) outlet coolant temperature is -8°C or less.² (R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. During stripping operations, the permittee shall not operate EU324-18 unless the service water condenser (25159) outlet coolant temperature is 45°C or less.² (R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETERS

1. Except when producing 204 fluid, the permittee shall not operate EU324-18 unless the chilled condenser pair (4804/4807) are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 that apply to the condensers.² (R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

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2. During stripping operations, the permittee shall not operate EU324-18 unless the service water condenser (25159) is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2 that apply to the condenser.² (R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall equip and maintain the chilled condenser pair (4804/4807) with an outlet coolant temperature indicator. The permittee shall calibrate the outlet coolant temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall equip and maintain the service water condenser (25159) with an outlet coolant temperature indicator. The permittee shall calibrate the outlet coolant temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request from the AQD District Supervisor, the permittee shall verify the VOC emission rates from EU324-18, by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1205(3), R 336.1224, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a))
2. While EU324-18 is operating, except when producing 204 fluid, the permittee shall monitor and record, on a continuous basis, the chilled condenser pair (4804/4807) outlet coolant temperature with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. While EU324-18 is operating during stripping operations, the permittee shall monitor and record, on a continuous basis, the service water condenser (25159) outlet coolant temperature with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point

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recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

- The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU324-18 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1205(3), R 336.1702(a))

VII. REPORTING

- Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
- Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV324-005 ^A (DV5638 – 203 Fluid storage tank)	1 ²	0.9 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV324-033 (Vent system on drum-off filter housing)	8 ²	3 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV324-039 ^A (DV5636 waste tank)	1 ²	0.6 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV324-048 ^A (4804/4807 condensers)	4 ²	50 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV324-054 ^A (25159 condenser)	2 ²	58 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV324-001 ^A (T-16511A tank vent)	1 ²	24	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV324-013 ^A (DV5624 – 230 Fluid storage tank)	1 ²	3 ²	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV324-056 ^A (DV25156 – 4-2776 process tank)	1 ²	57 ²	R 336.1225, 40 CFR 52.21(c) & (d)
9. SV324-008 ^A (DV5629 – 2-2728 storage tank)	1 ²	11 ²	R 336.1225, 40 CFR 52.21(c) & (d)
10. SV324-006 ^A (DV5632 – 204 Fluid storage tank)	1 ²	0.6 ²	R 336.1225, 40 CFR 52.21(c) & (d)
11. SV324-057 ^A (DV16511W – 2-5471 storage tank)	1 ²	25 ²	R 336.1225, 40 CFR 52.21(c) & (d)
12. SV324-007 ^A (324 feed tank – C-12 Olefin 23134)	1 ²	8 ²	R 336.1225, 40 CFR 52.21(c) & (d)

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Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
13. SV324-024 ^A (324 Building East Side Exhaust Fan)	18 ²	4 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^A This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU325-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

TCS (trichlorosilane) vent recovery system. EU325-01 receives vents from different processes to recover TCS. EU325-01 is located in 317 building. This emission unit typically vents to the carbon bed and venturi scrubber system described in FG325-01; however, the emission unit may vent to the 337 wet scrubber in the event the venturi scrubber system is down.

The most recent PTI for this emission unit is PTI No. 44-06B.

Flexible Group ID: FG325-01, FG337SCRUBBER, FGTHROX, FGSITESCUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

- Carbon bed bank No. 1 (regenerative) comprised of carbon beds 20587, 20588, and 20589
- Carbon bed bank No. 2 (regenerative) comprised of carbon beds 22200, 22205, and 22210
- Venturi scrubber bank No. 1 comprised of venturi scrubbers 9956, 9957, and 9958 (operate in series)
- Venturi scrubber bank No. 2 comprised of venturi scrubbers 22245-1, 22245-2, and 22245-3 (operate in series)
- 337 wet scrubber (9950, 9960 – scrubbers typically alternate in operation but can operate in parallel and vent to SV337-001/002, respectively). NOTE – 337 scrubber acts as backup to venturi scrubber bank Nos. 1 and 2
- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Hydrogen Chloride	1.9 pph ¹	Hourly	EU325-01	SC III.2	R 336.1224, R 336.1225
2. Hydrogen Chloride	14.6 pph ²	Hourly	EU325-01	SC IV.1, VI.1	R 336.1225 R 336.1910

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate the process unless either carbon bed bank No. 1 (carbon beds 20587, 20588, and 20589) or carbon bed bank No. 2 (carbon beds 22200, 22205, and 22210) is installed, maintained, and operated in a satisfactory manner.² **(R 336.1910)**
2. The permittee shall not operate the process unless either venturi scrubber bank No. 1 (venturi scrubbers 9956, 9957, and 9958), venturi scrubber bank No. 2 (venturi scrubbers 22245-1, 22245-2, and 22245-3), or the 337 scrubber is installed, maintained, and operated in a satisfactory manner.² **(R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee may operate equipment in EU325-01 under maintenance and/or upset conditions for a maximum of 200 hours per rolling 12-month time period.² **(R 336.1225, R 336.1910)**

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall keep, in a satisfactory manner, records of the number and duration of maintenance and/or upset operation periods per calendar month and 12-month rolling time period as determined at the end of each calendar month. The permittee shall also record the reason the maintenance and/or upset operation period occurred. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1225, R 336.1910)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV337-003	10 ²	30 ²	R 336.1224, R 336.1225, 40 CFR 52.21(c) & (d)
2. SV337-004	10 ²	30 ²	R 336.1224, R 336.1225, 40 CFR 52.21(c) & (d)
3. SV337-001	10 ²	30 ²	R 336.1224, R 336.1225, 40 CFR 52.21(c) & (d)
4. SV337-002	10 ²	30 ²	R 336.1224, R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU325-03
EMISSION UNIT CONDITIONS**

DESCRIPTION

Solids recovery system. EU325-03 receives vents from different processes to recover silicon. EU325-03 is located in 348 building.

The most recent PTI for this emission unit is PTI No. 44-06.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

- Venturi scrubbers in series (16810, 16811) or FG337SCRUBBER
- Scrubber liquid tank

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Particulate Matter	0.10 lbs/1,000 lb exhaust gas ²	Instantaneous	EU325-03	SC VI.1	R 336.1331(1)(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. If the liquid flow rate of venturi scrubber 16810 is less than 40 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence.² (R 336.1910)
2. The permittee shall not operate the process serviced by the spent silicon material handling operation, including recovery of direct process residue solid/fines tank and spent bed tanks, hereinafter "system", unless the 348 building scrubbers (16810, 16811) are installed and operating properly.² (R 336.1910, R 336.1201)
3. The permittee shall equip and maintain scrubber 16810 with a liquid flow indicator.² (R 336.1910, R 336.1201)

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

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VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall monitor and record, on a continuous basis, the following operational parameters with instrumentation acceptable to the AQD.
 - The liquid flow rate of venturi scrubber no. 16810.
 - The liquid level of the scrubber tank.

For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.² (R 336.1910)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV348-001	10 ¹	35 ¹	R 336.1225

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU340-01
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Calcium chloride process including condensers, scrubbers, columns, vaporizers, storage tanks, compressor, and related equipment. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU340-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 34-04B.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#), FGLEAKDETECTION

POLLUTION CONTROL EQUIPMENT

- Absorber (8745A). This device is a CAM subject unit for VOC and Methyl Chloride
- Scrubbers (8745B). This device is a CAM subject unit for VOC and Methyl Chloride

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Benzene	0.05 pph ¹	Hourly	EU340-01	SC VI.1 & VI.2	R 336.1225
2. Methyl Chloride	3.5 pph, except when the gas stream is diverted to No. 8745 absorber and scrubber. ¹	Hourly	EU340-01	SC VI.1 & VI.2	R 336.1225
3. Methyl Chloride	70.0 pounds per the first hour of one of the infrequent episodes when the gas stream is diverted to No. 8745 absorber and scrubber, not to exceed 101 pounds per episode. ¹	Hourly	EU340-01	SC VI.1 & VI.2	R 336.1225
4. Methyl Chloride	2.6 tpy ¹	12-month rolling period*	EU340-01	SC VI.1 & VI.2	R 336.1225
5. VOC	7.0 pounds per hour, except when the gas stream is diverted to No. 8745 absorber and scrubber. ²	Hourly	EU340-01	SC VI.1 & VI.2	R 336.1702(a)
6. VOC	97.7 pounds per the first hour of one of the infrequent episodes when the gas stream is diverted to No. 8745 absorber and scrubber, not to exceed 126 pounds per episode. ²	Hourly	EU340-01	SC VI.1 & VI.2	R 336.1702(a)
7. VOC	5.0 tpy ²	12-month rolling period*	EU340-01	SC VI.1 & VI.2	R 336.1702(a)

*As determined at the end of each calendar month.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate the process unless the scrubbing water flow of scrubber 8745B is greater than 2.5 gallons per minute. An excursion is a scrubbing water flow rate less than 2.5 gallons per minute defined in this condition or demonstrated during testing. Upon detecting an excursion of the scrubbing water flow limit, the permittee shall restore operation of scrubber 8745B to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1702(a), R 336.1910)**
2. The permittee shall not operate the process unless the coolant flow rate of absorber 8745A is greater than 50 gallons per minute. An excursion is a water flow rate less than 50 gallons per minute defined in this condition or demonstrated during testing. Upon detecting an excursion of the scrubbing water flow limit, the permittee shall restore operation of scrubber 8745B to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1702(a), R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain absorber 8745A with a liquid flow indication device. An alarm shall warn the operator whenever the coolant flow rate drops below 50 gallons per minute.² **(R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(1)(i), (ii))**
2. The permittee shall equip and maintain scrubber 8745B with a liquid flow indication device that shall warn the operator whenever the scrubbing water flow rate is less than 2.5 gallons per minute.² **(R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(1)(i), (ii))**
3. The permittee shall calibrate the flow indicators for scrubber 8745B and absorber 8745A in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall maintain a record of the date, time and duration of every low flow alarm, as well as, the actions taken to restore proper flow for scrubber 8745B and absorber 8745A.² **(40 CFR 64.6(c)(1), R 336.1910)**
2. The permittee shall keep records as required to demonstrate compliance with the emission limits specified in this table. A monthly summary of these emissions shall be made available to the AQD upon request. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission totals specified in this table.² **(R 336.1225, R 336.1702(a))**

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3. For absorber 8745A and scrubber 8745B, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). **(40 CFR 64.7(d))**
4. For absorber 8745A and scrubber 8745B, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
5. For absorber 8745A and scrubber 8745B, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
6. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**
5. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**
6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

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VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV340-001	6.0 ¹	70.0 ¹	R 336.1225, R 336.1901
2. SV340-003	2.0 ¹	55.0 ¹	R 336.1225, R 336.1901

IX. OTHER REQUIREMENT(S)

1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU356-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

Hydrochloric Acid (HCl) production plant with a packed bed scrubber (24388) and venturi scrubber (24386), capable of producing both anhydrous HCl and aqueous HCl. Production and storage of liquid HCl product at a concentration of 30 weight percent or greater during normal operations is subject to the requirements of the Hydrochloric Acid Production NESHAP, 40 CFR Part 63, Subpart NNNNN. Columns 24350 and 24370 and vessels 24358, 24360, and 24362 are only used to produce anhydrous HCl. Absorbers 24387 and 26018 are only used to produce aqueous HCl. Tanks 24345 and 24346 and the packed bed and venturi scrubbers are used during production of both anhydrous and aqueous HCl.

The most recent PTI for this emission unit is PTI No. 29-07D.

Flexible Group ID: FGHCLMACT

POLLUTION CONTROL EQUIPMENT

- Packed bed scrubber (24388) and potential future identical backup spare. Only one scrubber is used at a time.
- Venturi scrubber (24386).

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. HCl	2.0 pph ^{1,*}	Hourly	EU356-01, from anhydrous HCl production activities	SC VI.1, VI.2	R 336.1224

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not produce anhydrous HCl in EU356-01 unless a packed bed scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining a minimum liquid flow rate of 1,012 pph in the packed bed scrubber or the minimum flow rate determined during performance testing acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1910)
2. The permittee shall not produce aqueous HCl in EU356-01 unless a packed bed scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining a minimum liquid flow rate of 1,012 pph in the packed bed scrubber or the minimum flow rate determined during the most recent performance testing conducted for FGHCLMACT.² (R 336.1910)

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3. The permittee shall not produce anhydrous HCl in EU356-01 unless the venturi scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the venturi scrubber includes meeting the requirements below.² **(R 336.1224, R 336.1225, R 336.1910)**

	Operating mode	Requirement
a.	Anhydrous HCl flow to the absorbers is 2500 pph or less.	A minimum liquid flow rate of 9 gallons per minute or the minimum flow rate determined during performance testing acceptable to the AQD District Supervisor.
b.	Anhydrous HCl flow to the absorbers is greater than 2500 pph.	A minimum liquid flow rate of 11 gallons per minute or the minimum flow rate determined during performance testing acceptable to the AQD District Supervisor.

4. The permittee shall not produce aqueous HCl in EU356-01 unless the venturi scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the venturi scrubber includes meeting the requirements below.² **(R 336.1910)**

	Operating mode	Requirement
a.	Anhydrous HCl flow to the absorbers is 2500 pph or less.	A minimum liquid flow rate of 9 gallons per minute or the minimum flow rate determined during the most recent performance testing conducted for FGHCLMACT.
b.	Anhydrous HCl flow to the absorbers is greater than 2500 pph.	A minimum liquid flow rate of 11 gallons per minute or the minimum flow rate determined during the most recent performance testing conducted for FGHCLMACT.

5. The permittee shall equip and maintain the operating packed bed scrubber and the venturi scrubber with a liquid flow meter.² **(R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

- The permittee shall monitor, in a satisfactory manner, the liquid flow rates of the venturi scrubber and of the operating packed bed scrubber on a continuous basis. Unless otherwise specified in this permit, monitoring, and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis.² **(R 336.1224, R 336.1225, R 336.1910)**
- The permittee shall keep, in a satisfactory manner, records of the liquid flow rates for the venturi scrubber and the operating packed bed scrubber. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1910)**
- The permittee shall keep, in a manner satisfactory to the AQD District Supervisor, records of the times during which EU356-01 produces anhydrous HCl and the times during which EU356-01 produces aqueous HCl.² **(R 336.1224, R 336.1225, R 336.1910)**
- The permittee shall monitor, in a satisfactory manner, the flow rate of anhydrous HCl to the absorbers. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1910)**

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VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV356-001 ^a (Packed bed scrubber)	2 ²	103 ²	R 336.1225, 40 CFR 52.21(c)&(d)

^a This stack discharges horizontally and is not required to discharge unobstructed vertically upwards.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

EU356-02
EMISSION UNIT CONDITIONS

DESCRIPTION

Rail car unloading station No. 9E with packed bed scrubber (24401) capable of either loading rail cars with aqueous HCl or unloading aqueous HCl from rail cars. Loading rail cars with liquid HCl product at a concentration of 30 weight percent or greater during normal operations is subject to the requirements of the Hydrochloric Acid Production NESHAP, 40 CFR Part 63, Subpart NNNNN.

The most recent PTI for this emission unit is PTI No. 29-07C.

Flexible Group ID: FGHCMACT

POLLUTION CONTROL EQUIPMENT

Packed bed scrubber (24401)

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU356-02 unless packed bed scrubber 24401 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining a minimum liquid flow rate of 2,500 lbs/hr in the packed bed scrubber.² (R 336.1224, R 336.1225, R 336.1910)
2. The permittee shall equip and maintain packed bed scrubber 24401 with a liquid flow meter.² (R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall monitor, in a satisfactory manner, the liquid flow rate of scrubber 24401 on a continuous basis whenever EU356-02 operates. Unless otherwise specified in this permit, monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis.² (R 336.1910)

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2. The permittee shall keep, in a satisfactory manner, records of the flow rate for scrubber 24401 as required by SC IV.2. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.² **(R 336.1910)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV356-002	4 ¹	20 ¹	R 336.1225

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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PTI No: MI-PTI-A4043-2019b

**EU356-03
EMISSION UNIT CONDITIONS**

DESCRIPTION

Rail car unloading station No. 10E with packed bed scrubber (24344) capable of unloading aqueous HCl from rail cars.

The most recent PTI for this emission unit is PTI No. 29-07C.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Packed bed scrubber (24344)

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU356-03 unless packed bed scrubber 24344 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining a minimum liquid flow rate of 2,500 lbs/hr in the packed bed scrubber.² (R 336.1224, R 336.1225, R 336.1910)
2. The permittee shall equip and maintain packed bed scrubber 24344 with a liquid flow meter.² (R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall monitor, in a satisfactory manner, the liquid flow rate of scrubber 24344 on a continuous basis whenever EU356-03 operates. Unless otherwise specified in this permit, monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis.² (R 336.1910)

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2. The permittee shall keep, in a satisfactory manner, records of the flow rate for scrubber 24344. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.² (R 336.1910)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV356-003	4 ¹	20 ¹	R 336.1225

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

**EU501-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

Intermediate viscosity (IV) and very low viscosity (VLV) silicone fluid manufacturing process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF.

The most recent PTI for this emission unit is PTI No. 158-87B.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

Carbon drum system - Plant currently vents to 5 drums in series; however, the number of drums may vary. The last drum is placed on a scale and weighed periodically to prevent breakthrough.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	0.34 pph ²	Hourly	EU501-01	SC VI.1 & VI.2	R 336.1702(a), R 336.1201
2. VOC	0.5 tpy ²	12-month rolling time period*	EU501-01	SC VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1201
3. Methyl Siloxane	4.1 pph ²	Hourly	EU501-01	SC VI.1 & VI.2	R 336.1702(a), R 336.1201
4. Methyl Siloxane	4.2 tpy ²	12-month rolling time period*	EU501-01	SC VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1201

*as determined at the end of each calendar month

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The weight increase of the last carbon drum (i.e., drum prior to discharge) within the carbon drum system shall not exceed 45 pounds.² (R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall monitor and record, at least once per shift, the weight of the last carbon drum (i.e., drum prior to discharge to atmosphere) within the carbon drum system with instrumentation acceptable to the AQD. A written log of these weights shall be kept on file and made available to the AQD upon request. (R 336.1213(3))
2. A written record of the amount of material processed per 12-month rolling period shall be kept on file and made available to the AQD upon request.² (R 336.1201(3))
3. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission limits specified in this table. These records shall be made available to the AQD upon request. (R 336.1213(3))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV501-103	8 ²	57 ²	R 336.1201(3)
2. SV501-222	2 ²	58 ²	R 336.1201(3)
3. SV501-229	2 ²	59 ²	R 336.1201(3)
4. SV501-230	1.5 ²	59 ²	R 336.1201(3)
5. SV501-231	1 ²	59 ²	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

1. The permittee shall not operate the process unless the carbon drum system is installed and operating properly.² (R 336.1910)
2. The permittee shall equip and maintain the carbon drum system with a scale that measures the weight of the last carbon drum.² (R 336.1910)

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU501-02
EMISSION UNIT CONDITIONS**

DESCRIPTION

1107 hydrolysis process, including tanks 4160 and 23535. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU501-02 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 126-03A.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

Venturi scrubbers (4109, 7585). These devices are CAM subject units for VOCs.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	9.1 pph ²	Hourly	EU501-02	SC VI.1 & VI.2	R 336.1702(a)
2. VOC	5.9 tpy ²	12-month rolling time period*	EU501-02	SC VI.1 & VI.2	R 336.1702(a)

*as determined at the end of each calendar month

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. If the liquid flow rate of venturi scrubber 4109 during startup, shutdown and emergency conditions is less than 18 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence.² **(40 CFR 64.6(c), 40 CFR 64.7(d), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. If the liquid flow rate for venturi scrubber 7585 during process operations in EU501-02 is less than 1.5 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence.² **(40 CFR 64.6(c), 40 CFR 64.7(d), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall calibrate the liquid flow measurement devices for scrubbers 4109 and 7585 in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not initiate startup or planned shutdown of operations in EU501-02 unless venturi scrubber 4109 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of venturi scrubber 4109 includes maintaining a minimum liquid flow rate of 18 gallons per minute to the scrubber.² **(R 336.1224, R 336.1910)**
2. The permittee shall not operate EU501-02 unless venturi scrubber 7585 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of venturi scrubber 7585 includes maintaining a minimum liquid flow rate of 1.5 gallons per minute to the scrubber.² **(R 336.1224, R 336.1910)**

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3. The permittee shall equip and maintain venturi scrubbers 4109 and 7585 with liquid flow measurement devices.² **(R 336.1201 R 336.1910, 40 CFR 64.6(c)(1)(i), (ii))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor within 30 days of the end of each calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(40 CFR 64.6(c)(1), R 336.1224, R 336.1225, R 336.1702(a))**
2. The permittee shall monitor and record, on a per shift basis, the liquid flow rate of venturi scrubber 7585 with instrumentation acceptable to the AQD.² **(40 CFR 64.6(c)(1), R 336.1224, R 336.1225, R 336.1702(a))**
3. During startup, shutdown, and emergency conditions, the permittee shall monitor and record, on a per shift basis, the liquid flow rate of venturi scrubber 4109 with instrumentation acceptable to the AQD.² **(40 CFR 64.6(c)(1), R 336.1224, R 336.1225, R 336.1702(a))**
4. The permittee shall calculate the VOC emission rate from EU501-02 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1702(a))**
5. The permittee shall keep, in a satisfactory manner, a log of each startup, shutdown and emergency operation condition. The log shall include the date, time, duration, and cause of each emergency operation condition. The permittee shall keep all records on file at the facility and make them available to the Department upon request² **(R 336.1912)**
6. For venturi scrubbers 4109 and 7585, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). **(40 CFR 64.7(d))**
7. For venturi scrubbers 4109 and 7585, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**

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- For venturi scrubbers 4109 and 7585, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
- The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

VII. REPORTING

- Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
- Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- Each semiannual report of monitoring and deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no excursions and/or exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**
- Each semiannual report of monitoring and deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**
- Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV501-141	2 ²	54 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV503-158	1 ²	20 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV503-159	1 ²	20 ²	R 336.1225, 40 CFR 52.21(c) & (d)

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IX. OTHER REQUIREMENT(S)

1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

EU501-05
EMISSION UNIT CONDITIONS

DESCRIPTION

Crosslinkers manufacturing process consisting of jacketed reactors, condensers, mixers, pumps and vacuum equipment, and product packaging. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 24-23.

Flexible Group ID: FGMONMACT

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

<u>Pollutant</u>	<u>Limit</u>	<u>Time Period/ Operating Scenario</u>	<u>Equipment</u>	<u>Monitoring/ Testing Method</u>	<u>Underlying Applicable Requirements</u>
1. VOC	4.2 tpy* ²	12-month rolling time period*	EU501-02	SC VI.1 & VI.2	R 336.1702(a)

* The emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.1224, R 336.1225, R 336.1702(a))
2. The permittee shall calculate the VOC emission rate from EU501-05 monthly for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

<u>Stack & Vent ID</u>	<u>Maximum Exhaust Dimensions (inches)</u>	<u>Minimum Height Above Ground (feet)</u>	<u>Underlying Applicable Requirements</u>
<u>1. SV501-021^a (DV4275)</u>	<u>2</u>	<u>53</u>	<u>R 336.1225, 40 CFR 52.21(c) & (d)</u>
<u>2. SV501-204 (Drum Off Vent)</u>	<u>27</u>	<u>56</u>	<u>R 336.1225, 40 CFR 52.21(c) & (d)</u>
<u>3. SV501-244^b (DV4284)</u>	<u>4</u>	<u>53</u>	<u>R 336.1225, 40 CFR 52.21(c) & (d)</u>

^a This stack is equipped with a raincap.
^b This stack vents downwards.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

**EU501-12
EMISSION UNIT CONDITIONS**

DESCRIPTION

Small Emulsion Polymer (EP) process. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and HHHHH, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 154-20.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	0.12 tpy*, ²	12-month rolling time period as determined at the end of each calendar month	EU501-12	SC VI.2	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1702(a))
2. The permittee shall calculate the VOC emission rate from EU501-12 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-501-106 ^a (7540 E.P. Pre-Mix Tank Vent)	3 ²	54 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV-501-121 ^a (7504 E.P. Poly Tank Vent)	2 ²	51 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV-501-122 ^a (7509 E.P. Poly Tank Vent)	2 ²	51 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the applicable provisions of 40 CFR Part 63, Subpart HHHHH (Coatings MACT).² **(40 CFR Part 63, Subpart HHHHH)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

EU501-49
EMISSION UNIT CONDITIONS

DESCRIPTION

Low viscosity fluids and 3-component fluids process including reactors, tanks, condensers, and a vacuum system. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, and the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 437-90C.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

Condenser (15091)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	6.30 tpy ² *	12-month rolling time period as determined at the end of each calendar month	EU501-49	SC VI.2, SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU501-49 unless the exit gas temperature of condenser 15091 is 90°F or less.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU501-49 unless condenser 15091 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall equip and maintain the condenser 15091 with a continuous exit gas temperature indicator. The permittee shall calibrate the temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a))
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of condenser 15091 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU501-49 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep these records on file at the facility and make them available to the AQD upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV501-018 ^a (Busch R5 Vacuum system)	2 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV501-047 ^a (LV Equilibrate Tanks)	1 ²	55 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV501-149 (West Dust Collector)	21 ²	58 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV501-228 ^a (4361 3-Component Fluid Equilibrator)	2 ²	55 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This stack is not required to discharge unobstructed vertically upwards.

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IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

ROP No: MI-ROP-A4043-2019b
Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

**EU502-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

Methyl vent system consisting of emissions from tanks T-100, T-102, T-150, T-151, T-208, T-20841, and T-25-100, emissions from maintenance procedures involving portable storage containing methyltrichlorosilane, methylchlorosilane, dimethylchlorosilane, dimethylchlorosilane, trimethylchlorosilane, phenyltrichlorosilane, and ethyltrichlorosilane, and the vent from the Cabot Mix Tank operation. This emission unit is subject to the requirements of 40 CFR Part 60, Subparts A and Kb and 40 CFR Part 61, Subparts A, J, and V. This emission unit vents to the 337 Spray Scrubber System or to the dry vent tank of the THROX System. The dry vent tank is either sent to the THROX System burner or diverted to the Site Scrubber System. Emissions from loading stations 9G, 10G, DVST-28, and DVST 56 also have the option to vent directly to the Site Scrubber System via the "Bulk Move Vent" described in EU502-07.

The most recent PTI for this emission unit is PTI No. 131-15.

Flexible Group ID: FG304VENTRECOVERY, FG337SCRUBBER, FG325-01, FGTHROX, FGSITESCROBBERS, FGSITEBLOWER, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- 337 Spray Scrubber (9950, 9960 – scrubbers typically alternate in operation but can operate in parallel and vent to SV337-001/002, respectively)
- THROX System comprised of thermal incinerator burner DV24422, quencher DV24424, HCl Absorber. This device is a CAM subject unit for VOCs.
- DV24425, IWS 1st Stage DV24427, IWS 2nd Stage DV 24428, vent SV2514-006
- Site Scrubber System comprised of two parallel spray tower scrubbers DV23709 and DV23710, vents SV2512-001/002

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	4.8 pp ^h	Annual	EU502-01	SC VI.1	R 336.1702(a)
2. VOC	2.5 tpy ²	12-month rolling time period*	EU502-01	SC VI.2	R 336.1702(a)

* 12-month rolling time period as determined at the end of each calendar month.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

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IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate the equipment listed below unless the vent streams from the equipment are exhausted to the emission control devices listed below. For a storage tank, "operate" refers only to transfers into or out of the tank. The permittee shall not exhaust emissions from any equipment identified below to an associated device listed below unless the device is installed, maintained, and operated in a satisfactory manner:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

	Emission Control	Required Control Efficiency
a. EU502-01	i. 337 Spray Scrubbers or	99.4%
	ii. THROX System or	99.9%
	iii. Site Scrubber System	99.4%

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1702(a))**
2. The permittee shall calculate the VOC emission rate from EU502-01 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
3. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart Kb, Section 60.116b (Monitoring of Operations) for storage vessel nos. DV100, DV102, DV150, DV151, DV208, DV20841, and DV25-100. **(40 CFR Part 60, Subpart Kb, Section 60.116b)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart Kb, Section 61.115b (Reporting and recordkeeping requirements) for storage vessel nos. DV100, DV102, DV150, DV151, DV208, DV20841, and DV25-100. **(40 CFR Part 60, Subpart Kb, Section 60.115b)**

See Appendix 8

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VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2514-006	54 ²	90 ²	R 336.1225, R 336.2803, R 336.2804
2. SV2512-001	6 ²	65 ²	R 336.1225, R 336.2803, R 336.2804
3. SV2512-002	6 ²	65 ²	R 336.1225, R 336.2803, R 336.2804

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subparts A (General Provisions) and Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels) for storage vessel nos. DV100, DV102, DV150, DV151, DV208, DV20841, and DV25-100. The applicable sections of Subpart Kb include, but are not necessarily limited to: **(40 CFR Part 60, Subparts A and Kb)**
 - a. 60.112b (Standard of VOCs)
 - b. 60.113b (Testing and procedures)
 - c. 60.114b (Alternative means of emission limitation)

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU502-04
EMISSION UNIT CONDITIONS**

DESCRIPTION

Container Maintenance and Wash area for the High Volume Silanes production facility. Includes nitrogen purge for some containers. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No PTI No. 18-18A.

Flexible Group ID: FGSITEBLOWER, FGTHROX, FGMONMACT

POLLUTION CONTROL EQUIPMENT

FGTHROX for nitrogen purge

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOCs	0.33 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU502-04	SC VI.2, SC VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate nitrogen purging activities of containers in EU502-04 unless FGTHROX is operated in accordance with the requirements of FGTHROX.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not conduct nitrogen purging activities exhausted to FGTHROX unless FGTHROX is installed, maintained, and operated in a satisfactory manner, which includes meeting the requirements of SC III.1.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (**R 336.1213(3)(b)(ii)**)

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (**R 336.1213(3)(b)(ii)**)

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (**R 336.1224, R 336.1225, R 336.1702(a)**)

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2. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU502-04 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
3. The permittee shall keep a record of nitrogen purging activities for each calendar month, noting all occasions when nitrogen purging was interrupted because FGTHROX was not installed, maintained, and operated in a satisfactory manner. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV502-009a (12G Tank Truck Wash Station)	48 ²	0 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV502-009b (13G Tank Truck Wash Station)	48 ²	0 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV502-009c (13G Rail Car Station)	48 ²	0 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV2514-006 (THROX Vent)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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Expiration Date: February 20, 2024
PTI No: MI-PTI-A4043-2019b

EU502-07 EMISSION UNIT CONDITIONS

DESCRIPTION

This emission unit consists of two sets of related equipment with different emission profiles and different vent control paths:

1. Distillation Vents: Trichlorosilane (TCS) distillation equipment for purifying crude TCS into various grades (electronic-, chemical-, and plant-grade) of TCS product as well as chemical-grade silicon tetrachloride.

Typically, the add-on control equipment for the Distillation Vents consists of the 304 Vent Recovery System followed by the dry vent tank at the THROX System. The dry vent tank is either sent to the THROX System burner or diverted to the Site Scrubber System. In the event both the THROX System and the Site Scrubber System are off-line, the Distillation Vents will be directed through the 337 Spray Scrubber System after 304 Vent Recovery. However, in the event 304 Vent Recovery System goes down, the Distillation Vents will be directed to the 325 Vent Recovery System. The 325 Vent Recovery System consists of two carbon bed banks (Nos. 1 and 2) and the 337 Venturi Scrubbers. Each one of the carbon beds (either No. 1 or No. 2) vent to one of the 337 Venturi Scrubbers (No. 1 or No. 2), or to the THROX System or the Site Scrubber System.

2. Bulk Move Vents: trichlorosilane (TCS), silicon tetrachloride (STC), and dichlorosilane (DCS) "bulk move" operations. These operations include the loading and unloading of storage tanks, railcars, and semi-trailers and occur primarily at Dow Corning's 502 Building, supporting the distillation operations.

Typically, the add-on control equipment for the Bulk Move Vents is the Site Scrubber System. If the Site Scrubber System is down, the Bulk Move Vents have the capability to follow the vent path of the Distillation Vents as described above.

The 337 Spray Scrubber System discharges to the atmosphere through either SV337-001 or SV337-002. 337 Venturi Scrubber bank No. 1 discharges to the atmosphere through SV337-003. 337 Venturi Scrubber bank No. 2 discharges to the atmosphere through SV337-004. The THROX System discharges through SV2514-006. The Site Scrubber System discharge through either SV2512-001 or SV2512-002. This emission unit is subject to the requirements of 40 CFR Part 60, Subparts A and Kb.

The most recent PTI for this emission unit is PTI No. 185-07B.

Flexible Group ID: FG304VENTRECOVERY, FG337SCRUBBER, FG325-01, FGTHROX, FGSITESCUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

- 304 Vent Recovery System comprised of interchangers HX1 2040 and HX2 2040 and condensers HX1 2044 and HX2 2044
- THROX System comprised of thermal incinerator burner DV24422, quencher DV24424, HCl Absorber DV24425, IWS 1st Stage DV24427, and IWS 2nd Stage DV 24428, vent SV2514-006
- Site Scrubber System comprised of two parallel spray tower scrubbers DV23709 and DV23710, vents SV2512-001/002
- 337 Spray Scrubber (9950, 9960 – scrubbers typically alternate in operation but can operate in parallel and vent to SV337-001/002, respectively)
- Tanker trailer vapor equalization
- 325 Vent Recovery System consisting of carbon beds (Bank No.1 - 20587, 20588, 20589 and Bank No. 2 - 22200, 22205, 22210) and the 337 Venturi Scrubbers (Bank No. 1 - 9956, 9957, 9958 operate in series and Bank No. 2 - 22245-1, 22245-2, 22245-3 operate in series) used as a backup control device for the emission unit in the event 304 Vent Recovery goes down.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Trichlorosilane & tetrachlorosilane combined	6.0 tpy ¹	12-month rolling time period as determined at the end of each calendar month.	EU502-07	SC VI.2	R 336.1224

II. MATERIAL LIMIT(S)

1. The permittee shall not route more than 1,000 pounds of material per hour, based on a one-hour average, from the Bulk Move Vents to the Site Scrubber System.¹ **(R 336.1225)**
2. The permittee shall not route more than 600 pounds of material per hour, based on an annual average, from the Bulk Move Vents to the Site Scrubber System.¹ **(R 336.1225)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the mass flow rate of the vapor from the Bulk Move Vents to the Site Scrubber System on a continuous basis. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.¹ **(R 336.1225)**
2. The permittee shall not operate the equipment listed below unless the vent streams from the equipment are exhausted to the emission control devices listed below. For a storage tank, "operate" refers only to transfers into or out of the tank. The permittee shall not exhaust emissions from any equipment identified below to an associated device listed below unless the device is installed, maintained, and operated in a satisfactory manner.² **(R 336.1224, R 336.1225, R 336.1910)**

Equipment	First Emission Control	Required Control Efficiency	Second Emission Control	Required Control Efficiency
a. Distillation Vents	i. 304 Vent Recovery System followed by	88%-99%*	1. THROX System or	99.9%
			2. Site Scrubber System or	99.4%
			3. 337 Spray Scrubbers	99.4%
	ii. Or 325 Vent recovery System followed by	99.9%	1. THROX System or	99.9%
			2. Site Scrubber System or	99.4%
			3. 337 Venturi Scrubbers	99.4%

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b. Bulk Move Vents	i. Site Scrubber System	99.4%	NA	
	ii. Or 304 Vent Recovery System followed by	88%-99%*	1. THROX System or	99.9%
			2. Site Scrubber System or	99.4%
			3. 337 Spray Scrubbers	99.4%
	iii. Or 325 Vent recovery System followed by	99.9%	1. THROX System or	99.9%
			2. Site Scrubber System or	99.4%
3. 337 Venturi Scrubbers			99.4%	

* Control efficiency depends on the chlorosilane – 96% for trichlorosilane, 99% for silicon tetrachloride, and 88% for dichlorosilane.

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall monitor and record, in a satisfactory manner, when the Bulk Move Vents are operating, the mass flow rate of the vapor from the Bulk Move Vents to the Site Scrubber System on a continuous basis. Monitoring and recording of data “on a continuous basis” is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event.¹ (R 336.1225)
2. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the Distillation Vents for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission limits specified in the table listed in Section I of this permit. These records shall be made available to the AQD upon request.¹ (R 336.1224)
3. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart Kb, Section 60.116b (Monitoring of Operations) for storage vessels DV153, DV155, DV252, DV25-102, DV25-105, and DV25-107. (40 CFR Part 60, Subpart Kb, Section 60.116b)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

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4. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart Kb, Section 61.115b (Reporting and recordkeeping requirements) for storage vessels DV153, DV155, DV252, DV25-102, DV25-105, and DV25-107. **(40 CFR Part 60, Subpart Kb, Section 60.115b)**

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2514-006	54 ²	90 ²	R 336.1225, R 336.2803, R 336.2804
2. SV2512-001	6 ²	65 ²	R 336.1225, R 336.2803, R 336.2804
3. SV2512-002	6 ²	65 ²	R 336.1225, R 336.2803, R 336.2804
4. SV337-003	10 ²	30 ²	R 336.1225, R 336.2803, R 336.2804
5. SV337-004	10 ²	30 ²	R 336.1225, R 336.2803, R 336.2804

IX. OTHER REQUIREMENTS

1. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subparts A (General Provisions) and Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels) for storage vessels DV153, DV155, DV252, DV25-102, DV25-105, and DV25-107. The applicable sections of Subpart Kb include, but are not necessarily limited to: **(40 CFR Part 60, Subparts A and Kb)**
- 60.112b (Standard of VOCs)
 - 60.113b (Testing and procedures)
 - 60.114b (Alternative means of emission limitation)

Footnotes:

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

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EU502-09
EMISSION UNIT CONDITIONS

DESCRIPTION

Chlorosilane waste tank 25403 for phenyl supply chain located in the 502 tank farm.

The most recent PTI for this emission unit is PTI No. 91-14.

Flexible Group ID: FGTHROX, FGSITESCUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

This emission unit vents to the site THROX and, when the THROX is not operating, the site scrubbers. Emissions from transfers from the tank to tank trucks and rail cars will be controlled by the THROX or vapor balance back to the tank.

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not load any tank truck or railcar from EU502-09 unless the THROX or the vapor balance system is installed, maintained, and operated in a satisfactory manner.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU502-09 unless the emissions are routed to FGTHROX or FGSITESCUBBERS and the control device (FGTHROX or FGSITESCUBBERS) is installed, maintained, and operated in a satisfactory manner, as described in ROP No. MI-ROP-A4043-2008 (or any subsequent revisions).² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))

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3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EU502-11
EMISSION UNIT CONDITIONS

DESCRIPTION

Chlorosilane waste tank 256 in the 2502 tank farm, with nominal capacity of 20,000 gallons. The tank receives liquid waste from various emission units at the facility and can be unloaded to either tank trucks or railcars. The tank typically vents to the site thermal oxidizer (THROX). In the event the THROX is offline, the tank vents to one of the parallel site scrubbers. If both the THROX and the site scrubbers are unavailable, the tank vents to one of the 337 tower scrubbers.

The most recent PTI for this emission unit is PTI No. 132-15.

Flexible Group ID: FGTHROX, FGSITESCRRUBBERS, FG337SCRUBBER

POLLUTION CONTROL EQUIPMENT

- THROX: thermal incinerator (24422 - burner, quench, and scrubber system), vent SV2514-006
- Site scrubber system: two parallel spray tower scrubbers (23709 and 23710), vents SV2512-001/002
- 337 Spray Scrubber System: (9950, 9960 – scrubbers typically alternate in operation but can operate in parallel and vent to SV337-001/002, respectively.)

I. EMISSION LIMITS

Pollutant	Limit	Time Period /Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	1.9 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU502-11	SC VI.4	R 336.1702(a)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall only transfer the 3295 vessel and column bottoms stream from 311 building to EU502-11 when emissions from the transfer are being exhausted to the THROX and the THROX is installed, maintained, and operated in a satisfactory manner.¹ (R 336.1224, R 336.1225)

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU502-11 unless all emissions are vented to one of the emission control devices listed below and the emission control device is installed, maintained, and operated in a satisfactory manner.² (R 336.1224, R 336.1702(a), R 336.1910)
 - a. THROX
 - b. Site scrubber system
 - c. 337 Spray Scrubber System
2. The permittee shall not transfer material from EU502-11 to DV15G railcar station or to DVST-61 trailer station unless the transfer is vapor balanced and the vapor balance equipment is installed, maintained, and operated in a satisfactory manner.² (R 336.1224, R 336.1702(a), R 336.1910)

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations and records in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1702(a))**
2. The permittee shall keep a monthly record of the time periods when emissions from EU502-11 are vented to each emission control device listed in SC IV.1. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
3. The permittee shall keep a monthly record of the identity and source of waste streams transferred to EU502-11. For the 3295 vessel and column bottoms stream from 311 building, the record shall also include the date and time during which the stream was transferred to EU502-11. The permittee shall keep all records on file at the facility and make them available to the Department upon request.¹ **(R 336.1224, R 336.1225)**
4. The permittee shall calculate the VOC emission rate from EU502-11 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR 60.115b (Reporting and recordkeeping requirements), as they apply to EU502-11. **(40 CFR 60.115b)**

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

NA

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IX. OTHER REQUIREMENTS

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A (General Provisions) and Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels), as they apply to EU502-11. The applicable sections of Subpart Kb include, but are not necessarily limited to, the following: **(40 CFR Part 60, Subparts A & Kb)**
 - a. 60.112b (Standard of VOCs)
 - b. 60.113b (Testing and procedures)
 - c. 60.114b (Alternative means of emission limitation)

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU505-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

Resin and coating manufacturing including reactors, kettles, condensers, scrubber, drum off, vacuum system, and related equipment. This emission unit is subject to the requirements of 40 CFR Part 61, Subparts A, J, and V, and 40 CFR Part 63, Subpart FFFF. Tanks 508 and 509 are subject to Subpart FFFF.

The most recent PTI for this emission unit is PTI No. 169-12B.

Flexible Group ID: FGLEAKDETECTION, FGTHROX, FGSITESCUBBERS, FGSITEBLOWER, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Chilled condensers (16092/25094, 6553).
- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOC	24.32 pph ² *	Hourly	EU505-01	SC V.1, VI.2	R 336.1702(a)
2. VOC	8.67 tpy ² *	12-month rolling time period as determined at the end of each calendar month	EU505-01	SC VI.2, VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Unless the exception in SC III.3 applies, the permittee shall not operate equipment in EU505-01 that exhausts to chilled condenser 6553 unless the coolant exit temperature of the condenser is 7°C or less.² (**R 336.1225, R 336.1702(a), R 336.1910**)
2. Unless the exception in SC III.3 applies, the permittee shall not operate equipment in EU505-01 that exhausts to either chilled condenser 16092 or chilled condenser 25094, whichever is in use, unless the coolant exit temperature of whichever condenser is in use is 0°C or less.² (**R 336.1225, R 336.1702(a), R 336.1910**)
3. The permittee may operate equipment in EU505-01 that exhausts to one of the chilled condensers (condenser 6553 and either condenser 16092 or condenser 25094) when the chilled condenser to which the equipment exhausts is not operating in a satisfactory manner, as long as all of the following conditions are true.² (**R 336.1224, R 336.1225, R 336.1702, R 336.1910**)
 - a. The equipment exhaust is routed to FGTHROX or FGSITESCUBBERS.
 - b. FGTHROX or FGSITESCUBBERS (whichever is receiving exhaust from EU505-01) is installed, maintained, and operated in a satisfactory manner.

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IV. DESIGN/EQUIPMENT PARAMETER(S)

1. Except as allowed in SC III.3, the permittee shall not operate equipment in EU505-01 that exhausts to chilled condenser 6553 and either chilled condenser 16092 or chilled condenser 25094, whichever is in use, unless the chilled condenser is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 through III.3 that apply to the condenser.² **(R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall equip and maintain each of the chilled condensers with a device to continuously monitor and record the condenser coolant exit temperature. The permittee shall calibrate the coolant exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Upon request of the AQD District Supervisor, the permittee shall verify VOC emission rates from EU505-01 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOCs	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² **(R 336.1702(a), R 336.2001, R 336.2003, R 336.2004,)**

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. **(R 336.1213(3))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall monitor and record, on a continuous basis, the coolant exit temperature of chilled condenser 6553 and either chilled condenser 16092 or chilled condenser 25094, whichever is in use, with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU505-01 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV505-001 16092/25094 Vent Condenser	2.0 ²	60.0 ²	R 336.1225 40 CFR 52.21(c)&(d)
2. SV505-011 Drum off vent	15.0 ²	44.0 ²	R 336.1225 40 CFR 52.21(c)&(d)
3. SV505-002 ^A 6553 condenser vent	1.0 ²	21.0 ²	R 336.1225 40 CFR 52.21(c)&(d)
4. DV23654 ^A Atmospheric Vent	2.0 ²	20 ²	R 336.1225 40 CFR 52.21(c)&(d)
5. SV505-032 ^A THROX blower atmospheric bypass vent	3.0 ²	47.0 ²	R 336.1225 40 CFR 52.21(c)&(d)

^A. This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU505-04
EMISSION UNIT CONDITIONS**

DESCRIPTION

23390 batch reactor and manufacturing process containing a receiver, filters, carbon beds, vacuum pump, condensers, storage tanks, and other associated equipment.

The most recent PTI for this emission unit is PTI No. 200-15A.

Flexible Group ID: FGMONMACT, [FGHAP2012A2A](#), FGLEAKDETECTION

POLLUTION CONTROL EQUIPMENT

- 23412 service water condenser
- 23414 glycol condenser
- 23401 packed tower scrubber
- 5-510 glycol condenser

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	174 lb/year ²	12-month rolling time period as determined at the end of each calendar month	EU505-04	SC VI.2, VI.3	R 336.1702(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU505-04 unless the emission control devices listed below are installed, maintained, and operated in a satisfactory manner. Satisfactory operation of each emission control device includes meeting the operating parameters listed below for the device.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

	Required control device	Indicator of satisfactory operation
a.	23401 scrubber	Scrubber liquid flow rate not less than 3.1 gallons per minute (gpm)
b.	23412 service water condenser and 23414 glycol condenser	Glycol return temperature from 23414 condenser no higher than 15°C
c.	5-510 glycol condenser	Glycol return temperature no higher than 7 °C

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the equipment listed below with the devices listed below:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

	Equipment	Device to be equipped and maintained
a.	23401 scrubber	Liquid flow rate indicator
b.	23414 glycol condenser	Glycol return temperature indicator
c.	5-510 glycol condenser	Glycol return temperature indicator

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, in a satisfactory manner, the following operational parameters for the listed equipment at the specified frequency.

	Equipment	Operational parameter	Frequency of monitoring
a.	23401 scrubber	Liquid flow rate	Continuous
b.	23414 glycol condenser	Glycol return temperature	Once per shift
c.	5-510 glycol condenser	Glycol return temperature	Continuous

For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of the event. This record shall also include actions taken to correct and prevent a reoccurrence of the event.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

3. The permittee shall calculate the VOC emission rate from EU505-04 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV505-003 (Exhaust from Manhole Vents) ^a	21 ²	49 ²	R 336.1225, 40 CFR 52.21(c)&(d)
2. SV505-008 (Tank Farm Vent Condenser) ^a	1 ²	23 ²	R 336.1225, 40 CFR 52.21(c)&(d)
3. SV505-011 (Drum Off Vent) ^a	15 ²	44 ²	R 336.1225, 40 CFR 52.21(c)&(d)
4. SV505-025 (Tank Vent North) ^a	1 ²	17 ²	R 336.1225, 40 CFR 52.21(c)&(d)
5. SV505-026 (Tank Vent South) ^a	1 ²	18 ²	R 336.1225, 40 CFR 52.21(c)&(d)
6. SV505-027 Fluid Kettle Scrubber Vent) ^a	2 ²	48 ²	R 336.1225, 40 CFR 52.21(c)&(d)

^a This vent is not required to discharge unobstructed vertically upwards.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU505-11
EMISSION UNIT CONDITIONS**

DESCRIPTION

Batch resin process with emissions controlled by condenser 6553 and either the site scrubbers or FGTHROX. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts A and FFFF, and to the equipment leak provisions of 40 CFR Part 63, Subpart UU, as well as to the requirements of 40 CFR Part 61, Subparts A, J, and V.

The most recent PTI for this emission unit is PTI No. 162-20.

Flexible Group ID: FGLEAKDETECTION, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Chilled condenser 6553
- FGTHROX
- FGSITESCRUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	14.5 pph ² *	Hourly	EU505-11	SC V.1, VI.2	R 336.1702(a)
2. VOC	1.3 tpy ² *	12-month rolling time period as determined at the end of each calendar month	EU505-11	SC VI.2, VI.3	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Unless the exception in SC III.2 applies, the permittee shall not operate equipment in EU505-11 that exhausts to chilled condenser 6553 unless the coolant exit temperature of the condenser is 7°C or less.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee may operate equipment in EU505-11 that exhausts to chilled condenser 6553 when the chilled condenser is not operating in a satisfactory manner, as long as all of the following conditions are true.² (**R 336.1224, R 336.1225, R 336.1702, R 336.1910**)
 - a. The equipment exhaust is routed to FGTHROX or FGSITESCRUBBERS.
 - b. FGTHROX or FGSITESCRUBBERS (whichever is receiving exhaust from EU505-11) is installed, maintained, and operated in a satisfactory manner.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. Except as allowed in SC III.2, the permittee shall not operate equipment in EU505-11 that exhausts to chilled condenser 6553 unless the chilled condenser is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1 that apply to the condenser.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall equip and maintain chilled condenser 6553 with a device to continuously monitor and record the condenser coolant exit temperature. The permittee shall calibrate the coolant exit temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify VOC emission rates from EU505-11 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1702(a), R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the coolant exit temperature of chilled condenser 6553 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU505-11 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))

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2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV505-002 ^A (6553 condenser vent)	1 ²	21 ²	R 336.1225 40 CFR 52.21(c)&(d)
2. SV505-011 (Drum off vent)	15 ²	44 ²	R 336.1225 40 CFR 52.21(c)&(d)
3. SV505-032 ^A (THROX blower atmospheric bypass vent)	3 ²	46 ²	R 336.1225 40 CFR 52.21(c)&(d)
4. SV2514-006 (FGTHROX)	54 ²	89.5 ²	R 336.1225 40 CFR 52.21(c)&(d)
5. SV2512-001	6 ²	65 ²	R 336.1225 40 CFR 52.21(c)&(d)
6. SV2512-002	6 ²	65 ²	R 336.1225 40 CFR 52.21(c)&(d)

^A This stack is not required to discharge unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU508-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

Phenyltrichlorosilane (PhSiCl₃) and diphenyldichlorosilane (Ph₂SiCl₂) processes, which include production, storage, and transfer activities. Emissions are controlled by FGTHROX (as well as FGSITESCUBBERS or FG337SCRUBBER during periods where FGTHROX is out of operation or when total or partial diversion is necessary for any safety-related or operational scenarios). This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF and to the equipment leak provisions of 40 CFR Part 63, Subpart UU.

The most recent PTI for this emission unit is PTI No. 84-08D.

Flexible Group ID: FG337SCRUBBER, FGTHROX, FGSITESCUBBERS, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- FGTHROX - Thermal oxidizer with heat recovery (THROX) unit consisting of a burner, quencher, absorber, and two two-stage ionizing wet scrubbers (IWS) in series; or
- FG337SCRUBBER - 337 wet scrubber (9950, 9960 – scrubbers typically alternate in operation, but can operate in-parallel and vent to SV337-001/002, respectively); or
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	20.3 tpy ^{2,*}	12-month rolling time period as determined at the end of each calendar month	EU508-01	SC VI.2	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU508-01 unless FGTHROX is operated in accordance with the requirements of FGTHROX, except as described in SC III.2.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)
2. The permittee may operate EU508-01 when FGTHROX is not operating in a satisfactory manner, as long as all of the following conditions are true.² (**R 336.1224, R 336.1225, R 336.1702, R 336.1910**)
 - a. The equipment exhaust is routed to FGSITESCUBBERS or FG337SCRUBBER.
 - b. FGSITESCUBBERS and/or FG337SCRUBBER (whichever is receiving exhaust from EU508-01) is installed, maintained, and operated in a satisfactory manner.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU508-01, except as described in SC III.2, unless FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a))
2. The permittee shall calculate the VOC emission rate from EU508-01 monthly, including the emission rate from the operational scenario as described in SC III.2, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV2517-001 ^a (TOX)	30 ²	102 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV2512-001 (Site Scrubber No. 1)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV2512-002 (Site Scrubber No. 2)	6 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV337-001 (Scrubber 9950)	10 ²	33 ²	R 336.1225, 40 CFR 52.21(c) & (d)

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Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
6. SV337-002 (Scrubber 9960)	10 ²	33 ²	R 336.1225, 40 CFR 52.21(c) & (d)

^a This EU may exhaust from SV2517-001 after that stack has been installed.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU515-01
 EMISSION UNIT CONDITIONS**

DESCRIPTION

The emission unit involves all activities associated with production, storage and transfer of Phenylmethyldichlorosilane (PhMeSiCl₂) and Diphenylmethylchlorosilane (Ph₂MeSiCl). The unit can vent as follows:

456 MgCl₂ Bin: This unit vents through a baghouse via SV515-002 as MgCl₂ powder is transferred to the bin from the 515 MgCl₂ Drying unit.

515 Toluene Scrubber: Multiple units vent to the 515 Toluene Scrubber (10530). These vents are pre-treated by glycol condenser HX-10541. The Reactors, 513 Tank Farm, 516 Distillation, 515 MgCl₂ Filtration and 515 MgCl₂ Drying units all vent to the 515 Toluene Scrubber. 655 column within 516 Distillation utilizes HX-10657 if FGTHROX burner is unavailable. The Toluene Scrubber vent is normally sent to FGTHROX and vented via SV2512-001, SV2512-002 or SV2514-006. If FGTHROX is unavailable emissions will vent through the 515 Toluene Scrubber and out SV515-003 while the process is shutting down.

515 MgCl₂ Quenching: MgCl₂ powder from 456 bin can be sent to the 515 MgCl₂ Quenching unit and vented via SV515-006.

515 MgCl₂ Trailer Loading: MgCl₂ powder from 456 bin can be sent to the 515 MgCl₂ Trailer Loading unit and vented via SV515-004.

Reactors: The reactors can vent N₂ from Mg chip transfer operations via SV515-007 and SV515-008.

[EU515-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.](#)

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The most recent PTI for this emission unit is PTI No. 812-91D.

Flexible Group ID: FGLDFACILITY, FGLEAKDETECTION, FGTHROX, FGSITESCUBBERS, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- 456 MgCl₂ Bin Baghouse (10457)
- Toluene Scrubber (10530) This CAM subject device for VOC.
- Condenser (HX-10453) This is a CAM subject device for VOC.
- Condenser (HX-10541) This is a CAM subject device for VOC.
- Condenser (HX-10657) This is a CAM subject device for VOC.
- Bag filters (22979, 22981)
- MgCl₂ Carbon Drums (Banks #1 and #2)
- FGTHROX
- FGSITESCUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	4.6 pph ^{A,2}	Hourly	EU515-01	SC V.1	R 336.1702(a)
2. VOC	20.16 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU515-01	SC VI.3, VI.4, VI.5, VI.6, VI.8	R 336.1702(a)

^A This limit does not apply when venting to SV515-003 or FGSITESCUBBERS when FGTHROX is not available.

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General Business

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU515-01 unless the emission control devices listed below are installed, maintained, and operated in a satisfactory manner. Satisfactory operation of each emission control device includes meeting the operating parameters listed below for the device.² (R 336.1225, R 336.1702(a), R 336.1910)

	Required control device	Operating Parameter
a.	DV22979 Bag Filter	Pressure drop is between 0.5 and 75 inches of water
b.	DV22981 Bag Filter	Pressure drop is between 0.5 and 75 inches of water
c.	HX-10453 Condenser	Coolant supply temperature is -5°C or less
d.	HX-10541 Condenser	Coolant supply temperature is -5°C or less
e.	HX-10657 Condenser	Liquid flow rate is 100 gpm or more ^A
f.	DV10530 Toluene Scrubber	Exhaust air temperature is -5°C or less
g.	FGTHROX	As specified in FGTHROX
h.	MgCl ₂ Carbon Drum	Carbon bed weight gain is not more than 80 kg per carbon drum bank
^A Compliance with this parameter is not required while EU515-01 is venting to FGTHROX.		

2. If the exit air temperature of packed tower scrubber 10530 exceeds -5°C while the scrubber exhaust is not routed to the THROX, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. An excursion of the exit air temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the exit air temperature limit, the permittee shall restore operation of scrubber 10530 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))
3. If the liquid flow rate of condenser HX-10657 is less than 100 gallons per minute while the scrubber exhaust is not routed to the THROX, the permittee shall implement corrective action and maintain a record of action take to prevent recurrence. An excursion is a liquid flow rate less than 100 gallons per minute defined in this condition, or demonstrated during testing. Upon detecting an excursion of the liquid flow rate limit, the permittee shall restore operation of condenser HX-10657 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))
4. If the main coolant supply temperature for condensers 10453 and 10541 exceeds -5°C, respectively, while the condenser exhaust is not routed to the THROX, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. An excursion of the main coolant supply temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the main coolant supply temperature limit, the permittee shall restore operation of condensers 10453 and 10541 to their normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))
5. The permittee shall calibrate the temperature gauge for scrubber 10530 and condensers 10453 and 10541 in a satisfactory manner. (40 CFR 64.6(c)(1)(iii))

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate the reactors; 456 MgCl₂ Bin Baghouse (10457); all distillation columns; all raw/crude material tanks; and all dryers in EU515-01 unless the emissions are routed to the DV22979 Bag Filter, DV22981 Bag Filter, HX-10453 Condenser, HX-10541 Condenser, HX-10657 Condenser, DV10530 Toluene

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Scrubber, and FGTHROX unless these control devices are installed, maintained, and operated in a satisfactory manner, as specified in SC III.1.2 (R 336.1225, R 336.1702(a), R 336.1910)

2. The permittee shall not operate the 456 MgCl₂ Bin unless the 456 MgCl₂ Bin Baghouse (10457) is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall not operate the 515 MgCl₂ Quenching unless the MgCl₂ Carbon Drums are installed, maintained, and operated in a satisfactory manner, as specified in SC III.1.2 (R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall equip and maintain DV22979 and DV22981 Bag Filters with devices to continuously monitor and record the pressure drop across each filter. The permittee shall calibrate each device in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1225, R 336.1702(a), R 336.1910)
5. The permittee shall equip and maintain Condensers HX-10453 and HX-10541 with devices to continuously monitor and record each condenser's coolant supply temperature. The permittee shall calibrate each device in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1225, R 336.1702(a), R 336.1910)
6. The permittee shall equip and maintain Toluene Scrubber DV10530 with a device to continuously monitor and record the scrubber's exhaust air temperature. The permittee shall calibrate the device in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1225, R 336.1702(a), R 336.1910)
7. The permittee shall equip and maintain the MgCl₂ Carbon Drum with devices to continuously monitor and record the weight of each carbon drum bank. The permittee shall calibrate each device in a satisfactory manner acceptable to the AQD District Supervisor.² (R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Upon request of the AQD District Supervisor, the permittee shall verify the VOC emission rates from EU515-01 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60, Subpart A. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1702(a), R 336.2001, R 336.2003, R 336.2004)
2. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall monitor and record, on a continuous basis, the pressure drop across DV22979 and DV22981 Bag Filters with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1225, R 336.1702(a), R 336.1910)

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3. The permittee shall monitor and record, on a continuous basis, the coolant supply temperature of Condensers HX-10453 and HX-10541 with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of Condenser HX-10657, when EU515-01 is not venting to FGTHROX, with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a), R 336.1910)**
5. The permittee shall monitor and record, on a continuous basis, the exhaust air temperature of Toluene Scrubber DV10530 with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a), R 336.1910)**
6. The permittee shall monitor and record, on a continuous basis, the weight of each MgCl₂ Carbon Drum carbon drum bank with instrumentation acceptable to the AQD District Supervisor. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a), R 336.1910)**
7. The permittee shall perform, and record the results of, a monthly visible emission observation of SV515-002 during routine operating conditions as an indicator of satisfactory operation. This observation need not be performed using Method 9. If visible emissions are observed, the permittee shall take corrective actions as necessary to ensure the 456 MgCl₂ Bin Baghouse (10457) is operating in a satisfactory manner. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1910)**
8. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU515-01 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
9. For scrubber 10530, and condensers 10453, 10541, HX-10657, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). **(40 CFR 64.7(d))**
10. For scrubber 10530, and condensers 10453, 10541, HX-10657, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the

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monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**

11. For scrubber 10530, and condensers 10453, 10541, HX-10657, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
12. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**
5. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**
6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**
7. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

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VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV515-002 ^A (456 Bin Vent)	3 ²	42 ²	R 336.1225 40 CFR 52.21(c) & (d)
2. SV515-003 ^A (Toluene Scrubber)	2 ²	88 ²	R 336.1225 40 CFR 52.21(c) & (d)
3. SV515-004 ^A (MgCL2 Trailer Loading)	2 ²	3 ²	R 336.1225 40 CFR 52.21(c) & (d)
4. SV515-006 ^A (MgCl2 Quencher Vent)	2 ²	44 ²	R 336.1225 40 CFR 52.21(c) & (d)
5. SV515-007 ^A (Mg Hopper Purge)	1 ²	54 ²	R 336.1225 40 CFR 52.21(c) & (d)
6. SV515-008 ^A (Mg Hopper Purge)	1 ²	54 ²	R 336.1225 40 CFR 52.21(c) & (d)
7. SV2512-001 (Site Scrubber #1)	6 ²	67 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
8. SV2512-002 (Site Scrubber #2)	6 ²	67 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
9. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225 40 CFR 52.21 (c) & (d)
10. SV2517-001 ^B (TOX vent)	30 ²	102 ²	R 336.1225 40 CFR 52.21(c) & (d)

^A This stack is not required to be discharged unobstructed vertically upwards to the ambient air

^B This EU may exhaust from SV2517-001 after that stack has been installed.

IX. OTHER REQUIREMENT(S)

1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU601-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

Alkoxylation process including kettle, condensers, storage tanks, distillation columns, bulk container filling equipment, scrubbers, and other related equipment. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart UU. EU601-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 534-77H.

Flexible Group ID: FGTHROX, FGSITEBLOWER, FGMONMACT, [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

- Venturi scrubber 24683. This is a CAM subject device for VOC and Methyl Chloride.
- Emergency vent scrubber 5309. This is a CAM subject device for VOC and Methyl Chloride.
- FGTHROX

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOCs	23.9 tpy* ²	12-month rolling time period as determined at the end of each calendar month	EU601-01	SC VI.2, SC VI.3, SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU601-01 unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. When exhausting to scrubber 24683, the upper liquid flow rate of scrubber 24683 is 8 gallons per minute or more and the lower liquid flow rate of scrubber 24683 is 3 gallons per minute or more.
 - b. When exhausting to scrubber 5309, the liquid flow rate of scrubber 5309 is 18 gallons per minute or more.
 - c. When exhausting to FGTHROX, FGTHROX is operated in accordance with the requirements of FGTHROX.
2. The upper liquid flow rate of scrubber 24683 shall be at least 8 gallons per minute and the lower liquid flow rate of scrubber 24683 shall be at least 3 gallons per minute. An excursion is a liquid flow rate less than the parameters defined in this condition or demonstrated during testing. Upon detecting an excursion of the liquid flow rates limits, the permittee shall restore operation of scrubber 24683 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d))**

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3. The liquid flow rate of scrubber 5309 shall be at least 18.0 gallons per minute during startup, shutdown, or emergency shutdown episodes. An excursion is a liquid flow rate less than 18.0 gallons per minute defined in this condition, or demonstrated during testing. Upon detecting an excursion of the liquid flow rate limit, the permittee shall restore operation of scrubber 5309 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU601-01 unless one of the following requirements is met:² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a. When exhausting to scrubber 24683, scrubber 24683 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(a).
 - b. When exhausting to scrubber 5309, scrubber 5309 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1(b).
 - c. When exhausting to FGTHROX, FGTHROX is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of FGTHROX.
2. The permittee shall equip and maintain scrubbers 24683 and 5309 with liquid flow indicators. The permittee shall calibrate the liquid flow indicators in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall equip and maintain scrubbers 24683 and 5309 with a liquid flow indication device. **(40 CFR 64.6(c)(1)(i), (ii))**
4. The permittee shall calibrate the liquid flow indicator for scrubbers 24683 and 5309 in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. When exhausting to scrubber 24683, the permittee shall monitor and record, on a continuous basis, the upper and lower liquid flow rates of scrubber 24683 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(1))**
3. When exhausting to scrubber 5309, the permittee shall monitor and record, on a continuous basis, the scrubber liquid flow rate of scrubber 5309 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(1))**

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4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU601-01 using production records, operating records, maintenance records, emergency shutdowns (including dates and duration), and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
5. For scrubbers 24683 and 5309, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). **(40 CFR 64.7(d))**
6. For scrubbers 24683 and 5309, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
7. For scrubbers 24683 and 5309, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
8. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**
5. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**

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- Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV601-005 (Emergency Scrubber 5309)	6 ²	27 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV601-026 (Scrubber 24683)	4 ²	30 ²	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV2514-006 (THROX)	54 ²	90 ²	R 336.1225, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENT(S)

- If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
- The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU602-07
EMISSION UNIT CONDITIONS**

DESCRIPTION

The 63 Unit is a continuous process making silicone gum. Condensers 6186 and 6168 control emissions from the reactor and from product stripping. This emission unit is subject to the miscellaneous organic chemical manufacturing NESHAP in 40 CFR Part 63, Subparts A and FFFF, and to the equipment leak provisions of Subpart UU.

The most recent PTI for this emission unit is PTI No. 151-20.

Flexible Group ID: FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Condenser 6186 (East IR Final Vent)
- Condenser 6168 (West IR Final Vent)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	260 lbs/yr ² . *	12-month rolling time period as determined at the end of each calendar month	EU602-07	SC VI.2, VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU602-07 with products requiring vacuum stripping unless the exit gas temperature of condenser 6186 is 36°C or less.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall not operate EU602-07 with products that do not require vacuum stripping unless the exit gas temperatures of condenser 6168 and condenser 6186 are both 36°C or less.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU602-07 with products requiring vacuum stripping unless condenser 6186 is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall not operate EU602-07 with products that do not require vacuum stripping unless condenser 6168 and condenser 6186 are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.2.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

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3. The permittee shall equip and maintain the condenser 6186 and condenser 6168 with exit gas temperature indicators. The permittee shall calibrate the exit temperature indicators in a satisfactory manner acceptable to the AQD District Supervisor.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall monitor and record, on a continuous basis, the exit gas temperatures of condenser 6186 and condenser 6168 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall keep a record of the time periods during which EU602-07 operates with products requiring vacuum stripping and during which EU602-07 operates with products that do not require vacuum stripping. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU602-07 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

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VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV602-021 (63 Unit Dimethyl Cyclics Day Tank Vent) ^a	1 ²	43 ²	R 336.1225, 40 CFR 52.21(c)&(d)
2. SV602-026 (Condenser DV6186 - East IR Final Vent) ^a	4 ²	43 ²	R 336.1225, 40 CFR 52.21(c)&(d)
3. SV602-027 (Condenser DV6168 - West IR Final Vent) ^a	4 ²	43 ²	R 336.1225, 40 CFR 52.21(c)&(d)

^a This vent is not required to discharge unobstructed vertically upwards.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**EU604-08
EMISSION UNIT CONDITIONS**

DESCRIPTION

Fluoro Cyclics Process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU604-08 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 466-73E.

Flexible Group ID: FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Freon-cooled condenser (7791). This is a CAM subject device for VOC.
- Spray tower scrubber (22753)
- Service water condenser (22713). This is a CAM subject device for VOC.
- Vent vapor equalization during railcar unloading operations when not venting to atmosphere through condenser 7791

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	16.7 pph ²	Hourly	EU604-08	SC VI.1, VI.2, VI.3, VI.4, & VI.5	R 336.1702(a), R 336.1201
2. VOC	11.8 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month.	EU604-08	SC VI.1, VI.2, VI.3, VI.4, & VI.5	R 336.1702(a), R 336.1201
3. Hydrogen Chloride	0.3 pph ¹	Hourly	EU604-08	SC VI.1, VI.2, VI.3, VI.4, & VI.5	R 336.1225

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. During railcar unloading operations if venting to the atmosphere, the condensate temperature from condenser 7791 shall not exceed 40.6°F. An excursion of the condensate temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the condensate temperature limit, the permittee shall restore operation of condenser 7791 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1702(a), R 336.1201)**
2. The liquid flow rate of the spray tower scrubber (22753) shall be at least 3.0 gallons per minute. Exceeding this parameter is an excursion.¹ **(R 336.1224)**
3. If the service water return temperature for condenser 22713 exceeds 105°F, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. An excursion of the service water return temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the service water return temperature

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limit, the permittee shall restore operation of condenser 22713 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1213(3))**

4. The permittee shall not conduct unloading operations from Emission Group EU604-08 which vent to atmosphere unless the freon-cooled condenser (7791) is installed and operating properly.² **(R 336.1702(a), R 336.1201)**
5. The permittee shall not operate the Emission Group EU604-08 unless the spray tower scrubber (22753) is installed and operating properly.¹ **(R 336.1224)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the freon-cooled condenser (7791) with an indication device for measuring the temperature of the condenser condensate.² **(R 336.1910, R 336.1201, 40 CFR 64.6(c)(1)(i), (ii))**
2. The permittee shall equip and maintain the spray tower scrubber (22753) with a liquid flow indicator.² **(R 336.1910, R 336.1201)**
3. The permittee shall equip and maintain the service water condenser (22713) with an indication device for measuring the service water return temperature. **(40 CFR 64.6(c)(1)(i), (ii))**
4. The permittee shall calibrate the temperature indicator for condensers 7791 and 22713 in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Within 360 days or ROP reissuance, the permittee shall verify VOC and hydrogen chloride emission rates from EU604-08 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A
Hydrogen Chloride	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

2. The permittee shall verify the VOC and hydrogen chloride emission rates from EU604-08 at a minimum, every five years from the date of the last test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**
3. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted. **(R 336.1213(3))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. During railcar unloading, the permittee shall monitor and record, on a continuous basis, the condensate temperature of Freon-cooled condenser 7791 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.² **(40 CFR 64.6(c)(1), R 336.1702(a), R 336.1201)**

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2. The permittee shall monitor and record, on a per shift basis, the spray tower scrubber (22753) liquid flow rate with instrumentation acceptable to the AQD.¹ **(R 336.1224)**
3. The permittee shall monitor and record, on a per shift basis, the service water return temperature of condenser 22713 with instrumentation acceptable to the AQD. **(40 CFR 64.6(c)(1), R 336.1213(3))**
4. The permittee shall keep records as required to demonstrate compliance with the emission limits specified in this table. Emission totals shall be calculated using the method described in Appendix 7, Section 7.11. A monthly summary of these emissions shall be made available to the AQD upon request. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission totals specified in this table.² **(R 336.1224, R 336.1702(a), R 336.1201)**
5. The permittee shall maintain a record of all railcar unloading operations. At a minimum, this record shall include the date, time and duration of all railcar unloading operations. **(R 336.1213(3))**
6. For condensers 7791 and 22713, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). **(40 CFR 64.7(d))**
7. For condensers 7791 and 22713, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
8. For condensers 7791 and 22713, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
9. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

See Appendix 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

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3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**
5. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**
6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

Exhaust gases shall be discharged unobstructed vertically upwards unless otherwise noted. SV604-014 and SV604-020 vent downward. SV604-015 vents horizontally. SV604-012, SV604-016, SV604-045, SV604-046, SV604-047, SV604-017, SV604-049, and SV604-053 vent upward with a kettle cap.

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV604-012	1.5 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
2. SV604-043	2.0 ²	80 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
3. SV604-013	3.0 ²	11.0 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
4. SV604-014	2.0 ²	0 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
5. SV604-015	2.0 ²	51 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
6. SV604-016	2.0 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
7. SV604-044	6.0 ²	12.0 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
8. SV604-045	2.0 ²	41.5 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
9. SV604-046	2.0 ²	41.5 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
10. SV604-047	2.0 ²	41.5 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
11. SV604-017	4.0 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
12. SV604-020	2.0 ²	55 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
13. SV604-049	4.0 ²	41.5 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
14. SV604-053	2.0 ²	41.5 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201

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IX. OTHER REQUIREMENT(S)

1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU800-01
EMISSION UNIT CONDITIONS**

DESCRIPTION

800 block tank farm consisting of storage and transfer operations for on-site waste liquids. Emissions are controlled by a nitrogen blanket.

The most recent PTI for this emission unit is PTI No. 334-88E.

Flexible Group ID: FGMONMACT

POLLUTION CONTROL EQUIPMENT

Nitrogen (N₂) blanket

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	0.76 tpy ^{*.2}	12-month rolling time period as determined at the end of each calendar month	EU800-01	SC VI.3, SC VI.4	R 336.1702(a)

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU800-01 unless the pressure of the N₂ pressure blanket is greater than or equal to 3 psig.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU800-01 unless the N₂ pressure blanket is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirement of SC III.1.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

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2. The permittee shall monitor and record, on a daily basis, the pressure of the N₂ pressure blanket with instrumentation acceptable to the AQD. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall record the date, amount of liquid waste transferred, and the type of transfer (e.g. dempster, tank truck, drum, vacuum transfer, etc.) for each transfer of liquid waste to and from each storage tank and for each dempster depressurization. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1224, R 336.1702(a), R 336.1201)
4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period VOC emissions for EU800-01 using production records, operating records, and/or other data acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1702(a))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV800-001 (Solvent Tanks)	3 ²	30 ²	R 336.1225 40 CFR 52.21(c) & (d)
2. SV800-002 (Code B Tank)	3 ²	29 ²	R 336.1225 40 CFR 52.21(c) & (d)
3. SV800-003 (Methoxysilane Tank)	3 ²	30 ²	R 336.1225 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EUBOILER2515
EMISSION UNIT CONDITIONS**

DESCRIPTION

~~25.1 MMBTU/hr boiler capable of burning natural gas, synthesis gas, or a blended mixture of both. This boiler is located in 2515 building and decommissioned but not dismantled. 40 CFR Part 63, Subpart DDDDD may be applicable to EUBOILER2515 if EUBOILER2515 is operated.~~

~~Flexible Group ID: FGPEM&BLR~~

POLLUTION CONTROL EQUIPMENT

~~NA~~

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	7.0 pph²	Hourly	EUBOILER2515	SC-V.1	R 336.1205, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
2. CO	2.8 pph²	Hourly	EUBOILER2515	SC-V.1	R 336.1205

II. MATERIAL LIMIT(S)

~~1. The permittee shall burn only synthesis gas and/or natural gas in EUBOILER2515. The permittee shall burn the synthesis/natural gas blended fuel only up to the maximum synthesis-to-natural gas percentage blend tested for during the most recent validated performance (stack) test.² (R 336.1201(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))~~

III. PROCESS/OPERATIONAL RESTRICTION(S)

- ~~1. The permittee shall operate EUBOILER2515 in accordance with manufacturer's recommendations for safe and proper operation to minimize emissions during periods of startup, shutdown and malfunction.² (R 336.1912)~~
- ~~2. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and Dc, as they apply to EUBOILER2515.² (40 CFR Part 60, Subparts A & Dc)~~

IV. DESIGN/EQUIPMENT PARAMETER(S)

~~1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device/devices to monitor and record both the synthesis gas and natural gas fuel use for EUBOILER2515 on a daily basis.² (R 336.1201)~~

V. TESTING/SAMPLING

~~Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))~~

~~1. Within 180 days after commencement of trial operation, verification of NOx and CO emission rates from EUBOILER2515, by testing at owner's expense, in accordance with Department requirements, will be required. The permittee must complete the test once every five years of operation. No less than 60 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must describe the normal operating range for the boiler and must be approved by the AQD prior to testing. Verification of emission rates includes the submittal~~

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of a complete report of the test results to the AQD within 60 days following the last date of the test.² ~~(R 336.1201, R 336.2001, R 336.2003, R 336.2004)~~

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. ~~(R 336.1213(3)(b)(ii))~~

1. The permittee shall keep, in a satisfactory manner, daily, monthly and 12-month rolling time period synthesis and natural gas fuel use records for EUBOILER2515. All records shall be kept on file at the facility and made available to the Department upon request.² ~~(R 336.1201)~~

See Appendix 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. ~~(R 336.1213(3)(c)(ii))~~

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. ~~(R 336.1213(3)(c)(i))~~

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. ~~(R 336.1213(4)(c))~~

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. EUBOILER2515	26 ²	50 ²	R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EU2515-01
EMISSION UNIT CONDITIONS

DESCRIPTION

An electrically powered plasma arc gasifier known as a "plasma-enhanced melter (PEM)" with ancillary equipment.

The most recent PTI for this emission unit is PTI No. 175-09A.

Flexible Group ID: FGPEM&BLR, FGTHROX

POLLUTION CONTROL EQUIPMENT

- FGTHROX
- Flare
- Control train consisting of a partial quench column (Q-0630)
- Baghouse (F-0640)
- HCl production system
- Synthesis gas polishing system including a recirculating scrubber (S-0650), a carbon filter (F-0680), and a high efficiency filter (F-0683).

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall immediately cease the input feed to EU2515-01, consistent with safe operating procedures, if the flare, FGTHROX, and boiler are not available. Input feed to EU2515-01 shall not restart until one of the devices is available to burn the synthesis gas.² **(R 336.1224, R 336.1205(3))**
2. The permittee shall not process materials in EU2515-01 other than the following: Q8-6011 (waste chlorosilane), Q8-6017 (waste solvent / siloxane), Q8-6061 (waste SiH siloxane), Q8-6064 (waste tetramethoxysilane), Q8-6116 (waste ethylenediamine monohydrochloride), Q8-6118 (waste vinylchlorosilanes), Q8-6227 (waste methyl chloride), Q8-6228 (waste propene chlorosilane), Q8-6062 (waste alkoxy silane), and any additional waste stream(s), provided the permittee meets both of the following provisions:² **(R 336.1207(1)(a), R 336.1224, R 336.1225, R 336.285(b), R 336.1702(a), R 336.1901)**
 - a. The synthesis gas produced by the permittee satisfies the "exclusion criteria" of Rule 230 of State of Michigan Part 111 Administrative Rules, specifically R 299.9230(2);
 - b. Processing the additional waste stream(s) does not cause a meaningful change in the quality and nature or a meaningful increase in the quantity of emissions from FGTHROX, or any other unit permitted by the Department to use synthesis gas.
3. The permittee shall not burn synthesis gas in the flare for more than 5,000 hours per 12-month rolling time period as determined at the end of each calendar month.² **(R 336.1205(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2515-01 unless the flare is installed, maintained, and operated in a satisfactory manner.² **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.1910)**

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2. The permittee shall equip and maintain the flare with a device for continuously monitoring whether or not the pilot flame is operating.² ~~(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.1910)~~
3. The permittee shall operate a continuously burning pilot flame at the flare when inputting waste feed to EU2515-01.² ~~(R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.1910)~~

~~V. TESTING/SAMPLING~~

Records shall be maintained on file for a period of five years.~~(R 336.1213(3)(b)(ii))~~

NA

~~VI. MONITORING/RECORDKEEPING~~

Records shall be maintained on file for a period of five years.~~(R 336.1213(3)(b)(ii))~~

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² ~~(R 336.1201(3))~~
2. The permittee shall keep, in a satisfactory manner, a record of the identity of the wastes processed in EU2515-01 each year. For each waste processed, the record shall also include the reason that the waste is acceptable under SC III.2, with supporting documentation for any waste added pursuant to SC III.2.a and III.2.b. The permittee shall keep all records on file at the facility for a period of at least five years after the waste is last processed and make them available to the Department upon request.² ~~(R 336.1205(3), R 336.1225)~~
3. The permittee shall keep, in a satisfactory manner, records of the hours the flare is operated on synthesis gas on a monthly basis and 12-month rolling time period basis, as determined at the end of each calendar month. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² ~~(R 336.1205(3))~~

See Appendix 7

~~VII. REPORTING~~

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. ~~(R 336.1213(3)(c)(ii))~~
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. ~~(R 336.1213(3)(c)(i))~~
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. ~~(R 336.1213(4)(c))~~

See Appendix 8

~~VIII. STACK/VENT RESTRICTION(S)~~

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2515-01	48²	36²	R 336.1225, R 336.1201

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IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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D. FLEXIBLE GROUP CONDITIONS

Part D outlines the terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGLEAKDETECTION	Emission units subject to the requirements of 40 CFR Part 61, Subpart A, Subpart J (National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene), and Subpart V (National Emission Standard for Equipment Leaks (Fugitive Emission Sources)).	EU303-11, EU340-01, EU505-01, EU505-04, EU505-11, EU515-01, EU800-01, EURULE290, FG337SCRUBBER, FGSITESCRRUBBERS
FG304VENTRECOVERY	304 vent recovery system comprised of two interchangers (HX1 2040 and HX2 2040) and two condensers (HX1 2044 and HX2 2044) which operate in series to remove air contaminants from process exhaust. The 304 vent recovery system receives process exhaust from several emission units on-site. Emissions are controlled by the THROX, the 337 wet scrubber, or the site scrubbers. FG304VENTRECOVERY is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The condensers are CAM subject devices for VOC. The most recent PTI for this emission unit is PTI No. 84-08B.	EU502-01, EU502-07, EURULE290
FG337SCRUBBER	337 spray tower water scrubber used to remove HCl and chlorosilanes from process exhaust prior to discharge to atmosphere. The 304 vent recovery system vents to the 337 scrubber. The 337 scrubber receives process exhaust from several emission units on site. The 337 scrubber is comprised of two scrubbers (i.e., scrubber nos. 9950 and 9960) which typically alternate in operation but can operate in parallel. The 337 scrubber utilizes water from the venturi scrubbers at EU325-01 (TCS vent recovery system) and city water as makeup. The most recent PTI for this emission unit is PTI No. 84-08.	EU325-01, EU502-01, EU502-07, EU502-11, EU508-01, FGSITESCRRUBBERS, FGTHROX, FGLEAKDETECTION

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Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGRULE290	Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278, 278a and 290. Emission units installed/modified before December 20, 2016, may show compliance with Rule 290 in effect at the time of installation/modification.	EURULE290, EU340-03, FGMONMACT, FGOLDFACILITY, FGLEAKDETECTION
FGCOLDCLEANERS	Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, 278a and Rule 281(2)(h) or Rule 285(2)(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.	EUCOLDCLEANER
FGRULE604	Any existing or future storage vessels subject to the requirements of R 336.1604 (Rule 604). Storage vessels subject to AQD Rule 604 are those which store any organic compound having a true vapor pressure of more than 1.5 psia, but less than 11 psia, at actual storage conditions in any fixed roof stationary vessel of more than 40,000 gallon capacity.	EURULE604
FGRULE605	Any existing or future storage vessels subject to the requirements of R 336.1605 (Rule 605). Storage vessels subject to AQD Rule 605 are those which store any organic compound having a true vapor pressure of 11 or more psia at actual storage conditions in any stationary vessel of more than 40,000 gallon capacity.	EURULE605
FGRULE703	Any new or future storage vessels subject to the requirements of R 336.1703 (Rule 703). Storage vessels subject to AQD Rule 703 are those which receive gasoline from a delivery vessel into any new stationary vessel of more than 2000 gallon capacity located at any gasoline dispensing facility.	EURULE703
FG325-01	Carbon bed and venturi scrubber system used to control emissions from EU325-01, EU502-01, and EU502-07. The 337 scrubber acts as a backup to the venturi scrubber system. The most recent PTI for this emission unit is PTI No. 44-06B.	EU325-01, EU502-01, EU502-07
FG432BOILERS	Three natural gas-fired boilers: EUBOILER12, EUBOILER13, and EUBOILER14; each rated at 103 MMBTU/hr with low-NOx burners. This flexible group is subject to the requirements of 40 CFR Part 63, Subpart DDDDD. The most recent PTI for this emission unit is PTI No. 92-21.	EUBOILER12, EUBOILER13, EUBOILER14, FGBOILERMACT-NG
FGSITEBLOWER	Site vent consolidation and blower system that collects vapor streams from numerous emission units and vents throughout the facility and routes them to either the on-site thermal oxidizer with heat recovery (FGTHROX) or to a site-wide water scrubber system. There are two parts to the site	These emission units include, but are not limited to, the following: EU303-06, EU303-09, EU303-11, EU304-02, EU321-01, EU321-02, EU321-11, EU325-01, EU502-01, EU502-04, EU502-07, EU502-09,

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Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
	vent consolidation and blower system: a dry vent header system for water reactive vents and a wet vent header system for vents that can contain water. The most recent PTI for this emission unit is PTI No. 91-07E.	EU505-01, EU505-11, EU601-01, EU2703-01, EU2703-03, EU2703-08, EU2703-17, EURULE290, FGTHROX, FGSITESCRUBBERS
FGSITESCRUBBERS	Site-wide water scrubber system. FGSITESCRUBBERS will remove HCl and chlorosilanes from the FGSITEBLOWER consolidated vents system prior to discharge to atmosphere when the site-wide thermal oxidizer system is not operating properly. The most recent PTI for this emission unit is PTI No. 91-07E.	These emission units include, but are not limited to, the following: EU303-01, EU303-02, EU303-06, EU303-09, EU303-11, EU303-15, EU303-16, EU303-19, EU304-02, EU321-01, EU321-02, EU321-07, EU321-11, EU321-12, EU325-01, EU502-01, EU502-07, EU502-09, EU502-11, EU505-01, EU505-11, EU508-01, EU515-01, EURULE290, FGHAP2012A2A , FGSITEBLOWER, FG304VENTRECOVERY, FG337SCRUBBER, FGLEAKDETECTION
FGTHROX	Site-wide thermal oxidizer system. The THROX will remove VOC, HAPs, PM10, Hydrogen Chloride, and other toxic air contaminants from the FGSITEBLOWER consolidated vents system prior to discharge to atmosphere. This flexible group is subject to the requirements of 40 CFR Part 63, Subpart FFFF. FGTHROX is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 92-21.	These emission units include, but are not limited to, the following: EU303-01, EU303-02, EU303-06, EU303-09, EU303-11, EU303-15, EU303-16, EU303-19, EU304-02, EU321-01, EU321-02, EU321-07, EU321-11, EU321-12, EU322-02, EU322-04, EU325-01, EU502-01, EU502-02, EU502-04, EU502-07, EU502-09, EU502-11, EU505-01, EU505-11, EU508-01, EU515-01, EU601-01, EU2515-01 , EU2703-01, EU2703-03, EU2703-08, EU2703-09, EU2703-13, EU2703-17, EURULE290, FGHAP2012A2A , FGSITEBLOWER, FG304VENTRECOVERY, FG337SCRUBBER
FGOLDFACILITY	The affected source is each new, reconstructed, or existing Organic Liquid Distribution (OLD) (non-gasoline) operation that is located at, or is part of, a major source of hazardous air pollutant (HAP) emissions. The affected source is comprised of storage tanks, transfer racks, equipment leak components associated with storage tanks, transfer racks and pipelines, transport vehicles, and all containers while loading or unloading at transfer racks subject to this subpart. Equipment that is part of an affected source under another NESHAP is excluded from the affected source. See 40 CFR 63.2338(c).	EU515-01, EU340-03, EURULE290
FGHCLMACT	HCl production facility: the collection of unit operations and equipment associated with the production of liquid HCl product at a concentration	EU356-01, EU356-02

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Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
	of 30 weight percent or greater during normal operations that is located at, or is part of, a major source of hazardous air pollutant emissions. See 40 CFR 63.8985(a).	
FGHAP2012A2A	<p>This flexible group consists of all the listed emission units. The listed emission units are the emission units at the facility as of the effective date of Permit to Install 91-07C (November 19, 2012) that emit hazardous air pollutants and emission units that support HAP emitting emission units, such as boilers and the InEntec plasma enhanced melter (EU2515-01). This flexible group will apply to all the listed emission units even if they are reconstructed as defined in the Michigan Rules R 336.1118, modified, renamed, or re-permitted. This flexible group was established for purposes of keeping records for the actual to projected actual PSD applicability determination.</p> <p>The most recent PTI for this emission unit is PTI No. 91-07E.</p>	<p>EU106-01, EU106-02, EU106-05, EU106-06, EU106-07, EU106-12, EU108-01, EU108-02, EU109-01, EU109-02, EU109-04, EU109-05, EU109-06, EU109-07, EU109-09, EU207-04, EU207-13, EU207-14, EU207-15, EU207-16, EU207-17, EU207-18, EU207-19, EU212-01, EU212-02, EU212-03, EU212-04, EU212-05, EU212-06, EU212-07, EU212-08, EU212-10, EU212-11, EU212-12, EU2404-01, EU2409-01, EU2409-02, EU2515-01, EU2703-01, EU2703-02, EU2703-03, EU2703-04, EU2703-05, EU2703-06, EU2703-07, EU2703-08, EU2703-09, EU2703-10, EU2703-12, EU2703-13, EU2703-14, EU2901-02, EU2901-04, EU2901-05, EU2901-14, EU2901-15, EU2901-16, EU303-01, EU303-02, EU303-03, EU303-04, EU303-06, EU303-09, EU303-10, EU303-11, EU303-13, EU303-19, EU304-01, EU3101-01, EU3102-02, EU3102-05, EU3102-09, EU3104-06, EU3104-08, EU3104-09, EU3104-14, EU311-01, EU321-01, EU321-02, EU321-05, EU321-07, EU321-08, EU321-10, EU321-11, EU321-13, EU321-14, EU321-16, EU321-17, EU322-01, EU322-02, EU322-03, EU322-04, EU322-05, EU322-09, EU322-10, EU322-11, EU324-01, EU324-02, EU324-03, EU324-05, EU324-06, EU325-04, EU340-01, EU340-03, EU501-01, EU501-02, EU501-03, EU501-11, EU501-12, EU501-13, EU501-15, EU501-17, EU501-24, EU501-32, EU501-34, EU501-40, EU501-49, EU502-01, EU505-01, EU505-04, EU505-05, EU505-11, EU508-01, EU508-03, EU515-01, EU601-01, EU602-01, EU604-10, EUSITE-05, EUSITE-08, FGSITESCRUBBERS, FGTHROX</p>
FGEMERGENCIRICE <500HP	Each existing or new compression ignition emergency stationary reciprocating internal	EUEMERGENCIRICE<500HP

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Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
	combustion engines (RICE) located at a major source of HAP emissions as identified within 40 CFR Part 63, Subpart ZZZZ, 63.6590(a)(1), less than or equal to 500 brake hp and is exempt from the requirements of Rule 201 pursuant to Rules 282(2)(b) or 285(2)(g)	
FGPEM&BLR	Plasma enhanced melter (PEM) and 25.4 MMBTU/hour boiler.	EU2515-01, EUBOILER2515
FGBOILERMACT-NG	Emission units subject to the requirements of 40 CFR Part 63, Subpart A (General Provisions) and Subpart DDDDD (National Emission Standard for Hazardous Air Pollutants: Industrial, Commercial and Institutional Boilers and Process Heaters – Major Sources) that burn only natural gas.	EU303-04, EU325-04, EU501-40, EU508-02, EU508-03, EU604-10, FG432BOILERS
FGMONMACT	Emission units subject to the requirements of 40 CFR Part 63, Subpart A (General Provisions) and Subpart FFFF (National Emission Standard for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing).	EU108-01, EU109-02, EU109-04, EU207-03, EU207-13, EU207-14, EU207-15, EU207-16, EU207-17, EU207-18, EU207-19, EU212-01, EU212-02, EU212-03, EU212-05, EU212-12, EU2504-14, EU2504-15, EU2504-16, EU2504-17, EU2504-18, EU2504-19, EU2505-06, EU2505-07, EU2703-01, EU2703-03, EU2703-08, EU2703-09, EU2703-13, EU2703-17, EU2901-16, EU303-01, EU303-02, EU303-03, EU303-06, EU303-09, EU303-15, EU303-16, EU303-19, EU304-02, EU311-01, EU321-01, EU321-02, EU321-07, EU321-11, EU321-12, EU322-01, EU322-02, EU322-03, EU322-04, EU322-11, EU324-01, EU324-08, EU324-11, EU324-18, EU340-01, EU340-03, EU501-01, EU501-02, EU501-12, EU501-49, EU502-04, EU505-01, EU505-04, EU505-11, EU508-01, EU515-01, EU601-01, EU602-07, EU604-08, EU800-01, EURULE290, FGTHROX

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**FGLEAKDETECTION
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Emission units subject to the requirements of 40 CFR Part 61, Subpart A (General Provisions), Subpart J (National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene), and Subpart V (National Emission Standard for Equipment Leaks (Fugitive Emission Sources)).

Emission Units: EU303-11, EU340-01, EU505-01, EU505-04, EU505-11, EU515-01, EURULE290, EU800-01

Flexible Group ID: FG337SCRUBBER, FGSITESCUBBERS

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall comply with the applicable requirements of 40 CFR Part 61, Subpart V (National Emission Standard for Equipment Leaks (Fugitive Emission Sources)), Section 61.246 (Recordkeeping requirements). **(40 CFR Part 61, Subpart V)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

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3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall comply with the applicable requirements of 40 CFR Part 61, Subpart V, Section 61.247 (Reporting Requirements). **(40 CFR Part 61, Subpart V)**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the applicable requirements of 40 CFR Part 61, Subparts A (General Provisions). **(40 CFR Part 61, Subpart A)**
2. The permittee shall comply with the applicable requirements of 40 CFR Part 61, Subpart J (National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene). The applicable sections of Subpart J include, but are not necessarily limited to: 61.112 (Standards). **(40 CFR Part 61, Subpart J)**
3. The permittee shall comply with the applicable requirements of 40 CFR Part 61, Subpart V. The applicable sections of Subpart V include, but are not necessarily limited to: **(40 CFR Part 61, Subpart V)**
 - a. 61.242-1 (Standards: General)
 - b. 61.242-2 (Standard: Pumps)
 - c. 61.242-4 (Standards: Pressure relief devices in gas/vapor service)
 - d. 61.242-7 (Standards: Valves)
 - e. 61.242-8 (Standards: Pressure relief devices in liquid service and flanges and other connectors)
 - f. 61.242-10 (Standards: Delay of repair)
 - g. 61.243-1 (Alternative standards for valves in VHAP service – allowable percentage of valves leaking)
 - h. 61.245 (Test methods and procedures)

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FG304VENTRECOVERY
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

304 Vent Recovery System comprised of two interchangers (HX1 2040 and HX2 2040) and two condensers (HX1 2044 and HX2 2044) which operate in series to remove air contaminants from process exhaust. The 304 vent recovery system receives process exhaust from several emission units on-site. FG304VENTRECOVERY is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The condensers are CAM subject devices for VOC.

The most recent PTI for this emission unit is PTI No. 84-08b.

Emission Units: EU502-01, EU502-07, EURULE290

Flexible Group ID: FG337SCRUBBER, FGTHROX, FGSITESCUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

- FGTHROX: Thermal oxidizer with heat recovery (THROX) unit consisting of a burner, quencher, absorber, and two two-stage ionizing wet scrubbers (IWS) in series; or
- FG337SCRUBBER: 337 wet scrubber (9950, 9960-scrubbers typically alternate in operation, but can operate in parallel and vent to SV337-001/002, respectively); or
- FGSITESCUBBERS: Site wide water scrubber system that removes HCl and chlorosilanes from the FGSITEBLOWER consolidated vent system prior to discharge to atmosphere when the site wide thermal oxidizer system is not operating properly.
- Condensers HX1 2044 and HX2 2044

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC ^a	30.0 pph ²	Hourly	FG304VENTRECOVERY	SC VI.1	R 336.1702(a), R 336.1225
2. VOC ^a	22.5 tpy ²	12-month rolling time period as determined at the end of each calendar month	FG304VENTRECOVERY	SC VI.1	R 336.1702(a), R 336.1225
3. Benzene ^a	0.46 pph ¹	Hourly	FG304VENTRECOVERY	SC VI.1	R 336.1225

^a Note these emission limits apply to the outlet of the 304 vent recovery system prior to mixing with any other vent streams. Emission testing would be conducted in the vent header rather than at an exhaust stack.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Except as allowed by FGSITEBLOWER, SC IV.1.a, the permittee shall not operate any emission unit vented to the 304 vent recovery system if the exit gas temperature of the refrigerated vent condensers (HX1 2044 and HX2 2044) exceeds -76°C. Exceeding this parameter is an excursion. An excursion of the HX1 2044 and HX2 2044 condensers exit gas temperature is exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the HX1 2044 and HX2 2044

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condensers exit gas temperature, the permittee shall restore operation of 304 Vent Recovery System to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² (40 CFR 64.6(c), 40 CFR 64.7(d), R 336.1225, R 336.1702, R 336.1910, 40 CFR 64.6(c)(2))

2. The permittee shall install and calibrate a temperature indicator for condensers HX1 2044 and HX2 2044 in a satisfactory manner. (40 CFR 64.6(c)(1)(ii), (iii))

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Within 240 days or ROP reissuance, the permittee shall verify VOC and benzene emission rates from FG304VENTRECOVERY by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A
Benzene	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. (R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall verify the VOC and benzene emission rates from, at a minimum, every five years from the date of the last test. (R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)
3. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted. (R 336.1213(3))
4. No later than April 30, 2013, the permittee shall verify the VOC and benzene emission rates from FG304VENTRECOVERY by testing at owner's expense, in accordance with department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD technical programs unit and district office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD technical programs unit and district office within 60 days following the last date of the test.² (R 336.1225, R 336.1702)

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall monitor and record, on a continuous basis, the exit gas temperature of the refrigerated vent condensers (HX1 2044 and HX2 2044) with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. (R 336.1225, R 336.1910, 40 CFR 64.6(c)(1), R 336.1213(3))
2. For FG304VENTRECOVERY, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely

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recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). **(40 CFR 64.7(d))**

3. For FG304VENTRECOVERY, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
4. For FG304VENTRECOVERY, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
5. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Each semiannual report of monitoring and deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no excursions and/or exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**
5. Each semiannual report of monitoring and deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**
6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

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IX. OTHER REQUIREMENT(S)

1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**FG337SCRUBBER
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

337 spray tower water scrubber used to remove HCl and chlorosilanes from process exhaust prior to discharge to atmosphere. The 304 vent recovery system vents to the 337 scrubber. The 337 scrubber receives process exhaust from several emission units on site. The 337 scrubber is comprised of two scrubbers (i.e., scrubbers 9950 and 9960) which typically alternate in operation but can operate in parallel. The 337 scrubber utilizes water from the venturi scrubbers at EU325-01 (TCS vent recovery system) and city water as makeup.

The most recent PTIs for this flexible group are PTI Nos. 131-15 and 185-07B.

Emission Units: EU325-01, EU502-01, EU502-07, EU502-11, EU508-01

Flexible Group ID: FGSITESCRRUBBERS, FGTHROX, FGLEAKDETECTION

POLLUTION CONTROL EQUIPMENT

- Water Scrubbers.9950 and 9960
- FGTHROX (Backup)
- FGSITESCRRUBBERS (Backup)

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Prior to discharge of process emissions through vent no. SV337-001, process emissions shall pass through scrubber 9950. If the liquid flow rate of scrubber 9950 is less than 45 gallons per minute while process gas is passing through it, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. **(R 336.1213(3))**
2. Prior to discharge of process emissions through vent SV337-002, process emissions shall pass through scrubber 9960. If the liquid flow rate of scrubber 9960 is less than 45 gallons per minute while process gas is passing through it, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of scrubber 9950 and 9960 with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event. (R 336.1213(3))
2. The permittee shall install and maintain a color camera and monitor system to monitor the visual emissions from the 337 wet scrubber. (R 336.1213(3))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV337-001 (scrubber 9950)	10 ²	30 ²	R 336.1201(3)
2. SV337-002 (scrubber 9960)	10 ²	30 ²	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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FGRULE290
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278, 278a and 290. Emission units installed/modified before December 20, 2016, may show compliance with Rule 290 in effect at the time of installation/modification.

Emission Units: EURULE290, ~~EU340-03~~

Flexible Group ID: FGMONMACT, FGOLDFACILITY, FGLEAKDETECTION

[Current Rule 290 emission units at this facility are listed in the table below:](#)

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<u>Emission Unit Identification</u>	<u>Plant/Process</u>	<u>Control device</u>	<u>NESHAP Subject Flexible Group</u>
<u>EG106-02</u>	<u>Resins - 100 Block</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG106-04</u>	<u>Resins - 100 Block</u>	<u>N/A</u>	<u>FGMONMACT</u>
<u>EG106-05</u>	<u>Resins - 100 Block</u>	<u>DV4016 Scrubber</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG106-06</u>	<u>Resins - 100 Block</u>	<u>DV4016 Scrubber</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG106-08</u>	<u>Resins - 100 Block</u>	<u>DV4016 Scrubber</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG106-09</u>	<u>Resins - 100 Block</u>	<u>N/A</u>	<u>FGMONMACT</u>
<u>EG106-10</u>	<u>Resins - 100 Block</u>	<u>N/A</u>	<u>FGMONMACT</u>
<u>EG106-11</u>	<u>Resins - 100 Block</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG106-12</u>	<u>Resins - 100 Block</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG106-13</u>	<u>Resins - 100 Block</u>	<u>N/A</u>	<u>FGMONMACT</u>
<u>EG108-02</u>	<u>Resins - 100 Block</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG109-01</u>	<u>Resins - 100 Block</u>	<u>DV2210 Scrubber</u> <u>DV24472 Condenser</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG109-03</u>	<u>Resins - 100 Block</u>	<u>N/A</u>	<u>FGMONMACT</u>
<u>EG109-05</u>	<u>Resins - 100 Block</u>	<u>N/A</u>	<u>FGMONMACT</u>
<u>EG109-06</u>	<u>Resins - 100 Block</u>	<u>DV2299 Scrubber</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG109-07</u>	<u>Resins - 100 Block</u>	<u>DV24472 Condenser</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG109-09</u>	<u>Resins - 100 Block</u>	<u>DV4443 Condenser</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG207-04</u>	<u>Elastomers - 207 Bldg</u>	<u>Dust Collector</u>	<u>N/A</u>
<u>EG207-07</u>	<u>Elastomers - 207 Bldg</u>	<u>Dust Collector</u>	<u>N/A</u>
<u>EG207-08</u>	<u>Elastomers - 207 Bldg</u>	<u>Dust Collector</u>	<u>N/A</u>
<u>EG207-09</u>	<u>Elastomers - 207 Bldg</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG212-04</u>	<u>Elastomers - 212 Bldg</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG212-06</u>	<u>Elastomers - 212 Bldg</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG212-07</u>	<u>Elastomers - 212 Bldg</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG212-08</u>	<u>Elastomers - 212 Bldg</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG212-09</u>	<u>Elastomers - 212 Bldg</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>
<u>EG212-10</u>	<u>Elastomers - 212 Bldg</u>	<u>N/A</u>	<u>FGLEAKDETECTION</u> <u>FGMONMACT</u>

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EG212-11	Elastomers - 212 Bldg	N/A	FGLEAKDETECTION FGMONMACT
EG212-19	Elastomers - 212 Bldg	N/A	FGLEAKDETECTION FGMONMACT
EG212-20	Elastomers - 212 Bldg	N/A	N/A
EG2504-09	Emulsions - 2504 Bldg	DV25028 Condenser	FGMONMACT
EG2505-02	Emulsions - 2505 Bldg	N/A	FGMONMACT
EG2505-10	Emulsions - 2505 Bldg	DV25714 Condenser	FGMONMACT
EG2505-12	Emulsions - 2505 Bldg	DV22494 Condenser	N/A
EG2505-13	Emulsions - 2505 Bldg	Baghouse	N/A
EG2602-01	Infrastructure - 2602 Bldg	N/A	N/A
EG2602-03	Infrastructure - 2602 Bldg	N/A	FGLEAKDETECTION FGMONMACT
EG2703-02	OSS - 2703 Bldg	DV9103 Emergency Scrubber	FGLEAKDETECTION FGMONMACT
EG2703-05	OSS - 2703 Bldg	DV9254 Scrubber DV9255 Scrubber DV9285 Amine Scrubber	FGLEAKDETECTION FGMONMACT
EG2703-06	OSS - 2703 Bldg	DV9254 Scrubber DV9255 Scrubber FGTHROX	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX
EG2703-10	OSS - 2703 Bldg	N/A	FGLEAKDETECTION FGMONMACT
EG2703-12	OSS - 2703 Bldg	DV9285 Scrubber	FGLEAKDETECTION FGMONMACT
EG2703-14	OSS - 2703 Bldg	DV9254 Scrubber DV9255 CPTC Scrubber DV9390 A/B Scrubber DV9163 PP S/D Scrubber DV9208 Scrubber	FGLEAKDETECTION FGMONMACT
EG2703-15	OSS - 2703 Bldg	DV25959 Scrubber DV24660 Condenser FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EG2901-02	Finishings - 2901 Bldg	DV19734 Scrubber DV19735 Condenser	FGLEAKDETECTION FGMONMACT
EG2901-05	Finishings - 2901 Bldg	DV16564 Condenser DV16573 Condenser	FGMONMACT
EG2901-06	Finishings - 2901 Bldg	DV16583B Condenser DV16585 Condenser	FGLEAKDETECTION FGMONMACT
EG2901-17	Finishings - 2901 Bldg	DV19735 Condenser DV25541 Condenser	FGLEAKDETECTION FGMONMACT

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EG303-13	Resins - 303 Bldg	DV24905 Condenser FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EG303-14	Resins - 303 Bldg	FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EG303-17	Resins - 303 Bldg	DV1637 Condenser DV3458 Condenser FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EG303-18	Resins - 303 Bldg	DV1637 Condenser DV3458 Condenser FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EG304-01	HVS - 304 Bldg	N/A	N/A
EG305-01	HVS - 305 Bldg	Scrubber 5224	FGLEAKDETECTION FGMONMACT
EG3102-02	Finishings - 3102 Bldg	DV16311 Condenser DV16312 Condenser	FGLEAKDETECTION FGMONMACT
EG3102-05	Finishings - 3102 Bldg	DV16311 Condenser DV16312 Condenser	FGLEAKDETECTION FGMONMACT
EG3104-06	Finishings - 3104 Bldg	DV16311 Condenser DV16312 Condenser DV25270 Scrubber DV23610 Scrubber	FGLEAKDETECTION FGMONMACT
EG3104-09	Finishings - 3104 Bldg	DV16311 Condenser DV16312 Condenser	FGLEAKDETECTION FGMONMACT
EG3104-19	Finishings - 3104 Bldg	DV25265 Condenser	FGLEAKDETECTION FGMONMACT
EG321-05	Resins - 321 Bldg	DV5106 Scrubber DV7170 Scrubber DV11476 Scrubber DV4776 Scrubber Carbon Beds FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS

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EG321-06	Resins - 321 Bldg	DV7159 Scrubber DV7158 Scrubber DV7170 Scrubber DV4776 Scrubber DV5141 Condenser Carbon Bed FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EG321-09	Resins - 321 Bldg	DV7158 Scrubber DV7170 Scrubber DV4776 Scrubber DV5141 Condenser FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EG321-10	Resins - 321 Bldg	N/A	FGLEAKDETECTION FGMONMACT
EG321-14	Resins - 321 Bldg	DV5143 Condenser Carbon Bed FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EG321-17	Resins - 321 Bldg	DV11476 Scrubber DV7170 Scrubber DV4776 Scrubber Carbon Beds FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EG321-18	Resins - 321 Bldg	Carbon Beds FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EG322-05	OSS - 322 Bldg	DV19673 Condenser FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGTHROX FGSITEBLOWER FGSITESCRUBBERS
EG322-08	OSS - 322 Bldg	N/A	N/A
EG322-09	OSS - 322 Bldg	N/A	FGLEAKDETECTION FGMONMACT
EG322-10	OSS - 322 Bldg	N/A	FGLEAKDETECTION FGMONMACT
EG322-14	OSS - 322 Bldg	N/A	FGLEAKDETECTION FGMONMACT
EG322-15	OSS - 322 Bldg	DV22452 Scrubber	FGLEAKDETECTION FGMONMACT
EG324-02	OSS - 324 Bldg	N/A	FGLEAKDETECTION FGMONMACT

General Business

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EG324-03	OSS - 324 Bldg	N/A	FGLEAKDETECTION FGMONMACT
EG324-04	OSS - 324 Bldg	N/A	N/A
EG324-09	OSS - 324 Bldg	DV4804 Condenser DV4807 Condenser	FGLEAKDETECTION FGMONMACT
EG324-10	OSS - 324 Bldg	DV4804 Condenser DV4807 Condenser	FGLEAKDETECTION FGMONMACT
EG324-12	OSS - 324 Bldg	DV25169 Scrubber	FGLEAKDETECTION FGMONMACT
EG324-13	OSS - 324 Bldg	DV5609 Condenser DV25169 Scrubber	FGLEAKDETECTION FGMONMACT
EG324-14	OSS - 324 Bldg	DV25169 Scrubber	FGLEAKDETECTION
EG324-16	OSS - 324 Bldg	N/A	FGLEAKDETECTION FGMONMACT
EG324-17	OSS - 324 Bldg	N/A	FGLEAKDETECTION FGMONMACT
EG324-19	OSS - 324 Bldg	DV4813 Scrubber	FGLEAKDETECTION FGMONMACT
EG325-02	HVS - 325 Bldg	N/A	N/A
EG340-03	HVS - 340 Bldg	N/A	N/A
EG340-04	HVS - 340 Bldg	N/A	N/A
EG501-03	Emulsions - 501 Bldg	DV1808 Condenser DV24877 Condenser	N/A
EG501-07	Emulsions - 501 Bldg	N/A	FGLEAKDETECTION FGMONMACT
EG501-08	Emulsions - 501 Bldg	DV7533 Scrubber	N/A
EG501-23	Emulsions - 501 Bldg	N/A	FGLEAKDETECTION FGMONMACT
EG501-31	Emulsions - 501 Bldg	DV15091 Condenser	N/A
EG501-47	Emulsions - 501 Bldg	DV4358 Condenser	N/A
EG501-50	Emulsions - 501 Bldg	N/A	N/A
EG501-51	Emulsions - 501 Bldg	N/A	N/A
EG501-52	Emulsions - 501 Bldg	N/A	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EG502-02	HVS - 502 Bldg	FGTHROX Site Scrubbers #1 and #2	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EG505-05	Resins - 505 Bldg	DV510 Condenser DV6553 Condenser DV16092 Condenser DV25094 Condenser FGTHROX Site Scrubbers #1 and #2	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS

General Business

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EG505-07	Resins - 505 Bldg	DV6547 Scrubber FGTHROX Site Scrubbers #1 and #2	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EG505-08	Resins - 505 Bldg	DV16092 Condenser DV25094 Condenser DV26176 Condenser FGTHROX Site Scrubbers #1 and #2	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EG505-09	Resins - 505 Bldg	FGTHROX Site Scrubbers #1 and #2	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EG505-10	Resins - 505 Bldg	Carbon Drums	FGLEAKDETECTION FGMONMACT
EG505-13	Resins - 505 Bldg	DV5-510 FGTHROX FGSITESCRUBBERS	FGLEAKDETECTION FGMONMACT FGSITEBLOWER FGTHROX FGSITESCRUBBERS
EG602-01	Elastomers - 602 Bldg	DV23967 Condenser	N/A
EG602-02	Elastomers - 602 Bldg	DV16489 Condenser	FGMONMACT
EG602-03	Elastomers - 602 Bldg	DV6168 Condenser DV23633 Condenser	FGMONMACT
EG602-04	Elastomers - 602 Bldg	DV8890 Condenser DV6168 Condenser	FGMONMACT
EG602-05	Elastomers - 602 Bldg	DV8837 Condenser	FGMONMACT
EG602-06	Elastomers - 602 Bldg	DV6679 Condenser	FGMONMACT
EG602-12	Elastomers - 602 Bldg	DV22968 Condenser	FGMONMACT
EG602-13	Elastomers - 602 Bldg	DV22852 Condenser	N/A
EG602-14	Elastomers - 602 Bldg	N/A	N/A
EG800-02	Infrastructure - 800 Bldg	N/A	FGMONMACT

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

- Each emission unit that emits only noncarcinogenic volatile organic compounds or noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, if the total uncontrolled or controlled emissions of air contaminants are not more than 1,000 or 500 pounds per month, respectively. **(R 336.1290(2)(a)(i))**
- Any emission unit for which CO2 equivalent emissions are not more than 6,250 tons per month and for which the total uncontrolled or controlled emissions of all other air contaminants are not more than 1,000 or 500 pounds per month, respectively, and all the following criteria listed below are met: **(R 336.1290(2)(a)(ii))**

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- a. For toxic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 0.04 micrograms per cubic meter and less than 2.0 micrograms per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively; **(R 336.1290(2)(a)(ii)(A))**
 - b. For toxic air contaminants with initial risk screening levels greater than or equal to 0.04 microgram per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively; **(R 336.1290(2)(a)(ii)(B))**
 - c. The emission unit shall not emit any toxic air contaminants, excluding non-carcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with an initial threshold screening level or initial risk screening level less than 0.04 microgram per cubic meter; **(R 336.1290(2)(a)(ii)(C))**
 - d. For total mercury, the uncontrolled or controlled emissions shall not exceed 0.01 pounds per month from emission units installed on or after December 20, 2016; **(R 336.1290(2)(a)(ii)(D))**
 - e. For lead, the uncontrolled or controlled emissions shall not exceed 16.7 pounds per month from emission units installed on or after December 20, 2016. **(R 336.1290(2)(a)(ii)(E))**
3. Any emission unit that emits only particulate air contaminants without initial risk screening levels and other air contaminants that are exempted under Rule 290(2)(a)(i) or Rule 290(2)(a)(ii), if all the following provisions are met: **(R 336.1290(2)(a)(iii))**
- a. The particulate emissions are controlled by an appropriately designed and operated fabric filter collector or an equivalent control system which is designed to control particulate matter to a concentration of less than or equal to 0.01 pound of particulate per 1,000 pounds of exhaust gases and which does not have exhaust gas flow rate more than 30,000 actual cubic feet per minute; **(R 336.1290(2)(a)(iii)(A))**
 - b. The visible emissions from the emission unit are not more than 5% opacity in accordance with the methods contained in Rule 303; **(R 336.1290(2)(a)(iii)(B))**
 - c. The initial threshold screening level for each particulate toxic air contaminant, excluding nuisance particulate, is more than 2.0 micrograms per cubic meter. **(R 336.1290(2)(a)(iii)(C))**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The provisions of Rule 290 apply to each emission unit that is operating pursuant to Rule 290. **(R 336.1290)**
2. The following requirements apply to emission units installed on or after December 20, 2016, utilizing control equipment:
 - a. An air cleaning device for volatile organic compounds shall be installed, maintained, and operated in accordance with the manufacturer's specifications. Examples include the following: **(R 336.1290(2)(b)(i), R 336.1910)**
 - i. Oxidizers and condensers equipped with a continuously displayed temperature indication device;
 - ii. Wet scrubbers equipped with a liquid flow rate monitor;
 - iii. Dual stage carbon absorption where the first canister is monitored for breakthrough and replaced if breakthrough is detected.
 - b. An air cleaning device for particulate matter shall be installed, maintained, and operated in accordance with the manufacturer's specifications or the permittee shall develop a plan that provides to the extent practicable for the maintenance and operation of the equipment in the manner consistent with good air pollution control practices for minimizing emissions. It shall also be equipped to monitor appropriate indicators of performance, for example, static pressure drop, water pressure, and water flow rate. **(R 336.1290(2)(b)(ii), R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall maintain records of the following information for each emission unit for each calendar month using the methods outlined in the DEQ, AQD Rule 290; Permit to Install Exemption Record form (EQP 3558) or in a format that is acceptable to the AQD District Supervisor: **(R 336.1213(3))**
 - a. Records identifying each air contaminant that is emitted; **(R 336.1213(3))**
 - b. Records identifying if each air contaminant is controlled or uncontrolled; **(R 336.1213(3))**
 - c. Records identifying if each air contaminant is either carcinogenic or non-carcinogenic; **(R 336.1213(3))**
 - d. Records identifying the ITSL and IRSL, if established, of each air contaminant that is being emitted under the provisions of Rules 290(2)(a)(ii) and (iii); **(R 336.1213(3))**
 - e. Records of material use and calculations identifying the quality, nature, and quantity of the air contaminant emissions in sufficient detail to demonstrate that the actual emissions of the emission unit meet the emission limits outlined in this table and Rule 290. Volatile organic compound emissions from units installed on or after December 20, 2016, shall be calculated using mass balance, generally accepted engineering calculations, or another method acceptable to the AQD District Supervisor; **(R 336.1213(3), R 336.1290(2)(d))**
 - f. Records are maintained on file for the most recent two-year period and are made available to the department upon request. **(R 336.1213(3), R 336.1290(2)(e))**
2. The permittee shall maintain an inventory of each emission unit that is exempt pursuant to Rule 290. This inventory shall include the following information: **(R 336.1213(3))**
 - a. The permittee shall maintain a written description of each emission unit as it is maintained and operated throughout the life of the emission unit; **(R 336.1290(2)(c), R 336.1213(3))**
 - b. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(2)(a)(iii), the permittee shall maintain a written description of the control device, including the designed control efficiency and the designed exhaust gas flow rate. **(R 336.1213(3))**
3. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(2)(a)(iii), the permittee shall perform a monthly visible emission observation of each stack or vent during routine operating conditions. This observation need not be performed using Method 9. The permittee shall keep a written record of the results of each observation. **(R 336.1213(3))**

See Appendix 4

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

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NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FGCOLDCLEANERS
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, 278a and Rule 281(2)(h) or Rule 285(2)(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.

Emission Unit: EUCOLDCLEANER

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall not use cleaning solvents containing more than five percent by weight of the following halogenated compounds: methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chloroform, or any combination thereof. **(R 336.1213(2))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Cleaned parts shall be drained for no less than 15 seconds or until dripping ceases. **(R 336.1611(2)(b), R 336.1707(3)(b))**
2. The permittee shall perform routine maintenance on each cold cleaner as recommended by the manufacturer. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The cold cleaner must meet one of the following design requirements:
 - a. The air/vapor interface of the cold cleaner is no more than ten square feet. **(R 336.1281(2)(h))**
 - b. The cold cleaner is used for cleaning metal parts and the emissions are released to the general in-plant environment. **(R 336.1285(2)(r)(iv))**
2. The cold cleaner shall be equipped with a device for draining cleaned parts. **(R 336.1611(2)(b), R 336.1707(3)(b))**
3. All new and existing cold cleaners shall be equipped with a cover and the cover shall be closed whenever parts are not being handled in the cold cleaner. **(R 336.1611(2)(a), R 336.1707(3)(a))**
4. The cover of a new cold cleaner shall be mechanically assisted if the Reid vapor pressure of the solvent is more than 0.3 psia or if the solvent is agitated or heated. **(R 336.1707(3)(a))**
5. If the Reid vapor pressure of any solvent used in a new cold cleaner is greater than 0.6 psia; or, if any solvent used in a new cold cleaner is heated above 120 degrees Fahrenheit, then the cold cleaner must comply with at least one of the following provisions:
 - a. The cold cleaner must be designed such that the ratio of the freeboard height to the width of the cleaner is equal to or greater than 0.7; **(R 336.1707(2)(a))**

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- b. The solvent bath must be covered with water if the solvent is insoluble and has a specific gravity of more than 1.0; **(R 336.1707(2)(b))**
- c. The cold cleaner must be controlled by a carbon adsorption system, condensation system, or other method of equivalent control approved by the AQD. **(R 336.1707(2)(c))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

- 1. For each new cold cleaner in which the solvent is heated, the solvent temperature shall be monitored and recorded at least once each calendar week during routine operating conditions. **(R 336.1213(3))**
- 2. The permittee shall maintain the following information on file for each cold cleaner: **(R 336.1213(3))**
 - a. A serial number, model number, or other unique identifier for each cold cleaner.
 - b. The date the unit was installed, manufactured or that it commenced operation.
 - c. The air/vapor interface area for any unit claimed to be exempt under Rule 281(h).
 - d. The applicable Rule 201 exemption.
 - e. The Reid vapor pressure of each solvent used.
 - f. If applicable, the option chosen to comply with Rule 707(2).
- 3. The permittee shall maintain written operating procedures for each cold cleaner. These written procedures shall be posted in an accessible, conspicuous location near each cold cleaner. **(R 336.1611(3), R 336.1707(4))**
- 4. As noted in Rule 611(2)(c) and Rule 707(3)(c), if applicable, an initial demonstration that the waste solvent is a safety hazard shall be made prior to storage in non-closed containers. If the waste solvent is a safety hazard and is stored in non-closed containers, verification that the waste solvent is disposed of so that not more than 20 percent, by weight, is allowed to evaporate into the atmosphere shall be made on a monthly basis. **(R 336.1213(3), R 336.1611(2)(c), R 336.1707(3)(c))**

VII. REPORTING

- 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
- 2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
- 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

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IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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FGRULE604
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any existing or future storage vessels subject to the requirements of R 336.1604 (Rule 604). Storage vessels subject to AQD Rule 604 are those which store any organic compound having a true vapor pressure of more than 1.5 psia, but less than 11 psia, at actual storage conditions in any fixed roof stationary vessel of more than 40,000 gallon capacity.

Emission Unit: EURULE604

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall maintain an up-to-date record of all storage vessels subject to the requirements of AQD Rule 604. (R 336.1213(3))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))

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3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall not operate storage vessels subject to AQD Rule 604 unless one of the following conditions is met: **(R 336.1604(1)(a), (b) & (c), R 336.1702(d))**
 - a. The vessel is a pressure tank capable of maintaining working pressures sufficient to prevent organic vapor or gas loss to the atmosphere at all times, except under emergency conditions;
 - b. The vessel is equipped and maintained with a floating cover or roof which rests upon, and is supported by, the liquid being contained and has a closure seal or seals to reduce the space between the cover or roof edge and the vessel wall. The seal or any seal fabric shall have no visible holes, tears, or other nonfunctional openings;
 - c. The vessel is equipped and maintained with a vapor recovery system, or other control system approved by the Director of the AQD or the Assistant Director of the AQD, which recovers not less than 90% by weight of the uncontrolled organic vapor that would otherwise be emitted to the atmosphere.
2. All openings, except stub drains, in any stationary vessel subject to AQD Rule 604 shall be equipped with covers, lids, or seals such that all of the following conditions are met: **(R 336.1604(2)(a), (b) and (c), R 336.1702(d))**
 - a. The cover, lid, or seal is in the closed position at all times, except when in actual use;
 - b. Automatic bleeder vents are closed at all times, except when the rood if floated off, or landed on, the roof leg supports;
 - c. Rim vents, if provided are set at the manufacturer's recommended setting or are set to open when the roof is being floated of the roof leg supports.

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGRULE605
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any existing or future storage vessels subject to the requirements of R 336.1605 (Rule 605). Storage vessels subject to AQD Rule 605 are those which store any organic compound having a true vapor pressure of 11 or more psia at actual storage conditions in any stationary vessel of more than 40,000 gallon capacity.

Emission Unit: EURULE605

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall maintain an up-to-date record of all storage vessels subject to the requirements of AQD Rule 605. **(R 336.1213(3))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

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VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall not operate storage vessels subject to AQD Rule 605 unless one of the following conditions is met: **(R 336.1605(1)(a) & (b), R 336.1702(d))**
 - a. The vessel is a pressure tank capable of maintaining working pressures sufficient to prevent organic vapor or gas loss to the atmosphere at all times, except under emergency conditions;
 - b. The vessel is equipped and maintained with a vapor recovery system, or other control system approved by the Director of the AQD or the Assistant Director of the AQD, which recovers not less than 90% by weight of the uncontrolled organic vapor that would otherwise be emitted into the atmosphere.
2. All openings in any stationary vessel subject to the provisions of AQD Rule 605 shall be equipped with covers, lids, or seals such that the covers, lids, or seals are in a closed position at all times, except when in actual use. **(R 336.1605(2), R 336.1702(d))**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FGRULE703
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Any new or future storage vessels subject to the requirements of R 336.1703 (Rule 703). Storage vessels subject to AQD Rule 703 are those which receive gasoline from a delivery vessel into any new stationary vessel of more than 2000-gallon capacity located at any gasoline dispensing facility.

Emission Unit: EURULE703

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall maintain an up-to-date record of all storage vessels subject to the requirements of AQD Rule 703. **(R 336.1213(3))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

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VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall not load or allow the loading of gasoline from a delivery vessel into any new stationary vessel or more than 2000-gallon capacity located at any gasoline dispensing facility, unless such stationary vessel is equipped with a permanent submerged fill pipe. **(R 336.1703(1))**
2. A new stationary vessel at a gasoline dispensing facility shall be constructed in a manner that will allow the vessel to be retrofitted according to AQD Rule 703(2) and (3). **(R 336.1703(5))**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FG325-01
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Carbon bed and venturi scrubber system used to control emissions from EU325-01, EU502-01, and EU502-07. The 337 scrubber acts as a backup to the venturi scrubber system.

The most recent PTI for this emission unit is PTI No. 44-06B.

Emission Units: EU325-01, EU502-01, EU502-07

POLLUTION CONTROL EQUIPMENT

- Carbon bed bank No. 1 (regenerative) comprised of carbon beds 20587, 20588, and 20589. Carbon bed bank No. 1 vents to either venturi scrubber bank No. 1, venturi scrubber bank No. 2, or the 337 scrubber. The typical mode of operation for carbon bed bank No. 1 is: one bed receives process exhaust, one bed is regenerating, and one bed is on standby with an alternating schedule every 6 hours.
- Carbon bed bank No. 2 (regenerative) comprised of carbon beds 22200, 22205, and 22210. Carbon bed bank No. 2 vents to either venturi scrubber bank No. 1, venturi scrubber bank No. 2, or the 337 scrubber. The typical mode of operation for carbon bed bank No. 2 is: one bed receives process exhaust, one bed is regenerating, and one bed is on standby with an alternating schedule every 6 hours.
- Venturi scrubber bank No. 1 comprised of venturi scrubbers 9956, 9957, and 9958 (operate in series). Venturi scrubber bank No. 1 vents to vent No. SV337-003.
- Venturi scrubber bank No. 2 comprised of venturi scrubbers 22245-1, 22245-2, and 22245-3 (operate in series). Venturi scrubber bank No. 2 vents to vent No. SV337-004.
- 337 wet scrubber (9950, 9960 – scrubbers typically alternate in operation but can operate in parallel and vent to SV337-001/002, respectively). NOTE: 337 scrubber acts as a backup to venturi scrubber bank Nos. 1 and 2.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. If the concentration of chlorosilanes from carbon bed bank No. 1 and 2 exceeds 100 ppm by volume, respectively, except during startup or shutdown periods, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. **(R 336.1213(3))**
2. While venting to venturi scrubber bank No. 1, if the combined liquid flow rate of venturi scrubber Nos. 9956, 9957 and 9958 is less than 30 gallons per minute, or the individual liquid flow rate of No. 9958 is less than 10 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. **(R 336.1213(3))**
3. While venting to venturi scrubber bank No. 2, if the combined liquid flow rate of venturi scrubber Nos. 22245-1, 22245-2 and 22245-3 is less than 30 gallons per minute, or the individual liquid flow rate of No. 22245-3 is less than 10 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. **(R 336.1213(3))**
4. The concentration of HCl in the outlet water from venturi scrubber Nos. 9958 and 22245-3 shall not exceed 10 percent by weight, respectively.² **(R 336.1910)**

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5. In the event of a malfunction of venturi scrubber bank Nos. 1 and 2, emissions from the process (after the carbon bed system) shall be controlled by the 337 main scrubber. The HCl emission rate from the process before entering the 337 main scrubber shall not exceed 1,490 pounds per hour. Applicant shall not operate the process in this mode for more than 48 hours per calendar month, nor 144 hours per 12-month rolling time period as determined at the end of each calendar month.² **(R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the carbon bed system (carbon bed bank Nos. 1 and 2) with a monitor capable of detecting carbon breakthrough, which has been defined as greater than 100 ppm. The monitor shall be calibrated according to the manufacturer's specifications. If breakthrough is detected, except during startup or shutdown periods, permittee shall record the date, time, duration, corrective action taken, and actions taken to prevent reoccurrence. These records shall be kept on file and made available to the AQD upon request.² **(R 336.1910, R 336.1201)**
2. The permittee shall equip and maintain each venturi scrubber (venturi scrubber Nos. 9956, 9957, 9958, 22245-1, 22245-2, and 22245-3) with a liquid flow indicator.² **(R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. While venting to carbon bed bank No. 1, permittee shall monitor and record, on a continuous basis, the concentration of chlorosilanes from carbon bed bank No. 1 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. With the exception of calibration, quality assurance, and maintenance activities, this record shall also include actions taken to correct and prevent a reoccurrence of each event. **(R 336.1213(3))**
2. While venting to carbon bed bank No. 2, permittee shall monitor and record, on a continuous basis, the concentration of chlorosilanes from carbon bed bank No. 2 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. With the exception of calibration, quality assurance, and maintenance activities, this record shall also include actions taken to correct and prevent a reoccurrence of each event. **(R 336.1213(3))**
3. While venting to venturi scrubber bank No. 1, permittee shall monitor and record, on a continuous basis, the following operational parameters with instrumentation acceptable to the AQD:
 - a. The liquid flow rate for venturi scrubber Nos. 9956, 9957 and 9958, respectively;
 - b. The concentration of HCl in the outlet water from venturi scrubber No. 9958.

For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and

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recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. With the exception of calibration, quality assurance, and maintenance activities, this record shall also include actions taken to correct and prevent a reoccurrence of each event. **(R 336.1213(3))**

4. While venting to venturi scrubber bank No. 2, permittee shall monitor and record, on a continuous basis, the following operational parameters with instrumentation acceptable to the AQD.
 - a. The liquid flow rate for venturi scrubber Nos. 22245-1, 22245-2 and 22245-3, respectively;
 - b. The concentration of HCl in the outlet water from venturi scrubber No. 22245-3.

For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. With the exception of calibration, quality assurance, and maintenance activities, this record shall also include actions taken to correct and prevent a reoccurrence of each event. **(R 336.1213(3))**

5. The permittee shall maintain the following records and make them available to the AQD upon request: **(R 336.1213(3))**
 - a. A record of process streams vented to the 337 scrubber during malfunction of the venturi scrubbers (venturi scrubber Nos. 9956, 9957, 9958, 22245-1, 22245-2 and 22245-3);
 - b. For each calendar month, the number of hours process exhaust gas steams vent to the 337 scrubber;
 - c. For the 12-month rolling time period, as determined at the end of each calendar month, the total number of hours process exhaust gas streams vent to the 337 scrubber.

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV337-003	10 ¹	30 ¹	R 336.1224, R 336.1225
2. SV337-004	10 ¹	30 ¹	R 336.1224, R 336.1225
3. SV337-001	10 ¹	30 ¹	R 336.1224, R 336.1225
4. SV337-002	10 ¹	30 ¹	R 336.1224, R 336.1225

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IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**FG432BOILERS
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Three natural gas-fired boilers, EUBOILER12, EUBOILER13, and EUBOILER14; each rated at 103 MMBTU/hr with low-NOx burners. This flexible group is also subject to the requirements of 40 CFR Part 63, Subpart A (General Provisions) and Subpart DDDDD (National Emission Standard for Hazardous Air Pollutants: Industrial, Commercial and Institutional Boilers and Process Heaters – Major Sources).

The most recent PTI for this emission unit is PTI No. 92-21.

Emission Units: EUBOILER12, EUBOILER13, EUBOILER14

Flexible Group ID: FGBOILERMACT-NG

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	0.041 lb/MMBTU ²	24-hour rolling average as determined each hour	Each boiler included in FG432BOILERS	SC VI.3 & VI.5, and measurements obtained by the certified CEM, as specified in VI.2	R 336.1205(1), 40 CFR 52.21(j), 40 CFR 60.44b(a)(1)
2. CO	81.2 tpy ²	12-month rolling time period as determined at the end of each calendar month	FG432BOILERS	SC V.1, VI.6, and See "Compliance Method" below	R 336.1205(3)

Compliance Method: Test results from the most recent test for CO shall be used to develop an emission factor in terms of pounds of pollutant per million cubic feet of natural gas for the three normal operating load scenarios for the boilers. The permittee shall use the worst-case emission factor from the most recent stack test. The emission factors shall be applied to the monthly fuel use to ensure compliance with the 12-month rolling average.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate FG432BOILERS unless a plan that describes how emissions will be minimized during startup(s), shutdown(s) and malfunction(s) has been approved by the AQD District Supervisor. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices. Modifications to this plan may be made by the permittee and must be submitted to the AQD District Supervisor for approval. A copy of the current plan must also be maintained at the facility. Unless notified by the District Supervisor within 30 business days, the original plan and any future modified plans shall be deemed approved.² **(R 336.1912)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain each boiler included in FG432BOILERS with a low-NOx burner.² **(R 336.1205(1), R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(j))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the fuel usage for each of the three boilers included in FG432BOILERS on a continuous basis.² **(R 336.1205(1))**
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the NOx emissions for each of the three boilers included in FG432BOILERS on a continuous basis and according to the procedures outlined in Appendix 3 attached and 40 CFR 60.48b(b)(1), (c), (d), (e), (f).² **(R 336.1205(1), 40 CFR 52.21(j), 40 CFR 60.48b)**
3. The permittee shall keep, in a satisfactory manner the following records for each boiler included in FG432BOILERS, for each calendar day pursuant to the requirements of 40 CFR 60.49b:
 - a. Calendar date;
 - b. Average hourly NOx emission rate in lb/MMBTU heat input;
 - c. 30-day average NOx emission rate in lb/MMBTU heat input, calculated at the end of each operating day from the hourly NOx emission rates for the preceding 30-days;
 - d. Excess emissions, reasons for excess emissions, and description for corrective actions taken;
 - e. Identification of the operating days for which NOx data has not been obtained, reasons for not obtaining the data and description of corrective actions taken;
 - f. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding the data;
 - g. Identification of the "F" factor used for calculations, method of determining the "F" factor and type of fuel combusted;
 - h. Identification of the times when the NOx concentration exceeds full span of the continuous emission monitoring system;
 - i. Description of any modifications to the continuous emission monitoring system that could affect the ability of the continuous emission monitor to comply with Performance Specification 2.

All records shall be kept on file for a period of at least five years and made available to the Department upon request. Reports of the above information shall be submitted to the EPA Administrator and the AQD District Supervisor every six months in accordance with 40 CFR 60.49b(v) and (w).² **(40 CFR 60.49b(g), (i), (o), (v), (w))**

4. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling average fuel use records and the annual capacity factor for each boiler included in FG432BOILERS. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each month. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request.² **(R 336.1205(3), 40 CFR 60.49b(d))**
5. The permittee shall keep, in a satisfactory manner, 24-hour rolling average NOx emission records for each boiler included in FG432BOILERS, as required by SC I.1. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request.² **(R 336.1205(1), 40 CFR 52.21(j), 40 CFR Part 60, Subpart Db)**

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- The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling average CO calculation records for FG432BOILERS, as required by SC I.2. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request.² **(R 336.1205(3))**
- The permittee shall keep, in a satisfactory manner, annual records of the normal operating range for each of the three boilers included in FG432BOILERS. All records shall be kept on file for a period of at least five years and made available to the Department upon request.² **(R 336.1205(3))**

See Appendix 3

VII. REPORTING

- Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
- Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- The permittee shall notify the Department if a change in land use occurs for property classified as industrial or as a public roadway, where this classification was relied upon to demonstrate compliance with Rule 225(1). The permittee shall submit the notification to the AQD District Supervisor, within 30 days of the actual land use change. Within 60 days of the land use change, the permittee shall submit to the AQD District Supervisor a plan for complying with the requirements of Rule 225(1). The plan shall require compliance with Rule 225(1) no later than one year after the due date of the plan submittal.¹ **(R 336.1225(4))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBOILER12	42 ²	50 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVBOILER13	42 ²	50 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SVBOILER14	42 ²	50 ²	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

- The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources for Industrial-Commercial-Institutional Steam Generating Units as specified in 40 CFR Part 60, Subparts A and Db, as they apply to the equipment in FG432BOILERS.² **(40 CFR Part 60, Subparts A and Db)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**FGSITEBLOWER
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Site vent consolidation and blower system that collects vapor streams from numerous emission units and vents throughout the facility and routes them to either the on-site thermal oxidizer with heat recovery (FGTHROX) or to a site-wide water scrubber system. There are two parts to the site vent consolidation and blower system: a dry vent header system for water reactive vents and wet vent header system for vents that can contain water.

The most recent PTI for this emission unit is PTI No. 91-07E.

Emission Units: Include, but are not limited to, the following: EU2703-01, EU2703-03, EU2703-08, EU2703-17, EU303-01, EU303-02, EU303-06, EU303-09, EU303-11, EU303-19, EU304-02, EU321-01, EU321-02, EU321-11, EU325-01, EU502-01, EU502-04, EU502-07, EU502-09, EU505-01, EU505-11, EU601-01, EURULE290

Flexible Group ID: FGTHROX, FGSITESCUBBERS

POLLUTION CONTROL EQUIPMENT

Site wide thermal oxidizer system (THROX) or site-wide water scrubber system.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate the emission units in FGSITEBLOWER unless they are routed to FGTHROX or the site wide water scrubbers, except as provided below, and the control device is installed, maintained and operated in a satisfactory manner or the system is operated in accordance with the malfunction abatement plan (MAP) described in SC III.1 of FGFACILITY section of this permit.² **(R 336.1205(2), R 336.1910, R 336.1225, R 336.1911, R 336.1912)**
 - a. When FGTHROX is operating properly, any emission vents at Midland Plant that are part of FGSITEBLOWER, which is routed to FGTHROX, and that have air pollution control equipment in addition to FGTHROX, shall have the ability to bypass the additional air pollution control equipment or operate the additional air pollution control equipment with parameters at levels or ranges outside of the specified parametric ranges or levels in their individual ROP tables. When FGTHROX is not operating or is not operating properly as defined in the MAP, any emission vents at Midland Plant that are part of FGSITEBLOWER and that have air pollution control equipment in addition to FGTHROX shall be handled as described in the MAP.

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

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VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall record the time and duration of each bypass episode wherein the vents comprising FGSITEBLOWER are not routed to FGTHROX. The permittee shall keep all records of these bypass episodes on file at the Dow Corning facility for a period of five years and make them available to the Department upon request.² **(R 336.1205(1)(a))**

See Appendix 3

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**FGSITESCRUBBERS
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Site-wide water scrubber system. FGSITESCRUBBERS will remove HCl and chlorosilanes from the FGSITEBLOWER consolidated vent system prior to discharge to atmosphere when the site wide Thermal Oxidizer system is not operating properly.

The most recent PTI for this emission unit is 91-07E.

Emission Units: Include, but are not limited to, the following: EU303-01, EU303-02, EU303-06, EU303-09, EU303-11, EU303-15, EU303-16, EU303-19, EU304-02, EU321-01, EU321-02, EU321-11, EU321-12, EU325-01, EU502-01, EU502-07, EU502-09, EU502-11, EU505-01, EU508-01, EU515-01, EURULE290, FGSITEBLOWER, FG304VENTRECOVERY, FG337SCRUBBER

Flexible Group ID: [FGHAP2012A2A](#), FGLEAKDETECTION,

POLLUTION CONTROL EQUIPMENT

Site-wide water scrubber system

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period	Equipment	Testing/ Monitoring Method	Underlying Applicable Requirements
1. Benzene	7.1 pph ¹	Per testing protocol and/or the Benzene Emissions Management and Monitoring Plan (BEMMP)	FGSITESCRUBBERS emission units vented through the site wide water scrubber system	SC VI.1, VI.2, & VI.3	R 336.1225, R 336.1901

¹This emissions limit only applies when FGTHROX is not operating and the site wide water scrubber system is serving as the back-up control device.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The permittee shall not operate FGSITESCRUBBERS unless the approved Benzene Emissions Management and Monitoring Plan (BEMMP) for demonstrating compliance with the emission limit for FGSITESCRUBBERS or an alternate plan approved by the AQD district supervisor is implemented and maintained.¹ **(R 336.1225, R 336.1901)**
- The permittee shall not bypass FGTHROX unless the following vents are routed to either the site wide water scrubbers or the control equipment specified in these vents emission unit tables in ROP No. MI-ROP-A4043-2008 (or any subsequent revisions) and the control equipment is installed, maintained, and operating in a satisfactory manner:²

SV515-001	SV303-011	SV303-002	SV321-024	SV321-059
SV515-003	SV303-016	SV303-004	SV321-031	
SV337-001	SV303-017	SV303-007	SV321-038	
SV337-002	SV303-019	SV321-018	SV321-052	

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SV303-001	SV303-046	SV321-021	SV321-053	
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(R 336.1205(2), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

3. The permittee shall not bypass FGTHROX when operating SV2703-011 unless SV2703-011 is routed to the control equipment specified in EU2703-03 and the control equipment is installed, maintained, and operated in a satisfactory manner.² (R 336.1205(2), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall not bypass FGTHROX when operating SV303-050 unless SV303-050 is routed to the control equipment specified in EU303-06 and the control equipment is installed, maintained, and operated in a satisfactory manner.² (R 336.1205(2), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
5. Proper operation of the site wide water scrubbers includes the total scrubber water flow rate shall not be less than the minimum flow rate specified in the MAP.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the site wide water scrubbers with water flow meters. (R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. Whenever the vents comprising FGSITEBLOWER are not routed to the THROX, the permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the water flow rates for the site wide water scrubbers on a continuous basis. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.² (R 336.1910)
2. The permittee shall keep, in a satisfactory manner, continuous records of scrubber flow rates for the site wide water scrubbers. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.² (R 336.1910)
3. The permittee shall keep, in a satisfactory manner, records demonstrating that the BEMMP is being implemented and maintained as required by SC III.1. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.¹ (R 336.1225, R 336.1901)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

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VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2512-001	6 ¹	65 ¹	R 336.1225
2. SV2512-002	6 ¹	65 ¹	R 336.1225

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FGTHROX
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Site wide thermal oxidizer system. The THROX will remove VOC, HAPs, PM10, hydrogen chloride, and other toxic air contaminants from the FGSITEBLOWER consolidated vent system prior to discharge to atmosphere. This flexible group is subject to the requirements of 40 CFR Part 63, Subpart FFFF. FGTHROX is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

Emission Units: Include, but are not limited to, the following: ~~EU2515-01~~, EU2703-01, EU2703-03, EU2703-08, EU2703-09, EU2703-13, EU2703-17, EU303-01, EU303-02, EU303-06, EU303-09, EU303-11, EU303-15, EU303-16, EU303-19, EU304-02, EU321-01, EU321-02, EU321-11, EU321-12, EU322-02, EU322-04, EU325-01, EU502-01, EU502-04, EU502-07, EU502-09, EU502-11, EU505-01, EU505-11, EU508-01, EU515-01, EU601-01, EURULE290, FGSITEBLOWER, FG304VENTRECOVERY, FG337SCRUBBER

Flexible Group ID: [FGHAP2012A2A](#)

POLLUTION CONTROL EQUIPMENT

Thermal oxidizer with heat recovery (THROX) unit consisting of a burner, quencher, absorber, 2 stage ionizing wet scrubbers (IWS) in series, and stack. This device is a CAM subject unit for VOCs and PM10.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	36 tpy ²	12-month rolling time period as determined at the end of each calendar month.	FGTHROX emissions vented through FGTHROX	SC VI.2, VI.10	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21(c)&(d)
2. CO	90 tpy ²	12-month rolling time period as determined at the end of each calendar month.	FGTHROX emissions vented through FGTHROX	SC V.1, VI.11	R 336.1205(1), R 336.2804, 40 CFR 52.21(d)
3. PM10	13.4 tpy ²	12-month rolling time period as determined at the end of each calendar month.	FGTHROX emissions vented through FGTHROX	SC V.2, VI.12	R 336.1205(3)
4. PM10	3.5 pph ²	720 hour rolling average ^a	FGTHROX emissions vented through FGTHROX	SC V.2, VI.12	R 336.1205(3)
5. VOC	6.6 pph ²	Hourly	FGTHROX emissions vented through FGTHROX	SC V.1, VI.1, VI.9, VI.11	R 336.1205(1), R 336.1702(a), R 336.1901
6. PM10	100 lbs/month ²	Calendar month ^b	FGTHROX emissions vented through FGTHROX resulting from EU2703-06, EU2703-07, EU2703-08, EU2703-09, and EU2703-13	SC VI.12	R 336.1205(3)

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^a PM10 emissions are due to silicon that is measure by the on-line Gas Chromatographs are based on a 720-hour rolling average (see SC VI.12(f)). Note that emission testing done per SC V.2 will detect all PM10 emissions, not just PM10 emissions due to silicon that has been measured by the on-line Gas Chromatographs.

^b PM10 emissions due to EU2703-06, EU2703-07, EU2703-08, EU2703-09, and EU2703-13 are calculated on a monthly basis (see SC VI.12(g)). These emission units vent directly to the THROX so the silicon is not measured by the on-line Gas Chromatographs.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not route process vents to FGTHROX unless the burner, quencher, absorber, and two 2-stage ionizing wet scrubbers (IWS) in series are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining the IWS and thermal oxidizer according to the MAP and maintaining a minimum THROX combustion chamber temperature of 1800°F and maintaining a residence time in the combustion chamber of greater than 1.0 second at any time when process vents are routed to FGTHROX. Satisfactory operation of the IWS includes maintaining the following parameters at or above the specified minimum values over the specified averaging period.² (R 336.1205(1), R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

Parameter	Units	Minimum Value	Averaging Period
1 st stage ^a secondary voltage	Kilovolts (kV)	10	1 hour
2 nd stage ^a secondary voltage	Kilovolts (kV)	15	1 hour
Secondary current	Milliamps (mA)	50	1 hour
Packing recycle rate per stage	Gallons per minute (gpm)	324	1 hour

^a Stage 1 refers to the first stage of each IWS and stage 2 refers to the second stage of each IWS

2. An excursion is a combustion chamber temperature less than 1800°F, a residence time in the combustion chamber of one second or less, and operation of the IWS below the minimum values in the table below as defined in this condition, or demonstrated during testing. Upon detecting an excursion of FGTHROX combustion chamber temperature, residence time in the combustion chamber, or failing to maintain satisfactory operation of the IWS limit, the permittee shall restore operation of FGTHROX to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (40 CFR 64.6(c)(2), 40 CFR 64.7(d))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. At least once every 12 months, verification of PM10, CO, and VOC emission rates from FGTHROX, by testing at owner's expense, in accordance with Department requirements, will be required. No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. The permittee shall notify the AQD no less than 7 days prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following completion of testing.² (R 336.1205(1), R 336.1205(3), R 336.1702(a), R 336.1901, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

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2. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM10/PM2.5	40 CFR Part 51, Appendix M
CO	40 CFR Part 60, Appendix A
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.2001, R 336.2003, R 336.2004)

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record on a continuous basis the combustion chamber temperature of FGTHROX. The temperature monitoring device shall be calibrated once per calendar year. For the purposes of this condition, "on a continuous basis" is defined as one instantaneous data point recorded at least once every 15 minutes.² (R 336.1205(1), R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.1910, 40 CFR 64.6(c)(1)(i), (ii), (iii))
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the NOx emissions for FGTHROX on a continuous basis and according to the procedures outlined in Appendix 3 and 40 CFR Part 60.48b(b)(1), (c), (d), (e), (f).² (R 336.1205(1))
3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the flue gas oxygen or carbon dioxide (CO₂) concentration for FGTHROX on a continuous basis and according to the procedures outlined in Appendix 3 and 40 CFR Part 60.48.² (R 336.1205(1))
4. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner online gas chromatographs to monitor and record the concentrations of compounds containing the silicon atom in the wet and dry vent headers to FGTHROX on a continuous basis. For the purposes of this condition, "on a continuous basis" is defined as one measurement every 60 minutes. For the purposes of this condition, "in a satisfactory manner" includes calibrating and maintaining the gas chromatographs according to the MAP. While the gas chromatographs are being used to analyze individual vents routed to FGTHROX, the requirement to continuously measure the concentrations of compounds containing the silicon atom in the wet and dry vent headers to FGTHROX does not apply for a maximum of 5 hours per day and 72 hours per 12-month rolling time period, as determined at the end of each calendar month.² (R 336.1205(3))
5. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner, devices to monitor and record the gas flow rates in the wet and dry vent headers to FGTHROX on a continuous basis. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.² (R 336.1205(3))
6. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record the gas flow rate from FGTHROX on a continuous basis and according to the procedures outlined in Appendix 3.A.² (R 336.1205(3), 40 CFR 60.48c)
7. All required calculations shall be completed in a format acceptable to the AQD District Supervisor and made available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition.² (R 336.1205(1), R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

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8. The permittee shall keep, in a satisfactory manner, daily, monthly and 12-month rolling time period average fuel use records for FGTHROX. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request.² **(R 336.1205(1))**
9. The permittee shall keep, in a satisfactory manner, continuous records of FGTHROX combustion chamber temperature. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request.² **(R 336.1205(1), R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.1910)**
10. The permittee shall keep, in a satisfactory manner the following records for FGTHROX for each calendar day:
 - a. Calendar date that FGTHROX was in operation;
 - b. Identification of the operating days for which NOx data has not been obtained, reasons for not obtaining the data and description of corrective actions taken;
 - c. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding the data;
 - d. Identification of the "F" factor used for calculations, method of determining the "F" factor and type of fuel combusted;
 - e. Identification of the times when the NOx concentration exceeds full span of the continuous emission monitoring system;
 - f. Description of any modifications to the continuous emission monitoring system that could affect the ability of the continuous emission monitor to comply with Performance Specification 2.

The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request.² **(R 336.1205(1))**

- 11 The permittee shall keep, in a satisfactory manner, records necessary to demonstrate that the following pollutants are in compliance with the emission limits listed in the corresponding special conditions. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.²

Pollutant	Emission Limit Special Condition	Applicable Requirement
a. NOx	I.1	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
b. CO	I.2	R 336.1205(1), R 336.2804, 40 CFR 52.21(d)
c. VOC	I.5	R 336.1205(3), R 336.1702(a)

12. The permittee shall keep, in a satisfactory manner, records necessary to demonstrate compliance with the PM10 emission limits in SC I.3, I.4, and I.6. These records shall include the following:
 - a. Dates and times that FGTHROX was combusting vent gas containing silicon;
 - b. Silicon loading to the IWS based on the online gas chromatographs;
 - c. Dates and times that the silicon loading to the IWS was not measured, as allowed by SC VI.4, including hours per day and hours per 12-month rolling time period, as determined at the end of each calendar month;
 - d. The exhaust flow rate through the IWS;
 - e. Calculation of the PM10 emission rate in pounds per hour using the Verantis equation, as described in the "Parametric Monitoring Plan and Verification of IWS Particulate Removal Efficiency from FGTHROX";
 - f. 720 hour average PM10 emission rate in pounds per hour, based on data from emission testing or the online gas chromatographs, calculated at the end of each hour from the PM10 emitted during the preceding 720 hours and the hours that FGTHROX was combusting vent gas containing silicon during the preceding 720 hours. This calculation shall be completed by the last day of the calendar month, for the pervious calendar month, for each hour in the previous month;
 - g. PM10 emission rate in lb/month due to EU2703-06, EU2703-07, EU2703-08, EU2703-09, and EU2703-13 shall be calculated. This calculation shall be completed by the last day of the calendar month for the pervious calendar month;
 - h. Twelve month rolling time period PM10 emission rate in tons per year, calculated at the end of each calendar month.

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The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request.² **(R 336.1205(3))**

13. The permittee shall keep, in a satisfactory manner, records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of FGTHROX; or any periods during which a continuous monitoring system or monitoring device in FGTHROX is inoperable. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request. **(40 CFR 60.7)**
14. The permittee shall submit notification to the AQD District Supervisor of the design heat input capacity, the identification of fuels to be combusted and the annual capacity factor for FGTHROX as required by 40 CFR 60.7 and 40 CFR 60.48c(a). **(40 CFR 60.48c(a))**
15. The permittee shall comply with the operation and maintenance plan provisions specified in Appendix 3.B and make it available to the Department upon request. The permittee shall operate and the THROX automated alert system requirements specified in accordance with Appendix 3.C, as they apply to FGTHROX.^{2,3} **(Act 451 Section 324.5503(b))**
16. The permittee shall keep, in a manner satisfactory to the AQD District Supervisor, and up to date list of all emission units routed to FGTHROX. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1205, R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**
17. For FGTHROX, upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). **(40 CFR 64.7(d))**
18. For FGTHROX, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for 40 CFR Part 64 compliance, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
19. For FGTHROX, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
20. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

See Appendix 3

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Each semiannual report of monitoring and deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no excursions and/or exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**
5. Each semiannual report of monitoring and deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**
6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2514-006	54 ²	89.5 ²	R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21(c)&(d), R 336.1901

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources for Small Industrial-Commercial-Institutional Steam Generating Units as specified in 40 CFR Part 60, Subparts A and Dc, as they apply to the equipment in FGTHROX.² **(40 CFR Part 60, Subparts A and Dc)**
2. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**

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3. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

³ This condition is federally enforceable ~~and was originally established in the consent decree settling, "U.S. v Company, Civil Action No. 19-11880" and also pursuant to Act 451, Section 324.5503(b), and will remain in effect after termination of the consent decree.~~

**FGOLDFACILITY
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

The affected source is each new, reconstructed, or existing Organic Liquid Distribution (OLD) (non-gasoline) operation that is located at, or is part of, a major source of hazardous air pollutant (HAP) emissions. The affected source is comprised of storage tanks, transfer racks, equipment leak components associated with storage tanks, transfer racks and pipelines, transport vehicles, and all containers while loading or unloading at transfer racks subject to this subpart. Equipment that is part of an affected source under another NESHAP is excluded from the affected source. See 40 CFR 63.2338(c).

Emission Units: EU340-03, EU515-01, EURULE290

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Total organic HAP	Reduce emissions by 95 wt% OR ≤ 20 ppmv* exhaust concentration	Hourly	Storage Tanks See Table 2 of 40 CFR Part 63, Subpart EEEE	SC V.1 - 8	40 CFR 63.2346(a)

* Corrected to 3% oxygen for combustion devices using supplemental combustion air.

2. The permittee shall comply with the applicable requirements for storage tanks and transfer racks specified in 40 CFR Part 63, Subpart SS for meeting emission limits, substituting the term storage tank at each occurrence of the term storage vessel in Subpart SS. **(40 CFR 63.2346(a)(1))**
3. The permittee must be in compliance with the emission limitations at all times when the equipment identified in 40 CFR 63.2338(b)(1) through (4) is in OLD operation. The emission limitations apply during periods of Startup, Shutdown and Malfunction (SSM) except as provided in 40 CFR 63.2378(b)(2) and (3). **(40 CFR 63.2350(a), 40 CFR 63.2378(b)(1))**

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. For each storage tank identified in Table 2 of 40 CFR Part 63, Subpart EEEE, items 1 through 5, the permittee shall reduce the emissions of organic HAP using one of the following work practice standards:
 - a. Route emissions to a fuel gas system, to a non-fuel gas system, or back into a process as specified in 40 CFR Part 63, Subpart SS; **(40 CFR 63.2346(a)(2))**
 - b. Use a vapor balancing system that complies with 63.2346(a)4(i) through (vii) and with the recordkeeping requirements in 40 CFR 63.2390(e). **(40 CFR 63.2346(a)(4))**
2. For each pump, valve, and sampling connection that operates in organic liquids service for at least 300 hours per year at an affected source that has at least one storage tank or transfer rack that meets the applicability criteria for control in Table 2 of 40 CFR Part 63, Subpart EEEE, the permittee must comply with 40 CFR Part 63,

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Subpart TT (control level 1); 40 CFR Part 63, Subpart UU (control level 2); or 40 CFR Part 63, Subpart H. **(40 CFR 63.2346(c))**

3. For each storage tank and low throughput transfer rack, the permittee shall comply with the respective requirements for monitored parameters as specified in 40 CFR Part 63, Subpart SS. Alternatively, the permittee may comply with the operating limits in Table 3 of 40 CFR Part 63, Subpart EEEE. **(40 CFR 63.2346(e))**
4. The permittee shall develop a written SSM plan according to the provisions in 40 CFR 63.6(e)(3), except for sources not required to be controlled as specified in 40 CFR 63.2343. The permittee must follow the requirements in 40 CFR 63.6(e)(1) and (3) during periods of startup, shutdown, malfunction, or nonoperation of the affected source or any part thereof. In addition, the provisions of 40 CFR 63.2378(b)(1) through (3) apply. **(40 CFR 63.2350(c), 40 CFR 63.2378(b))**
5. The permittee must be in compliance with the operating limits at all times when the equipment identified in 40 CFR 63.2338(b)(1) through (4) is in OLD operation. **(40 CFR 63.2350(a))**
6. The permittee shall operate and maintain the affected source, including air pollution control and monitoring equipment, according to the provisions in 40 CFR 63.6(E)(l)(i). **(40 CFR 63.2350(b))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall demonstrate initial compliance with each applicable emission limitation and work practice standard as specified in Tables 6 and 7 of 40 CFR Part 63, Subpart EEEE. **(40 CFR 63.2370(a))**
2. The permittee shall demonstrate continuous compliance with each applicable emission limitation, operating limit, and work practice standard in Tables 2 through 4 of 40 CFR Part 63, Subpart EEEE according to the methods specified in 40 CFR Part 63, Subpart SS and in Tables 8 through 10 of 40 CFR Part 63, Subpart EEEE, as applicable. **(40 CFR 63.2378(a))**
3. For each performance test, design evaluation, and/or compliance determination conducted, the permittee shall use the following procedures:
 - a. Design evaluations according to the procedures in 40 CFR Part 63, Subpart SS; **(40 CFR 63.2354(a)(2))**
 - b. Compliance determine of the HAP content of organic liquids according to either EPA Method 311 of 40 CFR Part 63, Appendix A or other method approved by the Administrator. **(40 CFR 63.2354(c))**
4. The permittee shall conduct initial performance tests and design evaluations by the following dates, whichever is earlier: **(40 CFR 63.2358(a))**
 - a. According to the schedule in 40 CFR 63.7(a)(2); or
 - b. The compliance date specified in any applicable State or Federal new source review construction permit.
5. For storage tanks and transfer racks choosing to comply with the emission limits in Table 2 of 40 CFR Part 63, Subpart EEEE, the permittee shall demonstrate initial compliance according to the following schedule:
 - a. For existing sources, by August 4, 2007. **(40 CFR 63.2358(b)(1))**
6. For each owned transport vehicle that is equipped with vapor collection equipment that is loaded with organic liquids at transfer racks subject to control based on the criteria in Table 2 of 40 CFR Part 63, Subpart EEEE, items 7 through 10, the permittee shall perform the vapor tightness testing required in Table 5 of 40 CFR Part 63, Subpart EEEE, item 2 at least once per year. **(40 CFR 63.2362(b)(1))**
7. For each owned transport vehicle that does not have vapor collection equipment, the permittee shall maintain current certification in accordance with the U.S. DOT pressure test requirements in 49 CFR Part 180 for cargo tanks or 49 CFR 173.31 for tank cars. **(40 CFR 63.2362(b)(2))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii), 40 CFR 63.2394)**

1. For each storage tank using a vapor balancing system per 40 CFR 63.2346(a)(4), the permittee shall keep the following records:
 - a. Current certification in accordance with the U.S. DOT pressure test requirements of 49 CFR Part 180 – cargo tanks; **(40 CFR 63.2390(e)(1))**
 - b. Current certification in accordance with the U.S. DOT pressure test requirements of 49 CFR 173.31 – tank cars; **(40 CFR 63.2390(e)(1))**
 - c. Pressure relief vent setting specified in 40 CFR 63.2346(a)(4)(v); **(40 CFR 63.2390(e)(2))**
 - d. A record of the equipment to be used and procedures to be followed when reloading cargo tanks or tank cars and displacing vapors back to the storage tank from which the liquid originates; **(40 CFR 63.2390(e)(3)(i))**
 - e. A record of each time the vapor balancing system is used to comply with 40 CFR 63.2346(a)(4)(vi)(B). **(40 CFR 63.2390(e)(3)(ii))**
2. The permittee shall keep records of the total actual annual facility-level organic liquid loading volume as defined in 40 CFR 63.2406 through transfer racks to document the applicability, or lack thereof, of the emission limitations in Table 2 of 40 CFR Part 63, Subpart EEEE, items 7 through 10. **(40 CFR 63.2390(d))**
3. For nonflare control devices controlling storage tanks and low throughput transfer racks, the permittee shall submit a monitoring plan according to the requirements in 40 CFR Part 63, Subpart SS. **(40 CFR 63.2366(b))**
4. The permittee shall keep records in a form suitable and readily available for expeditious inspection and review according to 40 CFR 63.10(b)(1) including records stored in electronic form at a separate location. **(40 CFR 63.2394(a))**
5. The permittee shall keep records of all information for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report or record as specified in 40 CFR 63.10(b)(1). **(40 CFR 63.2394(b))**
6. The permittee shall keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report or record as specified in 40 CFR 63.10(b)(1). These same records may be kept off site for the remaining 3 years. **(40 CFR 63.2394(c))**
7. The permittee shall keep all records required by 40 CFR 63.2343 for each emission source that does not require control under 40 CFR Part 63, Subpart EEEE. **(40 CFR 63.2390(a))**
8. The permittee shall keep all of the following records for each emission source that requires control under 40 CFR Part 63, Subpart EEEE:
 - a. All records in 40 CFR, Part 63, Subpart SS; **(40 CFR 63.2390(b))**
 - b. All records in Table 12 of 40 CFR Part 63, Subpart EEEE; **(40 CFR 63.2390(b))**
 - c. All records required to show continuous compliance as required in 40 CFR Part 63, Subpart SS and in Tables 8 through 10 of 40 CFR Part 63, Subpart EEEE. **(40 CFR 63.2390(b))**

VII. REPORTING

1. The permittee shall submit the following notifications according to the schedule in Table 12 of 40 CFR Part 63, Subpart EEEE:
 - a. Each notification in 40 CFR Part 63, Subpart SS; **(40 CFR 63.2382(a))**
 - b. Each notification in Table 12 of 40 CFR Part 63, Subpart EEEE; **(40 CFR 63.2382(a))**
 - c. Initial notification according to the schedule specified in 40 CFR 63.2382(b); **(40 CFR 63.2382(b))**
 - d. Notification of Intent to conduct a performance test as required in 40 CFR 63.7(b)(1); **(40 CFR 63.2382(c))**
 - e. Notification of Compliance Status including the information required in 40 CFR 63.999(b) and 40 CFR 63.2382(d)(2)(i) through (viii). **(40 CFR 63.2382(d))**

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These notifications must be submitted according to the schedule in Table 12 of 40 CFR Part 63, Subpart EEEE and as specified in paragraphs (b) through (d) of 40 CFR 63.2382.

2. The permittee shall submit all applicable reports in 40 CFR 63.2386 according to the schedule in Table 11 of 40 CFR Part 63, Subpart EEEE and by the dates specified in 40 CFR 63.2386(b)(1) through (3). These reports include, but are not limited to, the following:
 - a. Each report in 40 CFR Part 63, Subpart SS; **(40 CFR 63.2386(a))**
 - b. Each report in Table 11 of 40 CFR Part 63, Subpart EEEE; **(40 CFR 63.2386(a))**
 - c. Each report in Table 12 of 40 CFR Part 63, Subpart EEEE; **(40 CFR 63.2386(a))**
 - d. First Compliance Report containing the information specified in 40 CFR 63.2386(c)(1) through (10); **(40 CFR 63.2386(c))**
 - e. Subsequent Compliance Reports containing the information specified in 40 CFR 63.2386(c)(1) through (9) and 40 CFR 63.2386(d)(1) through (4) where applicable; **(40 CFR 63.2386(d))**
 - f. Report of all deviations for each affected source that has obtained a Renewable Operating Permit. **(40 CFR 63.2386(e))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart EEEE for Organic Liquid Distribution by the initial compliance date. **(40 CFR Part 63, Subparts A and EEEE)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FGHCLMACT
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

HCl production facility: the collection of unit operations and equipment associated with the production of liquid HCl product at a concentration of 30 weight percent or greater during normal operations that is located at, or is part of, a major source of hazardous air pollutant emissions. See 40 CFR 63.8985(a).

Emission Units: EU356-01, EU356-02

POLLUTION CONTROL EQUIPMENT

- Packed bed scrubber (24388)
- Packed bed scrubber (24401)

I. EMISSION LIMITS

Pollutant	Limit ^a	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Hydrogen Chloride (HCl)	12 ppmv or at least 99.4 percent reduction ²	Hourly	Emission stream from each HCl process vent in FGHCLMACT	SC V.1 & V.2	40 CFR 63.9000(a)
2. HCl	12 ppmv or at least 99.9 percent reduction ²	Hourly	Emission stream from each HCl storage tank in FGHCLMACT	SC V.1 & V.2	40 CFR 63.9000(a)
3. HCl	120 ppmv or at least 99 percent reduction ²	Hourly	Emission stream from each HCl transfer operation in FGHCLMACT	SC V.1, V.2, & V.3	40 CFR 63.9000(a)

^a The emission limits in SC I.1 through SC I.3 apply while producing liquid HCl product at a concentration of 30 weight percent or greater during normal operations in FGHCLMACT.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not produce liquid HCl product at a concentration of 30 weight percent or greater during normal operations in FGHCLMACT unless the leak detection and repair (LDAR) plan required by 40 CFR 63.9000 is implemented and maintained.² **(40 CFR 63.9000(a))**
2. The permittee shall not produce liquid HCl product at a concentration of 30 weight percent or greater during normal operations in FGHCLMACT unless the monitoring plan required by 40 CFR 63.9025 is implemented and maintained.² **(40 CFR 63.8, 40 CFR 63.9025)**

IV. DESIGN/EQUIPMENT PARAMETERS

Special Conditions IV.1, IV.2, and IV.3 apply while producing liquid HCl product at a concentration of 30 weight percent or greater during normal operations in FGHCLEMACT.

1. The permittee shall equip and maintain scrubber 24388 and scrubber 24401 with the equipment listed below.²
(40 CFR 63.9000(b))
 - a. For each scrubber, a device to monitor the liquid flow rate to the packed bed;
 - b. For each scrubber, a device to monitor the scrubber effluent pH, unless an alternative is approved pursuant to 40 CFR 63.8(f).
2. The permittee shall not produce liquid HCl product at a concentration of 30 weight percent or greater during normal operations in FGHCLEMACT unless scrubber 24388 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining the liquid flow rate to the packed bed and the scrubber effluent pH in the ranges identified in the monitoring plan as constituting satisfactory operation. Scrubber effluent pH monitoring is not required if an alternative is approved pursuant to 40 CFR 63.8(f).² **(40 CFR 63.9000(b))**
3. The permittee shall not load rail cars with liquid HCl product at a concentration of 30 weight percent or greater during normal operations in FGHCLEMACT unless scrubber 24401 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining the liquid flow rate to the packed bed and the scrubber effluent pH in the ranges identified in the monitoring plan as constituting satisfactory operation. Scrubber effluent pH monitoring is not required if an alternative is approved pursuant to 40 CFR 63.8(f).² **(40 CFR 63.9000(b))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Within 180 days after initial startup of production of liquid HCl product at a concentration of 30 weight percent or greater during normal operations in equipment in FGHCLEMACT, the permittee shall verify HCl emission rates from FGHCLEMACT, by testing at owner's expense, in accordance with 40 CFR Part 63, Subpart A and NNNNN. The permittee shall notify the AQD District Supervisor in writing of the intention to conduct a performance test, at least 60 calendar days before the testing is scheduled to begin, in accordance with 40 CFR 63.9045(d). Stack testing procedures and the location of stack testing ports shall be in accordance with the applicable federal Reference Methods, 40 CFR Part 63, Appendix A. No less than 30 days prior to testing, the permittee shall submit a complete plan to the AQD Technical Programs Unit and the District Office. The AQD must approve the final plan prior to testing. The permittee shall submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² **(40 CFR Part 63, Subpart NNNNN)**
2. The permittee shall conduct periodic performance tests while producing liquid HCl product at a concentration of 30 weight percent or greater during normal operations in equipment in FGHCLEMACT, as required in 40 CFR 63.9015. Advance notification and reporting of results shall be as required in SC V.1 and in 40 CFR Part 63, Subparts A and NNNNN.² **(40 CFR Part 63, Subparts A and NNNNN)**
3. For an emission stream from an HCl transfer operation in FGHCLEMACT that meets the requirements of 40 CFR 63.9020(c), the permittee may submit a design evaluation to the AQD in lieu of any performance test required by SC V.1 or V.2. The design evaluation will meet the requirements of 40 CFR 63.9020(c). The permittee shall submit the design evaluation to the AQD District Supervisor no later than the date by which the performance test is required to be complete.² **(40 CFR 63.9020(c))**
4. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. **(R 336.1213(3))**

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VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

Special Conditions VI.1 and VI.2 apply while producing liquid HCl at a concentration of 30 weight percent or greater during normal operations in FGHLMACT.

1. The permittee shall keep a record, in a satisfactory manner, of the time periods during which liquid HCl product at a concentration of 30 weight percent or greater during normal operations in FGHLMACT. The permittee shall keep the record on a daily basis.² **(40 CFR Part 63, Subparts A and NNNNN)**
2. The permittee shall monitor and record, in a satisfactory manner and on a daily basis, all of the operating parameters listed below:² **(40 CFR 63.9000(b), 40 CFR 63.9025)**
 - a. The daily average liquid flow rate to the packed bed;
 - b. The daily average scrubber effluent pH for scrubber 24388 and scrubber 24401, unless an alternative is approved pursuant to 40 CFR 63.8(f).

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. No later than 7 calendar days after startup of production of liquid HCl at concentrations of 30 weight percent or greater during normal operations in FGHLMACT, the permittee shall notify the AQD District Supervisor in writing of the startup date.² **(40 CFR Part 63, Subparts A and NNNNN)**
5. With each Notification of Compliance Status required for equipment in FGHLMACT, the permittee shall submit the following plans to the AQD District Supervisor:² **(40 CFR 63.9(h)(3))**
 - a. An updated LDAR plan for FGHLMACT, for comment, as required by 40 CFR 63.9000(a).
 - b. An updated monitoring plan for FGHLMACT, as required by 40 CFR 63.9025.

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENTS

1. While producing liquid HCl product at a concentration of 30 weight percent or greater during normal operations in equipment in FGHLMACT the permittee shall comply with all provisions of the National Emissions Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and NNNNN, as they apply to FGHLMACT.² **(40 CFR Part 63, Subparts A and NNNNN)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**FGHAP2012A2A
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

This flexible group consists of all the listed emission units. The listed emission units are the emission units at the facility as of the effective date of Permit to Install No. 91-07C (November 19, 2012) that emit hazardous air pollutants and emission units that support HAP emitting emission units, such as boilers and the InEnTec plasma enhanced melter (EU2515-01). This flexible group will apply to all the listed emission units even if they are reconstructed as defined in the Michigan Rules (R 336.1118), modified, renamed, or re-permitted. This flexible group was established for the purposes of keeping records for the actual to projected actual PSD applicability determination.

The most recent PTI for this emission unit is PTI No. 91-07E.

Emission Units: EU106-01, EU106-02, EU106-05, EU106-06, EU106-07, EU106-12, EU108-01, EU108-02, EU109-01, EU109-02, EU109-04, EU109-05, EU109-06, EU109-07, EU109-09, EU207-04, EU207-13, EU207-14, EU207-15, EU207-16, EU207-17, EU207-18, EU207-19, EU212-01, EU212-02, EU212-03, EU212-04, EU212-05, EU212-06, EU212-07, EU212-08, EU212-10, EU212-11, EU212-12, EU2404-01, EU2409-01, EU2409-02, EU2515-01, EU2701-01, EU2703-01, EU2703-02, EU2703-03, EU2703-04, EU2703-05, EU2703-06, EU2703-07, EU2703-08, EU2703-09, EU2703-10, EU2703-12, EU2703-13, EU2703-14, EU2901-02, EU2901-04, EU2901-05, EU2901-14, EU2901-15, EU2901-16, EU303-01, EU303-02, EU303-03, EU303-04, EU303-06, EU303-09, EU303-10, EU303-11, EU303-13, EU303-15, EU303-16, EU303-17, EU303-18, EU303-19, EU304-01, EU3101-01, EU3102-02, EU3102-05, EU3102-09, EU3104-06, EU3104-08, EU3104-09, EU3104-14, EU3111-01, EU321-01, EU321-02, EU321-05, EU321-07, EU321-08, EU321-10, EU321-11, EU321-13, EU321-14, EU321-16, EU321-17, EU322-01, EU322-02, EU322-03, EU322-04, EU322-05, EU322-09, EU322-10, EU322-11, EU324-01, EU324-02, EU324-03, EU324-05, EU324-06, EU325-04, EU340-01, EU340-03, EU501-01, EU501-02, EU501-03, EU501-11, EU501-12, EU501-13, EU501-15, EU501-17, EU501-24, EU501-32, EU501-34, EU501-40, EU501-49, EU502-01, EU505-01, EU505-04, EU505-05, EU505-11, EU508-01, EU508-03, EU515-01, EU601-01, EU602-01, EU604-10, EUSITE-05, EUSITE-08

Flexible Group ID: FGSITESCRUBBERS, FGTHROX

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

NA

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. ~~(R 336.1213(3)(b)(ii))~~

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. ~~(R 336.1213(3)(b)(ii))~~

- ~~1. The permittee shall calculate and keep records of the annual emissions of VOC and NOx from FGHP2012A2A described in Appendix 7, Section 7.13, in tons per calendar year. Calculations and record keeping shall begin upon issuance of Permit to Install No. 91-07C (November 19, 2012) and shall continue for ten (10) years.² (R 336.2818, 40 CFR 52.21(r)(6)(e)(iii))~~

See Appendix 7

VII. REPORTING

- ~~1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))~~
- ~~2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))~~
- ~~3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(e))~~
- ~~4. The permittee shall submit records of the annual emissions of VOC and NOx from FGHP2012A2A described in Appendix 7, in tons per calendar year, to the AQD Permit Section Supervisor within 60 days following the end of each reporting year if both the following occur:
 - ~~a. The calendar year actual emissions of VOC and NOx exceed the baseline actual emissions (BAE) listed in Appendix 7 by a significant amount, as defined in R 336.2801(qq)(i)(B) and (E), and~~
 - ~~b. The calendar year actual emissions differ from the pre-construction projections listed in Appendix 7, Section 7.13.~~The report shall contain the name, address, and telephone number of the facility (major stationary source); the annual emissions as calculated pursuant to SC VI.1, and any other information the owner or operator wishes to include (i.e., an explanation why emissions differ from the pre-construction projections).² (R 336.2818, 40 CFR 52.21(r)(6)(e)(iii))~~

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FGEMERGENCIRICE<500HP
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Each existing or new compression ignition emergency stationary reciprocating internal combustion engines (RICE) located at a major source of HAP emissions as identified within 40 CFR Part 63, Subpart ZZZZ, 63.6590(a)(1), less than or equal to 500 brake hp, and is exempt from the requirements of Rule 201 pursuant to Rules 282(2)(b) or 285(2)(g).

Emission Units: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. An affected source that meets any of the criteria in paragraphs 40 CFR 63.6590(c)(1) through (7) must meet the requirements of this part by meeting the requirements of 40 CFR Part 60, Subpart IIII, for compression ignition engines. No further requirements apply for such engines under this part. **(40 CFR 63.6590(c))**
2. The permittee shall limit operation of each stationary emergency RICE with a site rating of less than or equal to 500 brake HP or greater than 500 brake HP as follows:
 - a. There is no time limit on the use of emergency stationary RICE in emergency situations. **(40 CFR 63.6640(f))**
 - b. Emergency stationary RICE may be operated for the purposes of maintenance checks and readiness testing up to 100 hours per year. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year. **(40 CFR 63.6640(f))**
 - c. Emergency stationary RICE may be operated up to 50 hours per year in non-emergency situations, but those hours are to be counted towards the 100 hours per year for maintenance and readiness testing. These 50 hours per year for non-emergency situations cannot be used for peak-shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. Up to 15 hours per year can be used as part of a demand response program. **(40 CFR 63.6640(f))**
3. The permittee shall operate and maintain existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP according to the manufacturer's emission-related operation and maintenance instructions or a plan developed by the facility that provides for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 63.6625(e), 40 CFR 63.6640(a), Table 6(9)(a))**
4. For existing emergency CI RICE with a site rating of less than or equal to 500 brake HP, the permittee shall inspect the air cleaner every 1000 hours of operation or annually, whichever comes first. **(40 CFR 63.6603(a) and Table 2d (4)(b))**

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5. For existing emergency CI RICE with a site rating of less than or equal to 500 brake HP, the permittee shall change the oil and filter every 500 hours of operation or annually, whichever comes first. In lieu of changing the oil and filter, the permittee may implement an oil analysis program to have the oil analyzed at the same frequency specified for changing the oil as described in 40 CFR 63.6625(i). **(40 CFR 63.6603(a) and Table 2d (4)(a) and (5)(a))**
6. If implementing an oil analysis program and if the analytical results of the oil analysis program for emergency stationary CI engines with a site rating of less than or equal to 500 brake HP indicate any of the following limits are exceeded, the permittee shall change the oil within 2 days of receiving the results of the analysis. If the engine is not in operation when the results of the analysis are received, the permittee shall change the oil within 2 days or before commencing operation, whichever is later. **(40 CFR 63.6625(i))**
 - a. Total Base Number is less than 30 percent of the Total Base Number of the oil when new;
 - b. Viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new;
 - c. Percent water content (by volume) is greater than 0.5.
7. For existing emergency CI RICE with a site rating of less than or equal to 500 brake HP, the permittee shall inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. **(40 CFR 63.6603(a) and Table 2d (4)(c) & (5)(c))**
8. If an existing emergency CI RICE with a site rating of less than or equal to 500 brake HP is operating during an emergency and it is not possible to shut down to perform the management practice requirements (change oil and filter, inspect air cleaner, and inspect hoses and belts) on the required schedule, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice shall be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. **(40 CFR 63.6603(a) and Table 2d footnote 2)**
9. The permittee shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission standards apply. **(40 CFR 63.6625(h), 40 CFR 63.6640(a))**
10. Beginning January 1, 2015, an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in 40 CFR 63.6640(f)(4)(ii), the permittee must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted. **(40 CFR 63.6604(b))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. For existing emergency CI RICE with a site rating of 500 brake HP or less, the permittee shall install a nonresettable hour meter. **(40 CFR 63.6625(f))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii), 40 CFR 63.9360)**

1. If implementing an oil analysis program for emergency stationary CI engines with a site rating of less than or equal to 500 brake HP, the permittee shall at a minimum analyze the oil for the following three parameters: **(40 CFR 63.6625(i))**
 - a. Total Base Number;
 - b. Viscosity;
 - c. Percent water content (by volume).

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VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii), 40 CFR 63.9360)**

1. The permittee shall maintain a copy of each notification and report submitted, including supporting documentation. **(40 CFR 63.6655(a)(1))**
2. The permittee shall maintain a record of the occurrence and duration of each malfunction of operation (i.e. process equipment) or the air pollution control and monitoring equipment. **(40 CFR 63.6655(a)(2))**
3. The permittee shall maintain a record of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. **(40 CFR 63.6655(a)(5))**
4. The permittee shall maintain records of the maintenance conducted on the stationary RICE in order to demonstrate that the stationary RICE was operated and maintained according to the facility maintenance plan. **(40 CFR 63.6655(e)(2))**
5. For existing emergency stationary RICE that do not meet the emission standards applicable to nonemergency stationary RICE, the permittee shall maintain records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The records must document how many hours are spent for emergency operation; including what classified the operation as emergency; and how many hours are spent for nonemergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response. **(40 CFR 63.6655(f))**
6. If implementing an oil analysis program, the permittee shall keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. **(40 CFR 63.6625(i) and (j))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGPEM&BLR
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Plasma enhanced melter (PEM) and 25.1 MMBTU/hour boiler.

The most recent PTI for this emission unit is 175-09A.

Emission Units: EU2515-01, EUBOILER2515

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	35.0 tpy ²	12-month rolling time period as determined at the end of each calendar month	FGPEM&BLR	SC-V.1	R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21(c)&(d)
2. CO	30.0 tpy ²	12-month rolling time period as determined at the end of each calendar month	FGPEM&BLR	SC-V.1	R 336.1205(3)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not route more than 9,540 MMBTU of synthesis gas to FGTHROX, per 12-month rolling time period as determined at the end of each calendar month.² (R 336.1205, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUBOILER2515 while using synthesis gas unless the following equipment associated with EU2515-01 (i.e. Plasma-Enhanced Melter) is installed, maintained, and operated in a satisfactory manner: partial quench column (Q-0630), baghouse (F-0640), HCl production system, and a synthesis gas polishing system including a recirculating scrubber (S-0650), a carbon filter (F-0680), and a high efficiency filter (F-0683).² (R 336.1201, R 336.1225, R 336.1702, R 336.1901, R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

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VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. ~~(R 336.1213(3)(b)(ii))~~

- ~~1. The permittee shall keep, in a satisfactory manner, daily, monthly and 12-month rolling time period records of the quantity of synthesis gas in MMBTU sent to FGTHROX. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1201, R 336.2803, R 336.2804, 40 CFR 52.21(c)&(d))~~
- ~~2. The permittee shall keep, in a satisfactory manner, calculations of the NOx and CO emission rates for each month and the 12-month rolling time period, as determined at the end of each calendar month, for FGPEM&BLR. All records shall be kept on file at the facility and made available to the Department upon request.² (R 336.1201, R 336.2803, R 336.2804, 40 CFR 52.21(c)&(d))~~
- ~~3. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1201(3))~~

VII. REPORTING

- ~~1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))~~
- ~~2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))~~
- ~~3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))~~

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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**FGBOILERMACT-NG
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Requirements for existing Gas 1 (Natural Gas only) for existing Boilers and Process Heaters at major sources of Hazardous Air Pollutants per 40 CFR Part 63, Subpart DDDDD. These existing boilers or process heaters must comply with this subpart no later than January 31, 2016, except as provided in 40 CFR 63.6(i).

Emission Units: EU303-04, EU325-04, EU501-40, EU508-02, EU508-03, EU604-10,

Flexible Group ID: FG432BOILERS

The collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within the units designed to burn gas 1 fuel subcategory as defined in 40 CFR 63.7575. At the time of permit renewal:

Less than 5 MMBTU/hr	EU508-02, EU604-10
Equal to or greater than 5 MMBTU/hr and less than 10 MMBTU/hr	EU325-04, 501-40
Equal to or greater than 10 MMBTU/hr	EU303-04, EU508-03, EUBOILER12, EUBOILER13, EUBOILER14

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall only burn natural gas as defined in 40 CFR 63.7575. **(40 CFR 63.7499(I))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee must meet the tune-up and Energy Assessment work practice standards for each applicable boiler or process heater at the source. **(40 CFR 63.7500(a)(1), 40 CFR Part 63, Subpart DDDDD, Table 3, Nos. 1-4)**
2. The permittee must operate and maintain affected sources in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. **(40 CFR 63.7500(a)(3))**
3. The permittee may obtain approval from the Administrator to use an alternative to the work practice standards noted in SC III.1 and/or SC III.2. **(40 CFR 63.7500(b))**
4. The permittee must:
 - a. Complete a tune-up every 5 years (61 months) for boilers/process heaters less than or equal to 5 million BTU per hour; **(40 CFR 63.7500(e), 40 CFR 63.7515(d))**
 - b. Complete a tune-up every 2 years (25 months) for boilers greater than 5 million BTU per hour and less than 10 million BTU per hour; **(40 CFR 63.7500(e), 40 CFR 63.7515(d))**

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- c. Complete a tune-up annually (13 months) for boilers greater than 10 million BTU per hour; **(40 CFR 63.7540(a)(10), 40 CFR 63.7515(d))**
 - d. Conduct the tune-up within 30 calendar days of startup, if the unit is not operating on the required date for a tune-up; **(40 CFR 63.7540(a)(13))**
 - e. Follow the procedures described in SC IX 4.a through 4.f for all initial and subsequent tune ups; **(40 CFR 63.7540(a)(10), 40 CFR Part 63, Subpart DDDDD, Table 3)**
 - f. Complete the Initial tune ups on all affected units no later than January 31, 2016, except as provided in 40 CFR 63.7510(j) and 40 CFR 63.7540(a)(13). **(40 CFR 63.7510(j), 40 CFR 63.7540(a)(13))**
5. The permittee must complete the one-time energy assessment no later than January 31, 2016. **(40 CFR 63.7510(e))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee must keep a copy of each notification and report submitted to comply with 40 CFR Part 63, Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that the permittee submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv). **(40 CFR 63.7555(a)(1))**
2. The permittee must keep each record on site, or they must be accessible from on-site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The permittee can keep the records off site for the remaining 3 years. **(40 CFR 63.7560(a), (b), and (c))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee must submit a Notification of Compliance Status that includes each boiler or process heater before the close of business on the 60th day following the completion of the initial compliance demonstrations for all boiler or process heaters at the facility. The Notification of Compliance Status report must contain the following information and must be submitted within 60 days of January 31, 2016. **(40 CFR 63.7545(e))**
 - a. A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a description of the add-on controls used on the unit to comply with 40 CFR Part 63, Subpart DDDDD, description of the fuel(s) burned. **(40 CFR 63.7545(e)(1))**
 - b. Certification(s) of compliance, as applicable, and signed by a responsible official: **(40 CFR 63.7545(e)(8))**
 - i. "This facility completed the required initial tune-up for all of the boilers and process heaters covered by 40 CFR Part 63, Subpart DDDDD at this site according to the procedures in 40 CFR 63.7540(a)(10)(i) through (vi)"; **(40 CFR 63.7545(e)(8)(i))**

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- ii. "This facility has had an energy assessment performed according to 40 CFR 63.7530(e)." **(40 CFR 63.7545(e)(8)(ii))**
5. Unless the EPA Administrator has approved a different schedule for submission of reports under 40 CFR 63.10(a), the permittee must submit each report, according to paragraph (h) of 40 CFR 63.7550, stated in SC VII.7, by the date in Table 9 of 40 CFR Part 63, Subpart DDDDD and according to the requirements in paragraphs (b)(1) through (4) of 40 CFR 63.7550, as listed below. For units that are subject only to a requirement to conduct an annual tune-up according to 40 CFR 63.7540(a)(10), stated in SC IX.4.a, biennial tune-up according to 40 CFR 63.7540(a)(11), stated in SC IX.4.b, or 5-year tune-up according to 40 CFR 63.7540(a)(12), stated in SC IX.4.c, and not subject to emission limits or operating limits, the permittee may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of 40 CFR 63.7550, as listed below, instead of a semi-annual compliance report: **(40 CFR 63.7550(b))**
- a. The first semiannual compliance report must cover the period beginning on January 31, 2016 and ending on December 31. When submitting an annual, biennial, or 5-year compliance report, the first compliance report must cover the period beginning on January 31, 2016 and ending on December 31 within 1, 2, or 5 years, as applicable, after the compliance date that is specified in 40 CFR 63.7495; **(40 CFR 63.7550(b)(1))**
- b. The first semiannual compliance report must be postmarked or submitted no later than September 15 or March 15, whichever date is the first date following the end of the first calendar half after January 31, 2016. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than March 15; **(40 CFR 63.7550(b)(2), 40 CFR 63.7550(b)(5))**
- c. Each subsequent semiannual compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31; **(40 CFR 63.7550(b)(3))**
- d. Each subsequent semiannual compliance report must be postmarked or submitted no later than September 15 or March 15, whichever date is the first date following the end of the semiannual reporting period. Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than March 15. **(40 CFR 63.7550(b)(4), 40 CFR 63.7550(b)(5))**
6. The permittee must include the following information in the compliance report: **(40 CFR 63.7550(c), 40 CFR 63.7550(c)(1))**
- a. Company and Facility name and address; **(40 CFR 63.7550(c)(5)(i))**
- b. Process unit information, emissions limitations, and operating parameter limitations; **(40 CFR 63.7550(c)(5)(ii))**
- c. Date of report and beginning and ending dates of the reporting period; **(40 CFR 63.7550(c)(5)(iii))**
- d. Include the date of the most recent tune-up for each unit. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown; **(40 CFR 63.7550(c)(5)(xiv))**
- e. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report. **(40 CFR 63.7550(c)(5)(xvii))**
7. The permittee must submit the reports according to the procedures specified in paragraph (h)(3) of 40 CFR 63.7550, as listed below; **(40 CFR 63.7550(h))**
- a. The permittee must submit all reports required by Table 9 of 40 CFR Part 63, Subpart DDDDD electronically to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). CEDRI can be accessed through the EPA's CDX. The permittee must use the appropriate electronic report in CEDRI for 40 CFR Part 63, Subpart DDDDD. Instead of using the electronic report in CEDRI for 40 CFR Part 63, Subpart DDDDD, the permittee may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (<http://www.epa.gov/ttn/chief/cedri/index.html>), once the XML schema is available. If the reporting form specific to 40 CFR Part 63, Subpart DDDDD is not available in CEDRI at the time that the report is due, the permittee must submit the report to the Administrator at the appropriate address listed in 40 CFR 63.13. The permittee must begin submitting reports via CEDRI no later than 90-days after the form becomes available in CEDRI. **(40 CFR 63.7550(h)(3))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

General Business

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The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The permittee must comply with 40 CFR Part 63, Subpart DDDDD no later than January 31, 2016, for existing boilers and process heaters, unless an extension has been granted per 40 CFR 63.6(i). **(40 CFR 63.7495(b))**
2. The permittee must be in compliance with the applicable work practice standards. **(40 CFR 63.7505(a))**
3. For affected sources (as defined in 40 CFR 63.7490) that have not operated since the previous compliance demonstration and more than one year has passed since the previous compliance demonstration, the permittee must complete a subsequent tune-up within 30 days of startup by following the procedures described in SC IX 4.a through 4.f. **(40 CFR 63.7515(g))**
4. The permittee must demonstrate continuous compliance with the tune-up requirement by completing the following: **(40 CFR 63.7540(a))**
 - a. Inspect the burner, and clean or replace any components of the burner as necessary (the permittee may perform the burner inspection any time prior to tune-up or delay the burner inspection until the next scheduled unit shutdown). At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment. **(40 CFR 63.7540(a)(10)(i))**
 - b. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available. **(40 CFR 63.7540(a)(10)(ii))**
 - c. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection. **(40 CFR 63.7540(a)(10)(iii))**
 - d. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOx requirement to which the unit is subject. **(40 CFR 63.7540(a)(10)(iv))**
 - e. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. **(40 CFR 63.7540(a)(10)(v))**
 - f. Maintain on-site and submit, if requested by the Administrator, the most recent periodic report containing the information as listed below: **(40 CFR 63.7540(a)(10)(vi))**
 - i. The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater; **(40 CFR 63.7540(a)(10)(vi)(A))**
 - ii. A description of any corrective actions taken as a part of the tune-up; **(40 CFR 63.7540(a)(10)(vi)(B))**
 - iii. The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit. **(40 CFR 63.7540(a)(10)(vi)(C))**
5. If the boiler or process heater has a heat input capacity of less than or equal to 5 million BTU per hour, the permittee may delay the burner inspection specified in SC IX 4.a until the next scheduled or unscheduled unit shutdown, but the permittee must inspect each burner at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, set the

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oxygen level no lower than the oxygen concentration measured during the most recent tune-up.
(40 CFR 63.7540(a)(12))

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FGMONMACT
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

These conditions apply to miscellaneous organic chemical manufacturing process units (MCPU) that are located at, or are part of, a major source as defined in section 112(a) of the Clean Air Act and that meet all the criteria specified in 40 CFR Part 63, Subpart FFFF (40 CFR 63.2435). Specified processes are further defined in 40 CFR 63.2440. For the purpose of the emission units listed below, several emission units may be associated with one MCPU or multiple MCPUs depending upon the products manufactured. The type of products manufactured within an emission unit will also influence whether or not the entire emission unit or a portion of the emission unit is subject to 40 CFR Part 63, Subpart FFFF (MON).

Emission Units: EU108-01, EU109-02, EU109-04, EU207-03, EU207-13, EU207-14, EU207-15, EU207-16, EU207-17, EU207-18, EU207-19, EU212-01, EU212-02, EU212-03, EU212-05, EU212-12, EU2504-14, EU2504-15, EU2504-16, EU2504-17, EU2504-18, EU2504-19, EU2505-06, EU2505-07, EU2703-01, EU2703-03, EU2703-08, EU2703-09, EU2703-13, EU2901-16, EU303-01, EU303-02, EU303-03, EU303-06, EU303-09, EU303-15, EU303-16, EU303-19, EU304-02, EU311-01, EU321-01, EU321-02, EU321-11, EU321-12, EU322-01, EU322-02, EU322-03, EU322-04, EU322-11, EU324-01, EU324-08, EU324-18, EU340-01, EU340-03, EU501-01, EU501-02, EU501-12, EU501-49, EU502-04, EU505-01, EU505-04, EU508-01, EU515-01, EU601-01, EU602-07, EU604-08, EU800-01, EURULE290

Flexible Group ID: FGTHROX

POLLUTION CONTROL EQUIPMENT

[See each Emission Unit](#)NA

I. EMISSION LIMITS

1. The permittee shall comply with the emission limits and work practice standards in Tables 1 through ~~7~~5 of Subpart FFFF at all times, ~~except during periods of startup, shutdown, and malfunction, and you must meet the requirements specified in 40 CFR 63.2455 through 63.2490~~ (or the alternative emission limits specified in 40 CFR 63.2495, 40 CFR 63.2500, or 40 CFR 63.2505), except as specified in 40 CFR 63.2450 (b) through (sv) of this section. You must meet the notification, reporting, and recordkeeping requirements specified in 40 CFR 63.2515, 63.2520, and 63.2525. **(40 CFR 63.2450(a))**
2. The permittee shall comply with each applicable emission limit in Table 1 of Subpart FFFF for continuous process vents. **(40 CFR 63.2455(a))**
3. The permittee shall comply with each applicable emission limit in Table 2 of Subpart FFFF for batch process vents. **(40 CFR 63.2460(a))**
4. The permittee shall comply with each applicable emission limit in Table 3 of Subpart FFFF for process vents that emit hydrogen halide and halogen HAP or HAP metals. **(40 CFR 63.2465(a))**
5. The permittee shall comply with each applicable emission limit in Table 4 of Subpart FFFF for storage tanks. **(40 CFR 63.2470(a))**
6. ~~The emission limits in Table 4 to Subpart FFFF for control devices used to control emissions from storage tanks do not apply during periods of planned routine maintenance. (40 CFR 63.2470(d))~~ Except for storage tanks in ethylene oxide service as defined in 40 CFR 63.2550, the emission limits in Table 4 to Subpart FFFF for control devices used to control emissions from storage tanks do not apply during periods of planned routine maintenance. (40 CFR 63.2470(b), 40 CFR 63.2470(d))

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6-7. As an alternative to the emission limits specified in Table 4 to Subpart FFFF, the permittee may elect to implement vapor balancing in accordance with 40 CFR 63.1253(f), except as specified in 40 CFR 63.2470(e)(1) through (3). The permittee may comply with the vapor balancing alternative in 40 CFR 63.1253(f) when the storage tank is filled from a barge. All requirements for tank trucks and railcars specified in 40 CFR 63.1253(f) also apply to barges, except when 40 CFR 63.1253(f)(2) refers to pressure testing certifications, the requirements in 40 CFR 61.304(f) apply for barges. (40 CFR 63.2470(e))

7-8. For each surge control vessel or bottoms receiver that meets the capacity and vapor pressure thresholds for a Group 1 storage tank, the permittee shall comply with the emission limits specified in Table 4 of Subpart FFFF. **(40 CFR 63.2450(r))**

8-9. The permittee shall comply with each applicable emission limit in Table 5 of Subpart FFFF for transfer racks. **(40 CFR 63.2475(a))**

9-10. The permittee may elect to comply with the pollution prevention alternative requirements specified below in lieu of the emission limitations and work practice standards contained in Tables 1 through 7 to Subpart FFFF for any MCPU for which initial startup occurred before April 4, 2002. The permittee may comply with the requirements of 40 CFR 63.2495(a)(1) for a series of processes, including situations where multiple processes are merged, if the permittee demonstrates to the satisfaction of the Administrator that the multiple processes were merged after the baseline period into an existing process or processes: **(40 CFR 63.2495(a))**

- a. The permittee must reduce the production-indexed HAP consumption factor (HAP factor) by at least 65% from a 3-year average baseline beginning no earlier than the 1994 through 1996 calendar years. For any reduction in the HAP factor achieved by reducing HAP that are also volatile organic compounds (VOC), the permittee must demonstrate an equivalent reduction in the production-indexed VOC consumption factor (VOC factor) on a mass basis. For any reduction in the HAP factor achieved by reducing a HAP that is not a VOC, the permittee may not increase the VOC factor. **(40 CFR 63.2495(a)(1))**
- b. Any MCPU for which the permittee seeks to comply by using the pollution prevention alternative must begin with the same starting material(s) and end with the same product(s). The permittee may not comply by eliminating any steps of a process by transferring the step offsite (to another manufacturing location). The permittee may also not merge a solvent recovery step conducted offsite to onsite and as part of an existing process as a method of reducing consumption. **(40 CFR 63.2495(a)(2))**
- c. The permittee may comply with the requirements of paragraph (a) above for a series of processes, including situations where multiple processes are merged, if the permittee demonstrates to the satisfaction of the Administrator that the multiple processes were merged after the baseline period into an existing process or processes. **(40 CFR 63.2495(a)(3))**
- d. The permittee must comply with the emission limitations and work practice standards contained in Tables 1 through 7 of Subpart FFFF for all HAP that are generated in the MCPU and that are not included in consumption, as defined in 40 CFR 63.2550. If any vent stream routed to the combustion control is a halogenated vent stream, as defined in 40 CFR 63.2550, then hydrogen halides that are generated as a result of combustion control must be controlled according to the requirements of 40 CFR 63.994 and the requirements referenced therein. The permittee may not merge nondedicated formulation or nondedicated solvent recovery processes with any other processes. **(40 CFR 63.2495(b))**
- e. To demonstrate initial compliance with the pollution prevention alternative requirements (40 CFR 63.2495(a)), the permittee must prepare a demonstration summary in accordance with 40 CFR 63.2495(c)(1) and calculate baseline and target annual HAP and VOC factors in accordance with 40 CFR 63.2495(c)(2) and (3). **(40 CFR 63.2495(c))**

40-11. For an existing source, the permittee may elect to comply with the percent reduction emission limitations in Tables 1, 2, 4, 5, and 7 to Subpart FFFF by complying with the emissions averaging provisions specified in 40 CFR 63.150, except as specified below: **(40 CFR 63.2500(a))**

- a. The batch process vents in an MCPU collectively are considered one individual emission point for the purposes of emissions averaging, except that only individual batch process vents must be excluded to meet the requirements of 40 CFR 63.150(d)(5). **(40 CFR 63.2500(b))**
- b. References in 40 CFR 63.150 to 40 CFR 63.112 through 40 CFR 63.130 mean the corresponding requirements in 40 CFR 63.2450 through 40 CFR 63.2490, including applicable monitoring, recordkeeping, and reporting. **(40 CFR 63.2500(c))**

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- c. References to "periodic reports" in 40 CFR 63.150 mean "compliance report" for the purposes of Subpart FFFF. **(40 CFR 63.2500(d))**
- d. For batch process vents, estimate uncontrolled emissions for a standard batch using the procedures in 40 CFR 63.1257(d)(2)(i) and (ii) instead of the procedures in 40 CFR 63.150(g)(2). Multiply the calculated emissions per batch by the number of batches per month when calculating the monthly emissions for use in calculating debits and credits. **(40 CFR 63.2500(e))**
- e. References to "storage vessels" in 40 CFR 63.150 mean "storage tank" as defined in 40 CFR 63.2550 for the purposes of Subpart FFFF. **(40 CFR 63.2500(f))**

~~4.12.~~ As an alternative to complying with the emission limits and work practice standards for process vents and storage tanks in Tables 1 through 4 to Subpart FFFF and the requirements in 40 CFR 63.2455 through 40 CFR 63.2470, the permittee may comply with the emission limits below and demonstrate compliance in accordance with the requirements in 40 CFR 63.2505(b). **(40 CFR 63.2505)**

- a. The permittee must route vent streams through a closed-vent system to a control device that reduces HAP emissions as specified in either paragraph below: **(40 CFR 63.2505(a)(1))**
 - i. If the permittee uses a combustion control device, it must reduce HAP emissions to an outlet TOC concentration of 20 parts per million by volume (ppmv) or less and to an outlet concentration of hydrogen halide and halogen HAP of 20 ppmv or less, or as an alternative, if the permittee controls halogenated vent streams emitted from a combustion device followed by a scrubber, reduce the hydrogen halide and halogen HAP generated in the combustion device by greater than or equal to 95% by weight in the scrubber. **(40 CFR 63.2505(a)(1)(i))**
 - ii. If the permittee uses a noncombustion control device(s), it must reduce HAP emissions to an outlet total organic HAP concentration of 50 ppmv or less, and an outlet concentration of hydrogen halide and halogen HAP of 50 ppmv or less. **(40 CFR 63.2505(a)(1)(ii))**
- b. Any Group 1 process vents within a process that are not controlled according to this alternative standard must be controlled according to the emission limits in Tables 1 through 3 to Subpart FFFF. **(40 CFR 63.2505(a)(2))**

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall comply with the work practice standards in Tables 1 through 7 of Subpart FFFF at all times, ~~except during periods of startup, shutdown, and malfunction, and comply with~~ and you must meet the requirements specified in 40 CFR 63.2495 through 40 CFR 63.2497 (or the alternative means of compliance in 40 CFR 63.2495, 40 CFR 63.2500, or 40 CFR 63.2505), except as specified in 40 CFR 63.2450 (b) through (sv). You must meet the notification, reporting, and recordkeeping requirements specified in 40 CFR 63.2515, 63.2520, and 63.2525. **(40 CFR 63.2450(a))**
2. When organic HAP emissions from different emission types (e.g., continuous process vents, batch process vents, storage tanks, transfer operations, and waste management units) are combined, the permittee shall comply with the requirements of either 40 CFR 63.2450(c)(1) or 40 CFR 63.2450(c)(2). **(40 CFR 63.2450(c))**
3. The permittee shall not use a flare to control halogenated vent streams or hydrogen halide and halogen HAP emissions. **(40 CFR 63.2450(o))**
- ~~4. Opening a safety device, as defined in 40 CFR 63.2550, is allowed at any time conditions require it to avoid unsafe conditions.~~ **(40 CFR 63.2450(p))**
- ~~5.4.~~ For each surge control vessel or bottoms receiver that meets the capacity and vapor pressure thresholds for a Group 1 storage tank, the permittee shall comply with the work practice standards specified in Table 4 of Subpart FFFF. For each surge control vessel and bottoms receiver in ethylene oxide service as defined in 40 CFR 63.2550, you must also meet the applicable process vent requirements specified in 40 CFR 63.2492 and 63.2493(a) through (c). **(40 CFR 63.2450(r))**

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- 6.5. For the purposes of determining group status for continuous process vents, batch process vents, and storage tanks in 40 CFR 63.2455, 40 CFR 63.2460, and 40 CFR 63.2470, the permittee shall consider hydrazine to be an organic HAP. **(40 CFR 63.2450(s))**
- 7.6. Periods of planned routine maintenance of each control device used to control emissions from storage tanks, during which the control device does not meet the emission limit specified in Table 4 to Subpart FFFF, must not exceed 240 hours per year (hr/yr). The permittee may submit an application to the Administrator requesting an extension of this time limit to a total of 360 hr/yr. The application must explain why the extension is needed, it must indicate that no material will be added to the storage tank between the time the 240-hr limit is exceeded and the control device is again operational, and it must be submitted at least 60 days before the 240-hr limit will be exceeded. **(40 CFR 63.2470(d))**
- 8.7. The permittee must comply with each work practice standard in Table 5 to Subpart FFFF that applies to transfer racks, and the permittee must meet each applicable requirement in 40 CFR 63.2475(b) and (c). When the term "high throughput transfer rack" is used in 40 CFR Part 63, Subpart SS, the term "Group 1 transfer rack," as defined in 40 CFR 63.2550, applies for the purposes of Subpart FFFF. **(40 CFR 63.2475)**

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The requirements specified in 40 CFR 63.2450 (g)(1) through (5) apply instead of or in addition to the requirements specified in 40 CFR Part 63, Subpart SS. (40 CFR 63.2450(g))
2. To demonstrate compliance with the emission limit in Table 3 to Subpart FFFF for HAP metals at a new source, the permittee must conduct an initial performance test of each control device that is used to comply with the emission limit for HAP metals specified in Table 3 to Subpart FFFF. The permittee must conduct the performance test according to the procedures in 40 CFR 63.997. The permittee must use Method 29 of Appendix A of 40 CFR Part 60 to determine the HAP metals at the inlet and outlet of each control device, or use Method 5 of Appendix A of 40 CFR Part 60 to determine the total particulate matter (PM) at the inlet and outlet of each control device. The permittee has demonstrated initial compliance if the overall reduction of either HAP metals or total PM from the process is greater than or equal to 97% by weight. (40 CFR 63.2465(d)(2))
3. For storage tanks, you must measure the concentration of ethylene oxide of the fluid stored in the storage tanks. (40 CFR 63.2492(b))
4. For each batch process vent or continuous process vent, you must measure the flow rate and concentration of ethylene oxide of each process vent specified in 40 CFR 63.2492(a). (40 CFR 63.2492(a))
5. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall comply with the recordkeeping requirements specified in 40 CFR 63.2515, 40 CFR 63.2520, and 40 CFR 63.2525. (40 CFR 63.2450(a))
2. Each continuous emissions monitoring system (CEMS) must be installed, operated, and maintained according to the requirements in 40 CFR 63.8 and 40 CFR 63.2450(j)(1) through (5). (40 CFR 63.2450(j))
3. The provisions in 40 CFR 63.2450(k)(1) through (6) of this section apply in addition to the requirements for continuous parameter monitoring system (CPMS) in 40 CFR Part 63, Subpart SS. (40 CFR 63.2450(k))
4. 40 CFR 63.152(f)(7)(ii) through (iv) and 40 CFR 63.998(b)(2)(iii) and (b)(6)(i)(A), which apply to the exclusion of monitoring data collected during periods of startup, shutdown, and malfunction from daily averages, do not apply for the purposes of 40 CFR Part 63, Subpart FFFF. (40 CFR 63.2450(l))
5. To demonstrate compliance with the emission limit in Table 3 to Subpart FFFF for HAP metals at a new source, the permittee must comply with the monitoring requirements specified in 40 CFR 63.1366(b)(1)(xi) for each fabric filter used to control HAP metals. (40 CFR 63.2465(d)(3))
6. The permittee must keep records of HAP and VOC consumption, production, and the rolling annual HAP and VOC factors for each MCPU for which the permittee is complying with 40 CFR 63.2495(a), the pollution prevention standard. (40 CFR 63.2495(e))
7. The permittee shall keep each applicable record required by 40 CFR Part 63, Subpart A and in referenced subparts of 40 CFR Part 63, F, G, SS, UU, WW, and GGG and in referenced Subpart F of 40 CFR Part 63. (40 CFR 63.2525(a))
8. The permittee shall keep records of each operating scenario as specified below:

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- a. A description of the process and the type of process equipment used. **(40 CFR 63.2525(b)(1))**
 - b. An identification of related process vents, including their associated emissions episodes if not complying with the alternative standard in 40 CFR 63.2505; wastewater point of determination (POD); storage tanks; and transfer racks. **(40 CFR 63.2525(b)(2))**
 - c. The applicable control requirements of Subpart FFFF, including the level of required control, and for vents, the level of control for each vent. **(40 CFR 63.2525(b)(3))**
 - d. The control device or treatment process used, as applicable, including a description of operating and/or testing conditions for any associated control device. **(40 CFR 63.2525(b)(4))**
 - e. The process vents, wastewater POD, transfer racks, and storage tanks (including those from other processes) that are simultaneously routed to the control device or treatment process(es). **(40 CFR 63.2525(b)(5))**
 - f. The applicable monitoring requirements of Subpart FFFF and any parametric level that assures compliance for all emissions routed to the control device or treatment process. **(40 CFR 63.2525(b)(6))**
 - g. Calculations and engineering analyses required to demonstrate compliance. **(40 CFR 63.2525(b)(7))**
 - h. For reporting purposes, a change to any of these elements not previously reported, except for 40 CFR 63.2525(b)(5), constitutes a new operating scenario. **(40 CFR 63.2525(b)(8))**
9. The permittee shall keep a schedule or log of operating scenarios for processes with batch vents from batch operations updated each time a different operating scenario is put into effect. **(40 CFR 63.2525(c))**
10. The permittee shall keep records of the information specified below for Group 1 batch process vents in compliance with a percent reduction emission limit in Table 2 to Subpart FFFF if some of the vents are controlled to less the percent reduction requirement: **(40 CFR 63.2525(d))**
- a. Records of whether each batch operated was considered a standard batch; **(40 CFR 63.2525(d)(1))**
 - b. The estimated uncontrolled and controlled emissions for each batch that is considered to be a nonstandard batch. **(40 CFR 63.2525(d)(2))**
11. The permittee shall keep records of the information specified below, as applicable, for each process with Group 2 batch process vents or uncontrolled hydrogen halide and halogen HAP emissions from the sum of all batch and continuous process vents less than 1,000 lb/yr. No records are required if the permittee documented in the notification of compliance status report that the MCPU meets any of the situations described in 40 CFR 63.2525(e)(1)(i), (ii), or (iii). **(40 CFR 63.2525(e))**
- a. If the permittee documented in the notification of compliance status report that an MCPU has Group 2 batch process vents because the non-reactive organic HAP is the only HAP and usage is less than 10,000 lb/yr, as specified in 40 CFR 63.2460(b)(7), the permittee must keep records of the amount of HAP material used, and calculate the daily rolling annual sum of the amount used no less frequently than monthly. If a record indicates usage exceeds 10,000 lb/yr, the permittee must estimate emissions for the preceding 12 months based on the number of batches operated and the estimated emissions for a standard batch, and begin recordkeeping as specified in 40 CFR 63.2525(e)(4). After 1 year, the permittee may revert to recording only usage if the usage during the year is less than 10,000 lb. **(40 CFR 63.2525(e)(2))**
 - b. If the permittee documented in the notification of compliance status report that total uncontrolled organic HAP emissions from the batch process vents in an MCPU will be less than 1,000 lb/yr for the anticipated number of standard batches, then the permittee must keep records of the number of batches operated and calculate a daily rolling annual sum of batches operated no less frequently than monthly. If the number of batches operated results in organic HAP emissions that exceed 1,000 lb/yr, the permittee must estimate emissions for the preceding 12 months based on the number of batches operated and the estimated emissions for a standard batch, and begin recordkeeping as specified in 40 CFR 63.2525(e)(4). After one year, the permittee may revert to recording only the number of batches if the number of batches operated during the year results in less than 1,000 lb of organic HAP emissions. **(40 CFR 63.2525(e)(3))**
 - c. If none of the conditions specified in 40 CFR 63.2525(e)(1) through (3) are met, the permittee must keep records of the information specified below: **(40 CFR 63.2525(e)(4))**
 - i. A record of the day each batch was completed and/or the operating hours per day for continuous operations with hydrogen halide and halogen emissions; **(40 CFR 63.2525(e)(4)(i))**
 - ii. A record of whether each batch operated was considered a standard batch; **(40 CFR 63.2525(e)(4)(ii))**
 - iii. The estimated uncontrolled and controlled emissions for each batch that is considered to be a nonstandard batch; **(40 CFR 63.2525(e)(4)(iii))**

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- iv. Records of the daily 365-day rolling summations of emissions, or alternative records that correlate to the emissions (e.g., number of batches), calculated no less frequently than monthly. **(40 CFR 63.2525(e)(4)(iv))**
12. The permittee shall keep a record of each time a safety device is opened to avoid unsafe conditions in accordance with 40 CFR 63.2450(s). **(40 CFR 63.2525(f))**
13. The permittee shall keep record of the results of each CPMS calibration check and the maintenance performed, as specified in 40 CFR 63.2450(k)(1). **(40 CFR 63.2525(g))**
14. For each CEMS, the permittee must keep records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period. **(40 CFR 63.2525(h))**
15. For each PUG, the permittee must keep records specified below: **(40 CFR 63.2525(i))**
 - a. Descriptions of the MCPU and other process units in the initial PUG required by 40 CFR 63.2535(l)(1)(v); **(40 CFR 63.2525(i)(1))**
 - b. Rationale for including each MCPU and other process unit in the initial PUG (i.e., identify the overlapping equipment between process units) required by 40 CFR 63.2535(l)(1)(v); **(40 CFR 63.2525(i)(2))**
 - c. Calculations used to determine the primary product for the initial PUG required by 40 CFR 63.2535(l)(2)(iv); **(40 CFR 63.2525(i)(3))**
 - d. Descriptions of process units added to the PUG after the creation date and rationale for including the additional process units in the PUG as required by 40 CFR 63.2535(l)(1)(v); **(40 CFR 63.2525(i)(4))**
 - e. The calculation of each primary product redetermination required by 40 CFR 63.2535(l)(2)(iv). **(40 CFR 63.2525(i)(5))**
16. In the SSMP required by 40 CFR 63.6(e)(3), the permittee is not required to include Group 2 emission points, unless those emission points are used in an emissions average. For equipment leaks, the SSMP requirement is limited to control devices and is optional for other equipment. **(40 CFR 63.2525(j))**
17. For each bag leak detector used to monitor PM HAP emissions from a fabric filter, maintain records of any bag leak detection alarm, including the date and time, with a brief explanation of the cause of the alarm and the corrective action taken. **(40 CFR 63.2525(k))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall comply with the notification and reporting requirements specified in 40 CFR 63.2515, 40 CFR 63.2520, and 40 CFR 63.2525. **(40 CFR 63.2450(a))**
5. When 40 CFR 63.2455 through 63.2490 reference other subparts in 40 CFR 63 that use the term "periodic report," it means "compliance report" for the purposes of 40 CFR Part 63, Subpart FFFF. The compliance report must include the information specified in 40 CFR 63.2520(e), as well as the information specified in referenced subparts. **(40 CFR 63.2450(m)(1))**
6. When there are conflicts between 40 CFR Part 63, Subpart FFFF and referenced subparts for the due dates of reports required by 40 CFR Part 63, Subpart FFFF, reports must be submitted according to the due dates presented in 40 CFR Part 63, Subpart FFFF. **(40 CFR 63.2450(m)(2))**

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7. Excused excursions, as defined in 40 CFR Part 63, Subparts G and SS, are not allowed. **(40 CFR 63.2450(m)(3))**
8. If an emission stream contains energetics or organic peroxides that, for safety reasons, cannot meet an applicable emission limit specified in Tables 1 through 7 to Subpart FFFF, then the permittee must submit documentation in the precompliance report explaining why an undue safety hazard would be created if the air emission controls were installed, and the permittee must describe the procedures that will be implemented to minimize HAP emissions from these vent streams. **(40 CFR 63.2450(q))**
9. If complying with the pollution prevention standard, the permittee must include the pollution prevention demonstration plan in the precompliance report required by 40 CFR 63.2520(c). The permittee must identify all days when the annual factors were above the target factors in the compliance reports. **(40 CFR 63.2495(f))**
10. The permittee must submit each applicable report in Table 11 to Subpart FFFF. **(40 CFR 63.2520(a))**
11. Unless the Administrator has approved a different schedule for submission of reports under 40 CFR 63.10(a), the permittee must submit each report by the date in Table 11 to Subpart FFFF and according to 40 CFR 63.2520(b)(1) through (5). **(40 CFR 63.2520(b))**
12. The permittee must submit a precompliance report to request approval for any of the items in 40 CFR 63.2520(c)(1) through (7). The report will be approved or disapproved within 90 days after receipt. If it is disapproved, the permittee must still be in compliance with the emission limitations and work practice standards in Subpart FFFF by the compliance date. To change any of the information submitted in the report, the permittee must submit a notification 60 days before the planned change is to be implemented. **(40 CFR 63.2520(c))**
13. The permittee must submit a notification of compliance status report according to the schedule in 40 CFR 63.2520(d)(1), and the notification of compliance status report must contain the information specified in 40 CFR 63.2520(d)(2). **(40 CFR 63.2520(d))**
14. The compliance report must contain the information specified in 40 CFR 63.2520(e)(1) through (10). **(40 CFR 63.2520(e))**
15. The permittee must submit all of the notifications in 40 CFR 63.6(h)(4) and (5), 40 CFR 63.7(b) and (c), 40 CFR 63.8(e), (f)(4) and (6), and 40 CFR 63.9(b) through (h) that apply by the dates specified. **(40 CFR 63.2515(a))**
16. As specified in 40 CFR 63.9(b)(2), if the affected source starts-up before November 10, 2003, the permittee must submit an initial notification not later than 120 calendar days after November 10, 2003. **(40 CFR 63.2515(b)(1))**
17. As specified in 40 CFR 63.9(b)(3), if the new affected source starts-up on or after November 10, 2003, the permittee must submit an initial notification not later than 120 calendar days after becoming subject to Subpart FFFF. **(40 CFR 63.2515(b)(2))**
18. If required to conduct a performance test, the permittee must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required in 40 CFR 63.7(b)(1). For any performance test required as part of the initial compliance procedures for batch process vents in Table 2 to Subpart FFFF, the permittee must also submit the test plan required by 40 CFR 63.7(c) and the emission profile with the notification of the performance test. **(40 CFR 63.2515(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENTS

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1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart FFFF for Miscellaneous Organic Chemical Manufacturing. **(40 CFR Part 63, Subparts A and FFFF)**
2. The permittee shall determine if an emission stream is a halogenated vent stream, as defined in 40 CFR 63.2550, by calculating the mass emission rate of halogen atoms in accordance with 40 CFR 63.115(d)(2)(v). Alternatively, the permittee may elect to designate the emission stream as halogenated. **(40 CFR 63.2450(b))**
3. Except when complying with 40 CFR 63.2485, if the permittee reduces organic HAP emissions by venting emissions through a closed-vent system to any combination of control devices (except a flare) or recovery devices, the permittee shall meet the requirements of 40 CFR 63.982(c) and the requirements referenced therein. **(40 CFR 63.2450(e)(1))**
4. Except when complying with 40 CFR 63.2485, if the permittee reduces organic HAP emissions by venting emissions through a closed-vent system to a flare, the permittee shall meet the requirements of 40 CFR 63.982(b) and the requirements referenced therein. **(40 CFR 63.2450(e)(2))**
5. If the permittee uses a halogen reduction device to reduce hydrogen halide and halogen HAP emissions from halogenated vent streams, the permittee shall meet the requirements of 40 CFR 63.994 and the requirements referenced therein. If the permittee uses a halogen reduction device before a combustion device, the permittee shall determine the halogen atom emission rate prior to the combustion device according to the procedures in 40 CFR 63.115(d)(2)(v). **(40 CFR 63.2450(e)(3))**
6. As part of a flare compliance assessment required in 40 CFR 63.987(b), the permittee has the option of demonstrating compliance with the requirements of 40 CFR 63.11(b) by complying with the requirements in either 40 CFR 63.11(b)(6)(i) or 40 CFR 63.987(b)(3)(ii). If the permittee elects to meet the requirements in 40 CFR 63.11(b)(6)(i), the permittee shall keep flare compliance assessment records as specified in 40 CFR 63.2450(f)(2)(i) and (ii). **(40 CFR 63.2450(f))**
7. To determine the percent reduction of a small control device that is used to comply with an emission limit specified in Table 1, 2, 3, or 5, the permittee may elect to conduct a design evaluation as specified in 40 CFR 63.1257(a)(1) instead of a performance test as specified in 40 CFR Part 63, Subpart SS. The permittee shall establish the value(s) and basis for the operating limits as part of the design evaluation. For continuous process vents, the design evaluation must be conducted at maximum representative operating conditions for the process, unless the Administrator specifies or approves alternate operating conditions. For transfer racks, the design evaluation must demonstrate that the control device achieves the required control efficiency during the reasonably expected maximum transfer loading rate. **(40 CFR 63.2450(h))**
8. When 40 CFR 63.997(e)(2)(iii)(C) requires correcting the measured concentration at the outlet of a combustion device to 3% oxygen if supplemental combustion air is added, the requirements in either (a) or (b) below apply for the purposes of 40 CFR Part 63, Subpart FFFF:
 - a. The permittee shall correct the concentration in the gas stream at the outlet of the combustion device to 3% oxygen if supplemental gases are added, as defined in 40 CFR 63.2550, to the vent stream; or **(40 CFR 63.2450(i)(1))**
 - b. The permittee shall correct the measured concentration for supplemental gases using Equation 1 of 40 CFR 63.2460; the permittee may use process knowledge and representative operating data to determine the fraction of the total flow due to supplemental gas. **(40 CFR 63.2450(i)(2))**
9. For each continuous process vent, the permittee shall either designate the vent as a Group 1 continuous process vent or determine the total resource effectiveness (TRE) index value as specified in 40 CFR 63.115(d), except as specified in 40 CFR 63.2455(b)(1) through (3). **(40 CFR 63.2455(b))**
10. If the permittee uses a recovery device to maintain the TRE above a specified threshold, the permittee shall meet the requirements of 40 CFR 63.982(e) and the requirements referenced therein, except as specified in 40 CFR 63.2450 and 40 CFR 63.2455(c)(1). **(40 CFR 63.2455(c))**

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11. If a process has batch process vents, as defined in 40 CR 63.2550, the permittee must determine the group status of the batch process vents by determining and summing the uncontrolled organic HAP emissions from each of the batch process vents within the process using the procedures specified in 40 CFR 63.1257(d)(2)(i) and (ii), except as specified in 40 CFR 63.2460(b)(1) through (7). **(40 CFR 63.2460(b))**
12. Exceptions to the requirements for batch process vents in 40 CFR Part 63, Subparts SS and WW are specified in 40 CFR 66.2460(c)(1) through (9). **(40 CFR 63.2460(c))**
13. If any process vents within a process emit hydrogen halide and halogen HAP, the permittee must determine and sum the uncontrolled hydrogen halide and halogen HAP emissions from each of the process vents within the process using the procedures specified in 40 CFR 63.1257(d)(2)(i) and/or (ii), as appropriate. When 40 CFR 63.1257(d)(2)(ii)(E) requires documentation to be submitted in the precompliance report, it means the notification of compliance status report for the purposes of 40 CFR 63.2465(b). **(40 CFR 63.2465(b))**
14. If collective uncontrolled hydrogen halide and halogen HAP emissions from the process vents within a process are greater than or equal to 1,000 pounds per year (lb/yr), the permittee must comply with 40 CFR 63.994 and the requirements referenced therein, except as specified in 40 CFR 63.2465(c)(1) through (3). **(40 CFR 63.2465(c))**
15. To demonstrate compliance with the emission limit in Table 3 to Subpart FFFF for HAP metals at a new source, the permittee must determine the mass emission rate of HAP metals based on process knowledge, engineering assessment, or test data. **(40 CFR 63.2465(d)(1))**
16. If the permittee conducts a performance test or design evaluation for a control device used to control emissions only from storage tanks, the permittee must establish operating limits, conduct monitoring, and keep records using the same procedures as required in 40 CFR Part 63, Subpart SS for control devices used to reduce emissions from process vents instead of the procedures specified in 40 CFR 63.985(c), 40 CFR 63.998(d)(2)(i), and 40 CFR 63.999(b)(2). **(40 CFR 63.2470(c)(1))**
17. When the term "storage vessel" is used in 40 CFR Part 63, Subparts SS and WW, the term "storage tank," as defined in 40 CFR 63.2550 applies for the purposes of Subpart FFFF. **(40 CFR 63.2470(c)(2))**
18. The permittee must meet each requirement in Table 6 to Subpart FFFF that applies to equipment leaks, except as specified in 40 CFR 63.2480(b) through (d). **(40 CFR 63.2480)**
19. The permittee must meet each requirement in Table 7 to Subpart FFFF that applies to wastewater streams and liquid streams in open systems within an MCPU, except as specified in 40 CFR 63.2485(b) through (o). **(40 CFR 63.2485)**
20. The permittee must meet each requirement in Table 10 to Subpart FFFF that applies to heat exchange systems, except that the phrase "a chemical manufacturing process unit meeting the conditions of 40 CFR 63.100 (b)(1) through (b)(3) of this section" in 40 CFR 63.104(a) means "an MCPU meeting the conditions of 40 CFR 63.2435" for the purposes of Subpart FFFF and that the reference to 40 CFR 63.100(c) in 40 CFR 63.104(a) does not apply for the purposes Subpart FFFF. **(40 CFR 63.2490)**
21. For each MCPU for which the permittee is complying with 40 CFR 63.2495(a), the pollution prevention standard, the permittee must calculate annual rolling average values of the HAP and VOC factors (annual factors) in accordance with the procedures specified below. To show continuous compliance, the annual factors must be equal to or less than the target annual factors calculated according to 40 CFR 63.2495(c)(3). **(40 CFR 63.2495(d))**
 - a. To calculate the annual factors, the permittee must divide the consumption of both total HAP and total VOC by the production rate, per process, for 12-month periods at the frequency specified in either paragraph below, as applicable: **(40 CFR 63.2495(d)(1))**
 - i. For continuous processes, the permittee must calculate the annual factors every 30 days for the 12-month period preceding the 30th day (i.e., annual rolling average calculated every 30 days). A process with both batch and continuous operations is considered a continuous process for the purposes of this section; **(40 CFR 63.2495(d)(2))**

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- ii. For batch processes, the permittee must calculate the annual factors every 10 batches for the 12- month period preceding the 10th batch (i.e., annual rolling average calculated every 10 batches), except as specified if the permittee produces more than 10 batches during a month, the permittee must calculate the annual factors at least once during that month and, if the permittee produces less than 10 batches in a 12-month period, the permittee must calculate the annual factors for the number of batches in the 12- month period since the previous calculations. **(40 CFR 63.2495(d)(3))**
22. To demonstrate compliance with the alternative standard in 40 CFR 63.2505, the permittee must meet the requirements of 40 CFR 63.1258(b)(5) beginning no later than the initial compliance date specified in 40 CFR 63.2445, except as specified below. **(40 CFR 63.2505(b))**
- a. The permittee must comply with the requirements in 40 CFR 63.983 and the requirements referenced therein for closed-vent systems. **(40 CFR 63.2505(b)(1))**
 - b. When 40 CFR 63.1258(b)(5)(i) refers to 40 CFR 63.1253(d) and 40 CFR 63.1254(c), the requirements in paragraph 40 CFR 63.2505(a) apply for the purposes of Subpart FFFF. **(40 CFR 63.2505(b)(2))**
 - c. When 40 CFR 63.1258(b)(5)(i)(B) refers to "HCl," it means "total hydrogen halide and halogen HAP" for the purposes of Subpart FFFF. **(40 CFR 63.2505(b)(3))**
 - d. When 40 CFR 63.1258(b)(5)(ii) refers to 40 CFR 63.1257(a)(3), it means 40 CFR 63.2450(j)(5) for the purposes of Subpart FFFF. **(40 CFR 63.2505(b)(4))**
 - e. The permittee must submit the results of any determination of the target analytes of predominant HAP in the notification of compliance status report. **(40 CFR 63.2505(b)(5))**
 - f. If the permittee elects to comply with the requirement to reduce hydrogen halide and halogen HAP by greater than or equal to 95% by weight in 40 CFR 63.2505(a)(1)(i)(C), the permittee must meet the requirements below. **(40 CFR 63.2505(b)(6))**
 - i. Demonstrate initial compliance with the 95% reduction by conducting a performance test and setting a site-specific operating limit(s) for the scrubber in accordance with 40 CFR 63.994 and the requirements referenced therein. The permittee must submit the results of the initial compliance demonstration in the notification of compliance status report. **(40 CFR 63.2505(b)(6)(i))**
 - ii. Install, operate, and maintain CPMS for the scrubber as specified in 40 CFR 63.994(c) and 40 CFR 63.2450(k), instead of as specified in 40 CFR 63.1258(b)(5)(i)(C). **(40 CFR 63.2505(b)(6)(ii))**
 - g. If flow to the scrubber could be intermittent, the permittee must install, calibrate, and operate a flow indicator as specified in 40 CFR 63.2460(c)(7). **(40 CFR 63.2505(b)(7))**
 - h. Use the operating day as the averaging period for CEMS data and scrubber parameter monitoring data. **(40 CFR 63.2505(b)(8))**
 - i. The requirements in 40 CFR 63.2505(a) do not apply to emissions from storage tanks during periods of planned routine maintenance of the control device that do not exceed 240 hr/yr. The permittee may submit an application to the Administrator requesting an extension of this time limit to a total of 360 hr/yr in accordance with the procedures specified in 40 CFR 63.2470(d). The permittee must comply with the recordkeeping and reporting specified in 40 CFR 63.998(d)(2)(ii) and 40 CFR 63.999(c)(4) for periods of planned routine maintenance. **(40 CFR 63.2505(b)(9))**
23. For any equipment, emission stream, or wastewater stream subject to the provisions of both 40 CFR Part 63, Subpart FFFF and another rule, the permittee may elect to comply only with the provisions as specified in 40 CFR 63.2535(a) through (l). The permittee also must identify the subject equipment, emission stream, or wastewater stream, and the provisions that will be complied with, in the notification of compliance status report required by 40 CFR 63.2520(d). **(40 CFR 63.2535)**
24. For any Group 2 emission point that becomes a Group 1 emission point after the compliance date for the facility, the permittee shall comply with the Group 1 requirements beginning on the date the switch occurs. An initial compliance demonstration, as specified in 40 CFR Part 63, Subpart FFFF, shall be conducted within 150 days after the switch occurs. **(40 CFR 63.2445(d))**
25. If, after the compliance date for the facility, hydrogen halide and halogen HAP emissions from process vents in a process increase to more than 1,000 lb/yr, or HAP metals emissions from a process at a new affected source increase to more than 150 lb/yr, the permittee shall comply with the applicable emission limits specified in Table 3 of 40 CFR Part 63, Subpart FFFF and the associated compliance requirements beginning on the date the emissions exceed the applicable threshold. An initial compliance demonstration, as specified in 40 CFR Part 63, Subpart FFFF, shall be conducted within 150 days after the switch occurs. **(40 CFR 63.2445(e))**

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26. If the permittee has a small control device for process vent or transfer rack emissions that becomes a large control device, as defined in 40 CFR 63.2550(i), the permittee shall comply with monitoring and associated recordkeeping and reporting requirements for large control devices beginning on the date the switch occurs. An initial compliance demonstration, as specified in 40 CFR Part 63, Subpart FFFF, shall be conducted within 150 days after the switch occurs. **(40 CFR 63.2445(f))**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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E. NON-APPLICABLE REQUIREMENTS

At the time of the ROP issuance, the AQD has determined that no non-applicable requirements have been identified for incorporation into the permit shield provision set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii).

APPENDICES

Appendix 1. Abbreviations and Acronyms

The following is an alphabetical listing of abbreviations/acronyms that may be used in this permit.

AQD	Air Quality Division	MM	Million
acfm	Actual cubic feet per minute	MSDS	Material Safety Data Sheet
BACT	Best Available Control Technology	MW	Megawatts
BTU	British Thermal Unit	NA	Not Applicable
°C	Degrees Celsius	NAAQS	National Ambient Air Quality Standards
CAA	Federal Clean Air Act	NESHAP	National Emission Standard for Hazardous Air Pollutants
CAM	Compliance Assurance Monitoring	NMOC	Non-methane Organic Compounds
CEM	Continuous Emission Monitoring	NOx	Oxides of Nitrogen
CFR	Code of Federal Regulations	NSPS	New Source Performance Standards
CO	Carbon Monoxide	NSR	New Source Review
COM	Continuous Opacity Monitoring	PM	Particulate Matter
department	Michigan Department of Environment, Great Lakes, and Energy	PM-10	Particulate Matter less than 10 microns in diameter
dscf	Dry standard cubic foot	pph	Pound per hour
dscm	Dry standard cubic meter	ppm	Parts per million
EPA	United States Environmental Protection Agency	ppmv	Parts per million by volume
EU	Emission Unit	ppmw	Parts per million by weight
°F	Degrees Fahrenheit	PS	Performance Specification
FG	Flexible Group	PSD	Prevention of Significant Deterioration
GACS	Gallon of Applied Coating Solids	psia	Pounds per square inch absolute
GC	General Condition	psig	Pounds per square inch gauge
gr	Grains	PeTE	Permanent Total Enclosure
HAP	Hazardous Air Pollutant	PTI	Permit to Install
Hg	Mercury	RACT	Reasonable Available Control Technology
hr	Hour	ROP	Renewable Operating Permit
HP	Horsepower	SC	Special Condition
H ₂ S	Hydrogen Sulfide	scf	Standard cubic feet
HVLP	High Volume Low Pressure *	sec	Seconds
ID	Identification (Number)	SCR	Selective Catalytic Reduction
IRSL	Initial Risk Screening Level	SO ₂	Sulfur Dioxide
ITSL	Initial Threshold Screening Level	SRN	State Registration Number
LAER	Lowest Achievable Emission Rate	TAC	Toxic Air Contaminant
lb	Pound	Temp	Temperature
m	Meter	THC	Total Hydrocarbons
MACT	Maximum Achievable Control Technology	tpy	Tons per year
MAERS	Michigan Air Emissions Reporting System	µg	Microgram
MAP	Malfunction Abatement Plan	VE	Visible Emissions
EGLE	Michigan Department of Environment, Great Lakes, and Energy	VOC	Volatile Organic Compounds
mg	Milligram	yr	Year
mm	Millimeter		

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 pounds per square inch gauge (psig).

Appendix 2. Schedule of Compliance

The permittee certified in the ROP application that this stationary source is in compliance with all applicable requirements and the permittee shall continue to comply with all terms and conditions of this ROP. A Schedule of Compliance is not required. (R 336.1213(4)(a), R 336.1119(a)(ii))

Appendix 3. Monitoring Requirements

Appendix 3.A:

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FG432BOILERS.

FG432BOILERS
NOx and CO₂/O₂ Monitoring
Continuous Emission Monitoring System (CEMS) Requirements

1. Within 30 calendar days after commencement of trial operation, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required CEMS.
2. Within 150 calendar days after commencement of trial operation, the permittee shall submit two copies of a complete test plan for the CEMS to the AQD for approval.
3. Within 180 calendar days after commencement of trial operation, the permittee shall complete the installation and testing of the CEMS.
4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CEMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table.

Pollutant	Applicable PS
NO _x	2
CO ₂ /O ₂	3

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.
6. The CEMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 2 and 3 of Appendix B, 40 CFR Part 60.
7. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CEMS set forth in Appendix F of 40 CFR Part 60. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report (Figure 1, Appendix F)
8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to the AQD, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
 - a. A report of each exceedance above the limits specified in the conditions of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
 - b. A report of all periods of CEMS downtime and corrective action.
 - c. A report of the total operating time of each boiler during the reporting period.
 - d. A report of any periods that the CEMS exceeds the instrument range.
 - e. If no exceedances or CEMS downtime occurred during the reporting period, the permittee shall report that fact.

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The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request.

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FGTHROX:

FGTHROX
NOx and CO₂/O₂ Monitoring
Continuous Emission Monitoring System (CEMS) Requirements

1. Within 30 calendar days after commencement of trial operation, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required CEMS.
2. Within 150 calendar days after commencement of trial operation, the permittee shall submit two copies of a complete test plan for the CEMS to the AQD for approval.
3. Within 180 calendar days after commencement of trial operation, the permittee shall complete the installation and testing of the CEMS.
4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CEMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table.

Pollutant	Applicable PS
NOx	2
CO ₂ /O ₂	3
Flow	6

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.
6. The CEMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 2 and 3 of Appendix B, 40 CFR Part 60.
7. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CEMS set forth in Appendix F of 40 CFR Part 60. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report (Figure 1, Appendix F)
8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to the AQD, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
 - a. A report of each exceedance above the limits specified in the conditions of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
 - b. A report of all periods of CEMS downtime and corrective action.
 - c. A report of the total operating time of each boiler during the reporting period.
 - d. A report of any periods that the CEMS exceeds the instrument range.
 - e. If no exceedances or CEMS downtime occurred during the reporting period, the permittee shall report that fact.

The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request.

Appendix 3.B: Operation and Maintenance Plan for Continuous Emission Monitoring

FG432BOILERS and FGTHROX
Requirements from EPA Consent Decree 19-11880
Operation and Maintenance Plan Requirements

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FG432BOILERS and FGTHROX.

1. ~~Operation and Maintenance Plan. By no later than one hundred eighty (180) Days after the Effective Date of the Consent Decree 19-11880 (CD), DSC shall submit to EPA for approval pursuant to Section XI of the CD (Approval of Deliverables) an Operation and Maintenance Plan (OMP) for the continuous emission monitoring units (#27897AE, #27899AE and #2514 CEMS, respectively) at Boiler #12, Boiler #13, and the THROX.~~
2. ~~Commencing no later than thirty (30) Days after EPA approval and continuing thereafter, DSC shall implement the OMP required by Paragraph 1, as approved by EPA, for the continuous emission monitoring units identified in Paragraph 1 above.~~
3. The OMP shall include the following:
 - a. Schedule for monthly inspections;
 - b. Unit inspection procedures and/or checklist, including calibration gas review; and
 - c. Corrective action process to address any instances of deviations from operating parameter requirements, including identifying the root cause of each deviation and ensuring that corrective actions are taken to address such deviations. Each root cause analysis must include:
 - (1) Description of corrective actions taken in response to the deviation or, alternatively, an explanation of why no actions were taken;
 - (2) Description of actions taken by DSC to prevent future deviations from the same or similar root cause(s); and
 - (3) When the root cause is unknown, a description of efforts undertaken by DSC to determine the root cause.
4. ~~OMP Plan Report. By no later than sixty (60) Days after two (2) years of implementation of the OMP, DSC shall submit a report to EPA (OMP Plan Report) that includes a summary and analysis of all root cause analyses performed under the OMP, and identifies any trends or commonalities among the root cause analyses. If a trend or commonality exists among the root causes that is within the control of DSC to correct, DSC shall include a proposal for corrective action in the OMP Plan Report to address the underlying causes and provide a proposed schedule for implementing such corrective action. DSC shall implement the proposed corrective action in accordance with the OMP Plan Report.~~

Appendix 3.C: THROX Automated Alert System

FGTHROX
Requirements from EPA Consent Decree 19-11880
Automated Alert System Requirements

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FGTHROX.

1. ~~By no later than eighteen (18) months after the Effective Date of Consent Decree 19-11880 (CD),~~ DSC shall ~~develop and thereafter~~ continuously operate, consistent with technological limitations, manufacturers' specifications, and good engineering and maintenance practices, an automated alert system to notify process operators who work in buildings containing processes that are controlled by the THROX when the THROX stops operating for any reason (downtime events). The automated alert system shall meet the requirements of Subparagraphs 1.a and 1.b.
 - a. The automated alert system shall notify all process operators before planned downtime events, and immediately after unplanned downtime events occur. Short-duration events, which would not provide sufficient time to allow initiation of secondary controls before the THROX returns to operation, do not need to be communicated to the process operators.
 - b. Until the automated alert system is in operation, DSC shall continue to operate its existing method of notifying process unit control room personnel when the THROX is not operating by following both its THROX Alerts Procedure and THROX Alerts Procedure Supplement. Under these procedures, environmental personnel evaluate the THROX outage and, if the duration warrants, initiate a site-wide alert message; process unit control room personnel are required to respond to the alert, and security personnel follow up if one or more process unit control rooms fail to respond; and process unit control room personnel are notified at the end of the THROX outage event.
2. The relevant building process operator shall start to operate and continue operating the secondary controls identified in the Renewable Operating Permit (e.g., condensers, water scrubbers) throughout the duration of each THROX downtime event to ensure the required level of control at the affected process units as follows:
 - a. For unplanned THROX downtime events, as soon as practicable after being notified of such event through the automated alert system identified in Paragraph 1; and
 - b. For a planned THROX downtime event, by the date scheduled for such event.
3. ~~By no later than ninety (90) Days after the installation of the automated alert system and continuing thereafter as necessary to train new employees,~~ DSC shall provide training to personnel responsible for processes that are affected by THROX downtime events about the alert system and required follow up actions as set forth in Paragraphs 1 and 2.
4. DSC shall notify personnel responsible for processes that are affected by THROX downtime events within twenty-four (24) hours of any changes to the alert system, and DSC shall train such personnel on any new procedures within ninety (90) Days of any changes.
5. ~~DSC shall inform EPA of the dates of completion for the installation and implementation of the automated alert system and training as required by Paragraphs 1 through 3 in the first Annual Report required by Section IX of the CD (Reporting Requirements) after installation. DSC shall inform EPA of the completion of required training as required by Paragraph 3 in the Annual Reports required by Section IX of the CD (Reporting Requirements).~~

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Appendix 4. Recordkeeping

Specific recordkeeping requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 5. Testing Procedures

Specific testing requirement plans, procedures, and averaging times are detailed in the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 6. Permits to Install

The following table lists any PTIs issued or ROP revision applications received since the effective date of the previously issued ROP No. MI-ROP-A4043-2008. Those ROP revision applications that are being issued concurrently with this ROP renewal are identified by an asterisk (*). Those revision applications not listed with an asterisk were processed prior to this renewal.

Source-Wide PTI No MI-PTI-A4043-2008 is being reissued as Source-Wide PTI No. MI-PTI-A4043-2019a.

Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
134-08	200800093	Silicone rubber manufacturing process	EU207-01
534-77G	200900104	Alkoxylation process	EU601-01
175-09A	201100031	25.1 MMBTU/hr boiler and electrically powered plasma arc gasifier known as a "plasma enhanced melter" (PEM)	EUBOILER2515, EU2515-01, FGPEM&BLR
812-91C	201300027	Grignard process	EU515-01
14-13	201300048	5617 batch kettle process producing silane and siloxane products	EU324-08
15-13	201300048	4820 batch kettle process producing silane and siloxane products	EU324-01
169-12	201300048	Resin and coating manufacturing	EU505-01
29-07B	201300077	HCl production plant, rail car transfer station no. 9E, and rail car unloading station no. 10E	EU356-01, EU356-02, EU356-03, FGHCLMACT
125-10A	201300106	Distillation pilot process	EU2901-12
34-04B	201300123	Calcium chloride process	EU340-01
91-07E	201400039	Site consolidation and blower system, site-wide scrubber system and thermal oxidation unit, and the trichlorosilane, silicon tetrachloride and dichlorosilane bulk move operations	FGSITEBLOWER, FGTHROX, FGSITESCUBBERS, FGHAP2012A2A, FGFOLD FACILITY
26-14	201400073	9025C dedicated waste tank in 2703 building	EU2703-17
84-08B	201400084	Phenyltrichlorosilane and diphenylchlorosilane recovery process	EU508-01, FG304VENTRECOVERY
91-14	201400117	Phenyl Chlorosilane Waste Tank 25403	EU502-09
44-89D	201500076	Silicone products manufacturing process	EU2504-01
104-14A	201500130	6019 Batch Kettle	EU212-03
63-14A	201500173	6054 Batch Kettle	EU212-01
48-14B	201500174	20400 Batch Kettle	EU212-12

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Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
156-06D	201600012	Liquid silicone rubber manufacturing batch mixer process	EU207-03
132-15	201600017	Chlorosilane waste tank 256 in the 2502 tank farm	EU502-11
131-15	201600018	Methyl vent system consisting of emissions from tanks T-100, T-102, T-150, T-151, T-208, T-20841, and T-25-100, emissions from maintenance procedures involving portable storage containing methyltrichlorosilane, methyl-dichlorosilane, dimethyldichlorosilane, dimethylchlorosilane, trimethylchlorosilane, phenyltrichlorosilane, and ethyltrichlorosilane, and the vent from the Cabot Mix Tank operation.	EU502-01
185-07B	201600019	Two sets of related equipment with different emission profiles and different vent control paths: Distillation Vents and Bulk Move Vents	EU502-07
180-15A	201600022	B Module Twin Screw Extruder	EU2901-16
126-03A	201600037	1107 hydrolysis process, including tanks 4160 and 23535	EU501-02
	201600045	Remove condition V.1 from Table	EU207-01
200-15	201600046	Silicone manufacturing process	EU505-04
44-06B	201600121	Trichlorosilane vent recovery system including carbon bed and venturi scrubber system	EU325-01, FG325-01
	201600127	Revised list of site boilers subject to Boiler MACT	
174-12A	201600135	40x resin manufacture	EU321-01
146-16	201700019	1600 Batch Kettle	EU303-15
147-16	201700019	1650 Batch Kettle	EU303-16
804-92D	201700019	Phenyl Methyl Fluids	EU303-01
19-14A	201700026	Silicone fluids manufacturing process	EU324-18
622-92D	201800012	Carbon parametric monitoring and recordkeeping	EU108-01
18-18	201800070	Container Maintenance and Wash area for the High Volume Silanes production facility. Includes nitrogen purge for some containers	EU502-04
437-90B	Unknown	Low viscosity fluids and 3-component fluids process	EU501-49

The following table lists the ROP amendments or modifications issued after the effective date of ROP No. MI-ROP-A4043-2019.

Permit to Install Number	ROP Revision Application Number - Issuance Date	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
29-07C	201900164 / June 13, 2022	This Minor Modification was to incorporate PTI No. 29-07C into the ROP, which was to update the requirement for stack EU356-01 to discharge unobstructed	EU356-01, EU356-02, EU356-03, FGHCLMACT

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		vertically upward be corrected to allow the stack to discharge horizontally. The stack was erroneously required to discharge unobstructed vertically upward in PTI No. 29-07B, (the last PTI that addressed this equipment), even though the stack has always discharged horizontally.	
616-92B	202000056 / June 13, 2022	This Minor Modification was to incorporate PTI No. 616-92B into the ROP, which was to revise EU304-02. Specifically, PTI No. 616-92B was to <ul style="list-style-type: none"> remove references of condenser 414 and the 337 scrubber; HAP emissions; and emissions from equipment that was not identified in the previous permit application. This project did not change the major source status of the facility. The project was not subject to PSD because the potential VOC emissions (the criteria pollutant emitted at the highest rate from the emission unit) is only 7.3 tpy, as limited by the permit conditions.	EU304-02,
29-07D	202000162 / June 13, 2022	This Minor Modification was to incorporate PTI No. 29-07D into the ROP, which was to add a second packed bed absorber to EU356-01.	EU356-01
156-06E	202100085 / June 13, 2022	This Minor Modification is to incorporate PTI No. 156-06E into the ROP, which is to update the requirements consistent with a USEPA Consent Decree, and to support process changes at the 207 Building facility, specifically EU207-03.	EU207-03
154-20	202100090 / June 13, 2022	This Minor Modification is to incorporate PTI No. 154-20, which is to incorporate previously exempt equipment in EU501-12 into the ROP. As part of the USEPA Consent Decree, t he PTI revised emission limits for the EP process, located in Building 1790 (EU501-12).	EU501-12, FGMONMACT, FGHAP2012A2A
48-14C	202100111 / June 13, 2022	This Minor Modification is to incorporate PTI No. 48-14C, which is to update emission calculations and to support process changes at the 212 building facility for reaction kettle 20400 in EU212-12. The EU212-12 process is a condensation reaction mixing kettle that vents through SV212-023.	EU212-12
108-18A	202100114 / June 13, 2022	This Minor Modification is to incorporate PTI No. 108-18A, which revises emission limits to allow for operational flexibility and incorporate the impact of the trace	EU212-05 FGMONMACT, FGHAP2012A2A

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		chemicals into the state air toxics evaluations. Specifically for the 6009 kettle, which is a cold blend mixing kettle that vents directly through SV212-004 in EU212-05. There are no heating or cooling capabilities on the process or process vents. All products contain xylene or toluene as solvents.	
169-20	202100115 / June 13, 2022	This Minor Modification is to incorporate PTI No. 169-20, which is for the batch mixer/reactor process, mixer 3, (EU207-13) due to the updating of emission calculations from the USEPA Consent Decree and to support process changes at Mixer 3, formerly in EU207-01 and now included in EU207-13.	EU207-13 FGMONMACT, FGHAP2012A2A
177-20	202100116 / June 13, 2022	This Minor Modification is to incorporate PTI No. 177-20, which is to revise emission estimates for Mixer 4 and removing this equipment from EU207-01 and making it its own emission unit as EU207-14.	EU207-14 FGMONMACT, FGHAP2012A2A
172-20	202100117 / June 13, 2022	This Minor Modification is to incorporate PTI No. 172-20, which is to revise emission estimates for Mixer 5 and removing this equipment from EU207-01 and making it its own emission unit as EU207-15.	EU207-15 FGMONMACT, FGHAP2012A2A
171-20	202100118 / June 13, 2022	This Minor Modification is to incorporate PTI 171-20, which is part of the EU207-01 breakup and is for updating emission calculations and to support process changes at Mixer 6, now identified as EU207-16.	EU207-16 FGMONMACT, FGHAP2012A2A
173-20	202100119 / June 13, 2022	This Minor Modification is to incorporate PTI No. 173-20, which is for the silicone rubber manufacturing process conducted in mixer 7 (EU207-17). This EU also includes equipment that is currently identified as EU207-02. The PTI revised emission estimates for Mixer 7, removing this equipment from EU207-01 and EU207-02 and making it its own emission unit.	EU207-02 EU207-17 FGMONMACT, FGHAP2012A2A
170-20	202100120 / June 13, 2022	This Minor Modification is to incorporate PTI No. 170-20, which is to revise emission estimates for Mixer 8, now identified as EU207-18 and removing the equipment from EU207-01 and making it its own emission unit.	EU207-18 FGMONMACT, FGHAP2012A2A
180-20	202100121 / June 13, 2022	This Minor Modification is to incorporate PTI No. 180-20, which is to revise emission estimates for Mixer 9, now identified as EU207-19, removing this equipment from EU207-01, and making it its own emission unit. DSC also has PTIs for the other	EU207-19 FGMONMACT, FGHAP2012A2A

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		emission units that result from splitting up EU207-01.	
437-90C	202100129 / June 13, 2022	This Minor Modification is to incorporate PTI No. 437-90C, which is to modify the low viscosity fluids and 3-component fluids process (EU501-49).	EU501-49
151-20	202100130 / June 13, 2022	This Minor Modification is to incorporate PTI No. 151-20, which is for the 63 Unit Silicone Gum Process (EU602-07). The purpose of this PTI is update emission calculations from the Consent Decree at the current EU602-07 facility.	EU602-07, FGMONMACT
176-20	202100133 / June 13, 2022	This Minor Modification is to incorporate PTI No. 176-20, which is for the Capped Resin Manufacturing Process (EU321-02).	EU321-02, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
19-14C	202100134 / June 13, 2022	This Minor Modification is to incorporate PTI No. 19-14C, which is to update the 25256 batch kettle process in EU324-18 due to the updating of emission calculations from the EPA Consent Decree .	EU324-18
174-20	202100136 / June 13, 2022	This Minor Modification is to incorporate PTI No. 174-20, which is for the mixing process in 2207 batch kettle process located in building 109 (EU109-02).	EU109-02
169-12B	202100139 / June 13, 2022	This Minor Modification is to incorporate PTI No. 169-12B, which is to revise emission estimates for EU505-01 and to remove some equipment from the current EU505-01 and put it in other permitted and exempt emission units. This emission unit no longer has NSPS subject tanks, therefore it was removed from FGOLDFACILITY. CAM will be reviewed during the next ROP Renewal.	EU505-01
162-20	202100140 / June 13, 2022	This Minor Modification is to incorporate PTI No. 162-20, which is for the batch resin process (EU505-11) due to the updating of emission calculations from the EPA Consent Decree and to support process changes, formerly in EU505-01, and now included in EU505-11.	EU505-11, FGLEAKDETECTION, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
155-80H	202100141 / June 13, 2022	This Minor Modification is to incorporate PTI No. 155-80H, which is due to the updating of emission calculations from the EPA Consent Decree and to support process changes in EU2703-01.	EU2703-01
153-20	202100142 / June 13, 2022	This Minor Modification is to incorporate PTI No. 153-20, which is for the siloxane	EU2503-13

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		kettles process in EU2503-13. The PTI updates emission calculations from the Consent Decree and to support includes process changes for DV8230, DV19826, and DV23050, formerly in EU2504-01, and now included in EU2504-13.	
137-20	202100143 / June 13, 2022	This Minor Modification is to incorporate PTI No. 137-20, which is for the batch reaction process in DV19840 kettle in emission unit EU2504-14. The PTI is part of the EU2504-01 breakup and is for updating emission calculations and to support process changes in the jacketed batch kettle DV19840 and associated equipment, now identified as EU2504-14.	EU2504-14, FGMONMACT
138-20	202100144 / June 13, 2022	This Minor Modification is to incorporate PTI No. 138-20, which is for the batch reaction process in DV19860 kettle in EU2504-15. The PTI is part of the EU2504-01 breakup and is for updating emission calculations and to support process changes in the jacketed batch kettle DV19860 and associated equipment, now identified as EU2504-15.	EU2504-15, FGMONMACT
139-20	202100145 / June 13, 2022	This Minor Modification is to incorporate PTI No. 139-20, which is for the mixing process in 8200 kettle in EU2504-16. The PTI is part of the EU2504-01 breakup and is for updating emission estimates for the mixing process for kettle 8200, and making it its own emission unit.	EU2504-16, FGMONMACT
140-20	202100146 / June 13, 2022	This Minor Modification is to incorporate PTI No. 140-20, which is for the mixing process in 8210 kettle in EU2504-17. The PTI is part of the EU2504-01 breakup and is for updating emission estimates for the mixing process for kettle 8210, and making it its own emission unit.	EU2504-17, FGMONMACT
141-20	202100147 / June 13, 2022	This Minor Modification is to incorporate PTI No. 141-20, which is for the mixing process in 8220 kettle in EU2504-18. The PTI is part of the EU2504-01 breakup and is for updating emission estimates for the mixing process for kettle 8220, and making it its own emission unit.	EU2504-18, FGMONMACT
142-20	202100148 / June 13, 2022	This Minor Modification is to incorporate PTI No. 142-20, which is for the mixing process in 8240 kettle in EU2504-19. The PTI is part of the EU2504-01 breakup and is for updating emission estimates for the mixing process for kettle 8240, and making it its own emission unit.	EU2504-19, FGMONMACT
143-20	202100149 / June 13, 2022	This Minor Modification is to incorporate PTI No. 143-20, which is for the Bis H	EU2504-20

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		Process in EU2504-20. The PTI is part of the EU2504-01 breakup and is for updating emission estimates for the mixing process for kettle 8240 and making it its own emission unit.	
146-20	202100154 / June 13, 2022	This Minor Modification is to incorporate PTI No. 146-20, which is for the Methylvinylchlorosilane Crude Distillation Process in EU322-11. EU322-11 is not part of FG322-01 which is a significant source of VOC emissions. The PTI is due to the updating of emission calculations from the EPA Consent Decree and to support process changes at the 322 Building.	EU322-11
147-12B	202100155 / June 13, 2022	This Minor Modification is to incorporate PTI No. 174-12B, which is for the 40x Resin Process for EU321-01 due to updating of emission calculations from the Consent Decree , to support process changes for EU321-01, to add operating limits for Scrubber 7170 and 4776, and to remove the hexamethyldisiloxane emission limit. EU322-11 is not part of FG322-01 which is a significant source of VOC emissions.	EU321-01
175-20	202100156 / June 13, 2022	This Minor Modification is to incorporate PTI No. 175-20, which is made up of a jacketed reactor, process condenser, receiver and auxiliary equipment in EU321-11. Process creates capped resins.	EU321-11, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
18-18A	202100157 / June 13, 2022	This Minor Modification is to incorporate PTI No. 18-18A, which is for the High Volume Silanes Container Maintenance and Wash production facility for EU502-04. This emission unit is not subject to FGLEAKDETECTION, leak detection is enforced through FGMONMACT.	EU502-04, FGMONMACT
NA	202100158 / April 21, 2023	This Minor Modification is to remove Flexible Group FGBOILERS2701-01, which is for boilers 8 and 9. These boilers have been rendered inoperable and are proposed to be removed from the area source.	Boiler No. 8 and No. 9, EU2701-01, FGBOILERS2701-01
308-94B	202100168 / April 21, 2023	This Minor Modification is to incorporate PTI No. 308-94B into the ROP, which to revise emission limits for EU322-06, the Siloxane Catalyst Process where Octomethylcyclotetrasiloxane is reacted with potassium hydroxide in the presence of cyclohexane. An atmospheric strip removes the solvent from the product after	EU322-06

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		the reaction. The vent is sent through a glycol condenser then to the atmosphere. The recovered solvent is reused in the next batch. CAM Conditions were carried forward and will be addressed during the next ROP Renewal.	
152-20	202100169 / April 21, 2023	This Minor Modification is to incorporate PTI No. 152-20 into the ROP, which is the permitting of EU324-11 which was previously operated under the Rule 290 exemption, due to the updating of emission calculations from the EPA Consent Decree . EU324-11 mainly consists of the batch distillation kettle 4895, including 4896 distillation column, and 24924/24925/4898 overhead receivers.	EU324-11
134-20	202100172 / April 21, 2023	This Minor Modification is to incorporate PTI No. 134-20 into the ROP, which was to separate the LP-1 process (EU322-01) from the other emission units comprising FG322-01, due to the updating of emission calculations from the EPA Consent Decree . PTI No. 134-20 also removed the operating limits for Condenser 6379 given that this unit is a process condenser and is not a control device. DSC submitted similar separate applications for the other two emission units in FG322-01.	EU322-01
15-13A	202100175 / April 21, 2023	This Minor Modification is to incorporate PTI No. 15-13A into the ROP, which was to revise emission limits for the 4820 batch kettle process, located in Building 324 (EU324-01) due to the updating of emission calculations from the EPA Consent Decree . The condensers were formerly subject to CAM. CAM Conditions were carried forward and will be addressed during the next ROP Renewal.	EU324-01
63-14B	202100189 / April 21, 2023	This Minor Modification is to incorporate PTI No. 63-14B into the ROP, which was to update emission calculations and to support process changes for the 6054 batch kettle and associated equipment in the 212 building (EU212-01) due to the updating of emission calculations from the EPA Consent Decree .	EU212-01
144-20	202100190 / April 21, 2023	This Minor Modification is to incorporate PTI No. 144-20 into the ROP, which was to update emission calculations and to support the 20500 polymer process changes in the 212 building (EU212-02) due to the updating of emission calculations from the EPA Consent Decree .	EU212-02

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		Decree . This emission unit was previously authorized under a Rule 290 exemption.	
145-20	202100191 / April 21, 2023	This Minor Modification is to incorporate PTI No. 145-20 into the ROP, which was to update emission limits for the cold blend mixing process in 6019 batch kettle (EU212-03), located in Building 212.	EU212-03
156-20	202100208 / April 21, 2023	This Minor Modification is to incorporate PTI No. 156-20 into the ROP, which was to revise emission limits for the 2262 process, located in Building 109 (EU109-04), due to the updating of emission calculations from the EPA Consent Decree . This emission unit was previously authorized under a Rule 290 exemption.	EU109-04
161-20	202100217 / April 21, 2023	This Minor Modification is to incorporate PTI No. 161-20 into the ROP, which was to update emission estimates for the 200-gallon Myers change can mixer (EU2505-06) and permitting this previously Rule 290 exempt emission unit, due to the updating of emission calculations from the EPA Consent Decree .	EU2505-06
159-20	202100218 / April 21, 2023	This Minor Modification is to incorporate PTI No. 159-20 into the ROP, which was to provide information supporting permit updates due to the updating of emission calculations from the Consent Decree at the current 200-gallon Myers change can mixer (EU2505-07). This emission unit was previously authorized under a Rule 290 exemption.	EU2505-07
14-13A	202100226 / April 21, 2023	This Minor Modification is to incorporate PTI No. 14-13A into the ROP, which was modified to reflect updated emission calculations for the 5617 batch kettle process in EU324-08, due to the updating of emission calculations from the EPA Consent Decree . The condensers were formerly subject to CAM. The CAM Conditions were carried forward and will be addressed during the next ROP Renewal.	EU324-08, FGMONMACT
92-21	202100228 / April 21, 2023	This Minor Modification is to incorporate PTI No. 92-21 into the ROP, which was to include requirements from US EPA Consent Decree associated with the 432 boilers (FG432BOILERS) and thermal heat recovery oxidation unit (FGTHROX). In addition, the CO emission testing requirement for the boilers was removed. The CO testing data shows the CO emissions are very low (less than 1 tpy per boiler) and, therefore, future testing is not necessary.	FGTHROX, FG432BOILERS

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155-20	202100243 / April 21, 2023	This Minor Modification is to incorporate PTI No. 155-20 into the ROP, which was to incorporate previously exempt (under Rule 290) 9140 batch kettle and associated equipment in emission unit EU2703-08, to reflect updated emission calculations, due to the EPA Consent Decree.	EU2703-08, FGMONMACT, FGTHROX, FGSITEBLOWER, FGHAP2012A2A
920-84C	202100244 / April 21, 2023	This Minor Modification is to incorporate PTI No. 920-84C into the ROP, which was to modify the permit requirements for the Chloropropyl Trichlorosilane Process in emission unit EU2703-03. This PTI updates emission calculations from the Consent Decree and to support includes process changes at the current 2703 Building facility. The venturi scrubbers were subject to CAM. CAM Conditions were carried forward and will addressed during the next ROP Renewal.	EU2703-03
157-20	202200008 / April 21, 2023	This Minor Modification is to incorporate PTI No. 157-20 into the ROP, which was to incorporate previously exempt (under Rule 290) the 9250 Batch Kettle in emission unit EU2703-09, to reflect updated emission calculations, due to the EPA Consent Decree.	EU2703-09, FGTHROX, FGHAP2012A2A , FGMONMACT
190-20	202200009 / April 21, 2023	This Minor Modification is to incorporate PTI No. 190-20 into the ROP, which was for the 22270 Batch Kettle in EU2703-13, to incorporate previously exempt (under Rule 290), due to the discovery of 1,3-butadiene in this process.	EU2703-13, FGTHROX, FGHAP2012A2A , FGMONMACT
534-77H	202200023 / April 21, 2023	This Minor Modification was to incorporate PTI No. 534-77H into the ROP, which was to update the Alkoxylation Process in emission unit EU601-01 as a result of the USEPA Consent Order and to reflect the process as currently operating in the 601 building.	EU601-01
179-20	202200038 / April 21, 2023	This Minor Modification was to incorporate PTI No. 179-20 into the ROP, which was to update emission limits as a result of the USEPA Consent Order for the mixing process in the 5132 batch kettle, located in Building 321 in emission unit EU321-07.	EU321-07
158-20	202200061 / April 21, 2023	This Minor Modification was to incorporate PTI No. 158-20 into the ROP, which was for the phenyl methyl fluids and resin hydrolysis and polymerization process in emission unit EU303-01 to update emission limits as a result of the USEPA Consent Order . CAM was formerly associated with this emission unit. CAM will be addressed during the next Renewal.	EU303-01

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726-78C	202200062 / April 21, 2023	This Minor Modification was to incorporate PTI No. 726-78C into the ROP, which was for the flake resin hydrolysis process in emission unit EU303-09 located in Building 303, to update emission limits as a result of the USEPA Consent Order.	EU303-09
15-22	202200064 / April 21, 2023	This Minor Modification was to incorporate PTI No. 15-22 into the ROP, which to revise emission limits for the polymer and resin surge, mixing, filtration, and blending process, located in Building 303 (EU303-02) to update emission limits as a result of the USEPA Consent Order. CAM was formerly associated with this emission unit and will be addressed during the next ROP Renewal.	EU303-02
1-08a	202200089 / April 21, 2023	This Minor Modification was to incorporate PTI No. 1-08A into the ROP to revise emission limits for the HCl/MeCl recovery process, which include scrubbers, tanks, columns, vaporizer, absorber, compressor, and related equipment located in Building 311 (EU311-01). Several processes on-site vent to this recovery process. Emissions are controlled by two sets of control device trains, each operating in series, that vent through an absorber (2810/24101) and then a vent scrubber (2812/24102). EU311-01 was updated as a result of the USEPA Consent Order and to reflect the process as currently operating. The absorber and vent scrubber are subject to CAM. CAM Conditions were carried forward and will be addressed during the next ROP Renewal.	EU311-01
334-88E	202200097 / April 21, 2023	This Minor Modification was to incorporate PTI No. 334-88E into the ROP to revise conditions in EU800-01, the 800-block tank farm, consisting of storage and transfer operations for on-site waste liquids. The PTI added a minimum pressure of the nitrogen blanket itself, as opposed to pressure drop across the nitrogen blanket.	EU800-01
84-08D	202200104 / April 21, 2023	This Minor Modification was to incorporate PTI No. 84-08D into the ROP to revise emission limits for the Phenyltrichlorosilane (PhSiCl ₃) and Diphenyldichlorosilane (Ph ₂ SiCl ₂) processes, which include production, storage, and transfer activities, located in Building 508 (EU508-01). EU508-01 was updated as a result of the USEPA Consent Order.	EU508-01
812-91D	202200105 / April 21, 2023	This Minor Modification was to incorporate PTI No. 812-91D into the ROP to revise	EU515-01

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		emission limits that involves all activities associated with production, storage and transfer of Phenylmethyldichlorosilane (PhMeSiCl ₂) and Diphenylmethylchlorosilane (Ph ₂ MeSiCl) in Building 515 (EU515-01). EU515-01 was updated as a result of the USEPA Consent Order. CAM was formerly associated with this emission unit, and the CAM related Conditions were carried forward. CAM will be addressed during the next Renewal.	
200-15A	202200120 / April 21, 2023	This Minor Modification was to incorporate PTI No. 200-15A into the ROP to revise emission limits in emission unit EU505-04 that involves batch reactor 23390 and the manufacturing process containing a receiver, filters, carbon beds, vacuum pump, condensers, storage tanks, and other associated equipment. The processes are controlled by condensers DVS-510 and DV23414 and scrubber DV23401 and then vents to the atmosphere. EU505-04 was updated as a result of the USEPA Consent Order.	EU505-04
38-22	202200153 / April 21, 2023	This Minor Modification was to incorporate PTI No. 38-22 into the ROP for changes to a previously exempt cosmetic wax manufacturing process, consisting of a reactor, process condenser, receiver, and auxiliary equipment which vents through one of two scrubbers operating in parallel prior to the exhaust going through two polishing scrubbers before going to FGTHROX, FGSITESCUBBERS, or 321 Carbon Beds. This is designated EU321-12 and was newly permitted.	EU321-12
26-14A	202200167 / April 21, 2023	This Minor Modification was to incorporate PTI No. 26-14A into the ROP for changes to emission unit EU2703-17, the 9025C waste tank, due to updating of emission calculations. EU2703-17 was updated as a result of the USEPA Consent Order.	EU2703-17
146-16A	202200207 / April 21, 2023	This Minor Modification was to incorporate PTI No. 146-16A into the ROP to revise emission limits for the 1600 batch kettle manufacturing process consisting of an agitated, jacketed kettle, water trap, receiver, blending and filtration, and product packaging, located in Building 303 (EU303-15). EU303-15 was updated as a result of the USEPA Consent Order. CAM was formerly associated with this emission unit, and the CAM related Conditions were	EU303-15

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		carried forward. CAM will be addressed during the next Renewal.	
147-16A	202200208 / April 21, 2023	This Minor Modification was to incorporate PTI No. 147-16A into the ROP to revise emission limits for the 1650 batch kettle manufacturing process consisting of an agitated, jacketed kettle, water trap, receiver, blending and filtration, and product packaging, located in Building 303 (EU303-16). EU303-16 was updated as a result of the USEPA Consent Order. CAM was formerly associated with this emission unit, and the CAM related Conditions were carried forward. CAM will be addressed during the next Renewal.	EU303-16
160-20A	202200228 / April 21, 2023	This Minor Modification was to incorporate PTI No. 160-20A into the ROP, which was for the batch and semi-continuous polymer and resin processing including reactors, distillation columns, strippers, receivers, storage tanks, accumulators, separators, vacuum pumps, condensers, adsorbers, filters in emission unit EU303-06. There are several different ways in which emissions are vented from this emission unit. EU303-06 was updated as a result of the USEPA Consent Order and to reflect the process as currently operating. CAM was formerly associated with this emission unit, and the CAM related Conditions were carried forward. CAM will be addressed during the next Renewal.	EU303-06
166-20A	202200229 / April 21, 2023	This Minor Modification was to incorporate PTI No. 166-20A into the ROP, which was for the phenyl methyl polymerization semi-continuous process consisting of an agitated kettle, water trap, storage tanks, distillation column, receivers, filters, vacuum pumps, and related equipment in emission unit EU303-19. There are several different ways in which emissions are vented from this emission unit.	EU303-19 FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
132-20A	202300004 / April 21, 2023	This Minor Modification is to incorporate PTI No. 132-20A into the ROP, which was to revise emission limits for the HP-7 process, located in Building 322 (EU322-02) from the other emission units comprising FG322-01, due to the updating of emission calculations from the EPA Consent Decree , and to allow for the connection of EU322-02 to the THROX (in FGTHROX). DSC submitted similar separate applications for the other two emission units in FG322-01.	EU322-02

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133-20A	202300005 / April 21, 2023	This Minor Modification is to incorporate PTI No. 133-20A into the ROP, which was to revise emission limits for the HP-6 process, located in Building 322 (EU322-04) from the other emission units comprising FG322-01, due to the updating of emission calculations from the EPA Consent Decree and to allow for the connection of EU322-04 to the THROX (in FGTHROX). DSC submitted similar separate applications for the other two emission units in FG322-01.	EU322-04
24-23	202300049 / March 2, 2023	This Minor Modification is to incorporate PTI No. 24-23 into the ROP, which is the permitting of 501-05 which was previously operated under the Rule 290 exemption, due to the updating of emission calculations from the EPA Consent Decree. EU501-05 consists of the crosslinkers manufacturing process.	EU501-05
26-14B	202300086 / May 8, 2023	This Minor Modification is to incorporate PTI No. 26-14B into the ROP, which was to revise emission limits for the 9025C waste tank, located in Building 2703 (EU2703-17).	EU2703-17

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Appendix 7. Emission Calculations

The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in emission unit tables EU108-01, EU207-03, EU2703-03, EU303-02, EU303-01, EU303-09, EU322-01, EU322-03, EU322-04, EU322-11, EU340-01, EU604-08, and EU800-01.

7.1 – EU108-01 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [V_p(i)] of pure component x Mole Fraction of the component in the liquid [Y(i)]

$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [X(i)]

where X(i) = Partial Pressure Vapor/ Total System Pressure

$$X(i) = P_v / P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;

SCFH (standard cubic feet per hour) is based on EGLE standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas [X(i)]}$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

7.2 – EU207-03 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [$V_p(i)$] of pure component x Mole Fraction of the component in the liquid [$Y(i)$]

$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [$X(i)$]

where $X(i)$ = Partial Pressure Vapor/ Total System Pressure

$$X(i) = P_v / P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;

SCFH (standard cubic feet per hour) is based on EGLE standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas } [X(i)]$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

Calculations based on vent samples

$$\text{VOC Total} = [(\text{No. Batches/ Month containing xylene and ethylbenzene}) \times (0.072 \text{ lb VOC/ batch})] + [(\text{No. of other Batches/ Month}) \times (0.015 \text{ lb VOC/ Batch})] = \text{lb VOC/ Month}$$

$$\text{VOC Rate (Maximum)} = [(0.13 \text{ lb VOC/ Mixer hour}) \times (\text{No. of Mixers in heat step at same time with xylene, ethylbenzene, and VOC emissions})] + [(0.05 \text{ lb VOC/ Mixer hour}) \times (\text{No. of other Mixers in heat step at same time})] = \text{lb VOC/ hour}$$

7.3 – EU2703-03 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's laws.

Determine partial pressure [P_v] of a component above a mixture

where P_v = Vapor Pressure [$V_p(i)$] of pure component x Mole Fraction of the component in the liquid [$Y(i)$]

$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [$X(i)$]

where $X(i)$ = Partial Pressure Vapor / Total System Pressure

$$X(i) = P_v / P_t$$

Determine partial pressure [P_v] of a component as a function of temperature

Determine Vapor Pressure by a form of Antoine's Law. (See simple form below)

$$\text{Log } [V_p(i)] = A + (B / \text{Absolute temperature})$$

Total vent flow calculation, based on molar flow rate (lbmol / hr)

SCFH (standard cubic feet per hour) is based on EGLE standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas } [X(i)]$$

Ton / year calculation

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

The above listed equations shall be used in the following manner for determining emission rates:

1. This item—Item No. 1—is located in the CONFIDENTIAL section of this permit file.
2. Determine the emissions resulting from three separate sets of operations:
 - a) start up/ shut down (i.e. purging with N₂, flushing, and tank feeding)
 - b) normal operations (i.e. steady state)
 - c) periodic tank level changes
3. Basic set of equations:
 - a) determine the moles/hour and mole fractions for the inert compounds
 - b) use Raoult's Law to determine partial pressures of inert compounds
 - c) determine total moles of active ingredients/compounds—thereby determining the lbs/hour before-control emissions
 - d) determine the lbs/hour after-the-condenser emissions—method for determining amount of material controlled in the condenser:

In addition to using Raoult's and Dalton's Laws, it is necessary to determine the "liquid/vapor distribution" coefficient and also the "individual mole fraction in the liquid phase" coefficient

The liquid/vapor distribution coefficient is determined through iteration of the following equations:

$$X_{wa} + X_{wb} + X_{wc} + X_{wd} = 1$$

where X_w = individual mole fraction in liquid phase

or more specifically,

$$X_{wa} = \text{liquid mole fraction}(a) * ([\text{Liq/Vap Distrib}] + 1) * (\text{individual Distribution Coef}(a) + [\text{Liq/Vap Distrib}])$$

*where individual Distribution Coef(a) =
lb moles / {[actual condenser pressure + 14.7] / 14.7} * 760}*

The amount of material condensed into the liquid phase can then be calculated, followed by the amount of uncondensed vapor:

$$\text{Lbs of liquid condensed for component (a)} = \text{total moles of liquid} * \text{liquid mole fraction } (X_{wa}) * \text{Mol. Wt. of component (a)}$$

$$\text{Lbs of uncondensed vapor of component (a)} = [\text{lbs of component (a) in feed}] - [\text{lbs of liquid (a) condensed}]$$

Note the following relationship between the total number of moles of vapor in the system, the total number of moles of liquid, and the "Liquid/Vapor Distribution" coefficient:

Moles of vapor =

$$\left(\frac{\text{lb of component (a) in the feed}}{\text{Mol. Wt. of comp. (a)}} + \frac{\text{lb of component (b) in the feed}}{\text{Mol. Wt. of comp. (b)}} + \frac{\text{lb of component (c) in the feed}}{\text{Mol. Wt. of comp. (c)}} + \frac{\text{lb of component (d) in the feed}}{\text{Mol. Wt. of comp. (d)}} \right) / [\text{Liq/Vap Distrib}]$$

and

$$\text{moles of liquid} = [\text{Liq/Vap Distrib}] * \text{mol vapor}$$

- e) determine the lbs/hour after-the-scrubber emissions

Assume a scrubber removal efficiency of 98.4% for the various chlorosilanes, but take no removal credit for the other compounds (for example, allyl chloride).

- f) determine the tons/year after-control emissions

Multiply the lbs/hour values by the appropriate hours of operation per year and tanks filled per year, etc., to determine the annual emissions.

7.4 – EU303-01 & EU303-02 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [$V_p(i)$] of pure component x Mole Fraction of the component in the liquid [$Y(i)$]

$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [$X(i)$]

where $X(i)$ = Partial Pressure Vapor/ Total System Pressure

$$X(i) = P_v / P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;

SCFH (standard cubic feet per hour) is based on EGGLE standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas } [X(i)]$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

VACUUM LEAK RATE (Lb/Hr), from Chemical Engineering, March 16, 1987 issue, Page 75;

$$\text{LEAK RATE, Lbs/Hr} = 0.08 \times [\text{Volume (ft}^3)]^{0.667}$$

ACHF (actual cubic feet per hour) is calculated at the vent outlet, based on atmospheric pressure and process temperature.

7.5 - EU303-09 - Vent Calculations

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Assumption: Gases are ideal and obey Raoult's and Dalton's Laws.

Dalton's Law of partial pressures:

$$P_1 + P_2 + P_3 + \dots = P_T$$

Where P_1 = partial pressure of component 1 in the vapor phase
 P_T = total pressure

Raoult's Law:

Determine Partial Pressure, P_i

where P_i = (Vapor Pressure of pure component [P_{vapi}])
* (Mole Fraction of the component in the liquid phase [X_i])

$$P_i = P_{vapi} * X_i$$

Determine the Mole Fraction of the Gas, Y_i

where $Y_i = \text{Partial Pressure Vapor} / \text{Total System Pressure}$

$$Y_i = P_i \div P_T$$

Combining Dalton's and Raoult's Laws:

$$\frac{P_i}{P_T} = \frac{n_i}{n_T}$$

The above listed equations shall be used in the following manner for determining emission rates:

Basic set of equations:

- 1) determine the vent flow rate [moles/hour] and mole fractions for the inert compounds
- 2) use Raoult's Law to determine partial pressures of inert compounds

* Where the total vent flow rate is determined as follows:

$$\text{Total vent flow rate} = \frac{(\text{lbmoles of volatiles stripped}) + (\text{lbmoles of N}_2 \text{ due to vacuum leak rate})}{[\text{vapor mole fraction of carrier gas (N}_2)]}$$

where the "lbmoles of volatiles stripped" is determined as follows:

$$\text{lbmoles of volatiles stripped} = \frac{(\text{loading rate}) + (\text{purge rate}) [\text{lbmoles/hour}]}{386.7 [\text{ft}^3/\text{lbmole}]}$$

HOURLY EMISSION RATE CALCULATION

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmole/Hr]} \times \text{Molecular Weight} \times \text{Vapor Mole Fraction [X(i)]}$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

VACUUM LEAK RATE (Lb/Hr), from *Chemical Engineering*, March 16, 1987 issue, Page 75;

$$\text{LEAK RATE, Lbs/Hr} = 0.08 \times [\text{Volume (ft}^3)]^{0.667}$$

7.6 – EU322-01 - Vent Calculations

Assumption: Gases are ideal and obey Raoult's and Dalton's law.

Dalton's Law of partial pressures:

$$P_1 + P_2 + P_3 + \dots = P_T$$

Where P_1 = partial pressure of component 1 in the vapor phase
 P_T = total pressure

Raoult's Law:

Determine Partial Pressure, P_i

where $P_i =$ (Vapor Pressure of pure component [P_{vapi}])
* (Mole Fraction of the component in the liquid phase [X_i])

$$P_i = P_{vapi} * X_i$$

Determine the Mole Fraction of the Gas, Y_i

where $Y_i =$ Partial Pressure Vapor/ Total System Pressure

$$Y_i = P_i \div P_T$$

Combining Dalton's and Raoult's Laws:

$$\frac{P_i}{P_T} = \frac{n_i}{n_T}$$

The above listed equations shall be used in the following manner for determining emission rates:

1. This item—Item No. 1—is located in the CONFIDENTIAL section of this permit file.
2. Determine the emissions resulting from three separate sets of operations:
 - a) start up/ shut down (i.e. purging with N_2 , flushing, and tank feeding)
 - b) normal operations (i.e. steady state)
 - c) periodic tank level changes
3. Basic set of equations:
 - a) determine the moles/hour and mole fractions for the inert compounds
 - b) use Raoult's Law to determine partial pressures of inert compounds
 - c) determine total moles of active ingredients/compounds—thereby determining the lbs/hour before-control-emissions
 - d) determine the lbs/hour after-the-condenser emissions—method for determining amount of material controlled in the condenser:

In addition to using Raoult's and Dalton's Laws, it is necessary to determine the "liquid/vapor distribution" coefficient and also the "individual mole fraction in the liquid phase" coefficient

The liquid/vapor distribution coefficient is determined through iteration of the following equations:

$$X_{wa} + X_{wb} + X_{wc} + X_{wd} = 1$$

where $X_w =$ individual mole fraction in liquid phase

or more specifically,

$$X_{wa} = \text{liquid mole fraction}(a) * ([\text{Liq/Vap Distrib}] + 1) * (\text{individual Distribution Coef}(a) + [\text{Liq/Vap Distrib}])$$

where individual Distribution Coef(a) =
 $\text{lb moles} / \{[(\text{actual condenser pressure} + 14.7) / 14.7]\} * 760\}$

The amount of material condensed into the liquid phase can then be calculated, followed by the amount of uncondensed vapor:

*Lbs of liquid condensed for component (a) =
total moles of liquid * liquid mole fraction (X_{wa}) * Mol. Wt. of component (a)*

*Lbs of uncondensed vapor of component (a) =
[lbs of component (a) in feed] – [lbs of liquid (a) condensed]*

Note the following relationship between the total number of moles of vapor in the system, the total number of moles of liquid, and the "Liquid/Vapor Distribution" coefficient:

Moles of vapor =

([lb of component (a) in the feed/ Mol. Wt. of comp. (a)] + [lb of component (b) in the feed/ Mol. Wt. of comp. (b)] + [lb of component (c) in the feed/ Mol. Wt. of comp. (c)] + [lb of component (d) in the feed/ Mol. Wt. of comp. (d)]) / [Liq/Vap Distrib]

and

*moles of liquid = [Liq/Vap Distrib] * mol vapor*

- e) determine the lbs/hour after-the-scrubber emissions

Assume a scrubber removal efficiency of 97% for the various chlorosilanes, but take no removal credit for the other compounds (i.e. xylene and acetylene).

- f) determine the tons/year after-control-emissions

Multiply the lbs/hour values by the appropriate hours of operation per year and tanks filled per year, etc. to determine the annual emissions.

7.7 – EU322-03 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [$V_p(i)$] of pure component x Mole Fraction of the component in the liquid [$Y(i)$]

$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [$X(i)$]

where $X(i)$ = Partial Pressure Vapor/ Total System Pressure

$$X(i) = P_v / P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;

SCFH (standard cubic feet per hour) is based on EGLE standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas } [X(i)]$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

VACUUM LEAK RATE (Lb/Hr), from Chemical Engineering, March 16, 1987 issue, Page 75;

$$\text{LEAK RATE, Lbs/Hr} = 0.08 \times [\text{Volume (ft}^3)]^{0.667}$$

ACHF (actual cubic feet per hour) is calculated at the vent outlet, based on atmospheric pressure and process temperature.

7.8 - EU322-04 - Vent Calculations For VOC's and chlorosilanes

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [$V_p(i)$] of pure component x Mole Fraction of the component in the liquid [$Y(i)$]

$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [$X(i)$]

where $X(i)$ = Partial Pressure Vapor/ Total System Pressure

$$X(i) = P_v / P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;

SCFH (standard cubic feet per hour) is based on EGLE standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas [X(i)]} \times \text{Vent Reduction Equipment Efficiency (VREE)}$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

7.9 - EU322-11 - Vent Calculations

Assumption: Gases are ideal and obey Raoult's and Dalton's law.

Dalton's Law of partial pressures:

$$P_1 + P_2 + P_3 + \dots = P_T$$

Where P_1 = partial pressure of component 1 in the vapor phase
 P_T = total pressure

Raoult's Law:

Determine Partial Pressure, P_i

where P_i = (Vapor Pressure of pure component [P_{vapi}])
* (Mole Fraction of the component in the liquid phase [X_i])

$$P_i = P_{vapi} \times X_i$$

Determine the Mole Fraction of the Gas, Y_i

where $Y_i = \text{Partial Pressure Vapor} / \text{Total System Pressure}$

$$Y_i = P_i \div P_T$$

Combining Dalton's and Raoult's Laws:

$$\frac{P_i}{P_T} = \frac{n_i}{n_T}$$

The above listed equations shall be used in the following manner for determining emission rates:

1. Recognize that this ("MeVi") process is a batch operation.
2. Basic set of equations:
 - a) determine the moles
 - b) determine the pounds emitted per batch of material produced
 - c) determine the lbs/hour (based on the worst-case highest instantaneous rate) flow to the condenser
 - d) determine the flow from vent condenser (to atmosphere) by using the following condensation calculations:

In addition to using Raoult's and Dalton's Laws, it is necessary to determine the "liquid/vapor distribution" coefficient and also the "individual mole fraction in the liquid phase" coefficient

The liquid/vapor distribution coefficient is determined through iteration of the following equations:

$$X_{wa} + X_{wb} + X_{wc} + X_{wd} = 1$$

where X_w = individual mole fraction in liquid phase

or more specifically,

$$X_{wa} = \text{liquid mole fraction}(a) * ([\text{Liq/Vap Distrib}] + 1) * (\text{individual Distribution Coef}(a) + [\text{Liq/Vap Distrib}])$$

*where individual Distribution Coef(a) = lb moles / {[actual condenser pressure + 14.7] / 14.7} * 760}*

The amount of material condensed into the liquid phase can then be calculated, followed by the amount of uncondensed vapor:

$$\text{Lbs of liquid condensed for component (a)} = \text{total moles of liquid} * \text{liquid mole fraction } (X_{wa}) * \text{Mol. Wt. of component (a)}$$

$$\text{Lbs of uncondensed vapor of component (a)} = [\text{lbs of component (a) in feed}] - [\text{lbs of liquid (a) condensed}]$$

Note the following relationship between the total number of moles of vapor in the system, the total number of moles of liquid, and the "Liquid/Vapor Distribution" coefficient:

$$\text{Moles of vapor} = \frac{([\text{lb of component (a) in the feed/ Mol. Wt. of comp. (a)}] + [\text{lb of component (b) in the feed/ Mol. Wt. of comp. (b)}] + [\text{lb of component (c) in the feed/ Mol. Wt. of comp. (c)}] + [\text{lb of component (d) in the feed/ Mol. Wt. of comp. (d)}])}{[\text{Liq/Vap Distrib}]}$$

and

$$\text{moles of liquid} = [\text{Liq/Vap Distrib}] * \text{mol vapor}$$

- e) multiply the lbs/batch values by the number of batches (produced) per year

7.10 - EU340-01 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [V_p(i)] of pure component x Mole Fraction of the component in the liquid [Y(i)]

$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [X(i)]

where X(i) = Partial Pressure Vapor/ Total System Pressure

$$X(i) = P_v / P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;

SCFH (standard cubic feet per hour) is based on EGLE standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas [X(i)]}$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

VACUUM LEAK RATE (Lb/Hr), from Chemical Engineering, March 16, 1987 issue, Page 75;

$$\text{LEAK RATE, Lbs/Hr} = 0.08 \times [\text{Volume (ft}^3\text{)}]^{0.667}$$

ACHF (actual cubic feet per hour) is calculated at the vent outlet, based on atmospheric pressure and process temperature.

7.11 - EU604-08 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [V_p(i)] of pure component x Mole Fraction of the component in the liquid [Y(i)]

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$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [X(i)]

where X(i) = Partial Pressure Vapor/ Total System Pressure

$$X(i) = P_v \div P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;
SCFH (standard cubic feet per hour) is based on EGLE standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas [X(i)]}$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

VACUUM LEAK RATE (Lb/Hr), from Chemical Engineering, March 16, 1987 issue, Page 75;

$$\text{LEAK RATE, Lbs/Hr} = 0.08 \times [\text{Volume (ft}^3\text{)}]^{0.667}$$

ACFH (actual cubic feet per hour) is calculated at the vent outlet, based on atmospheric pressure and process temperature.

VOLUME VENTED DUE TO SEAL FLUID TRANSFER

$$\text{ft}^3/\text{year} = (\text{gallons / year}) \times (\text{ft}^3 / 7.48 \text{ gallons})$$
$$\text{VAPOR DISPLACED BY SEAL FLUID} = 40.11 \text{ ft}^3/\text{year}$$

VOLUME VENTED DUE TO B/S LEAKAGE AS MEASURED ON FLOW INDICATOR

$$\text{Number of batch still runs} = \text{B/S production} \div 8000 \text{ lbs/batch}$$
$$\text{B/S runs} = 250$$

$$\text{Total vent through FI-2054 for year} = (\text{B/S runs}) \times (\text{lb. vented / batch})$$

$$\text{Total vent} = 4500.0 \text{ lb./year}$$

$$\text{lb/year to ft}^3 = \text{specific volume} \times \text{lb/year}$$

specific volume @ 1 psig = (specific vol. of air lb/ft³) (MW air / MW N₂) (absolute pressure / actual pressure)

$$\text{Specific Vol.} = 12.527385 \text{ ft}^3/\text{lb}$$

$$\text{N}_2 \text{ vent ft}^3/\text{year} = \text{Specific Vol.} \times \text{total vent}$$

$$\text{N}_2 \text{ vent} = 56372.8 \text{ ft}^3/\text{year}$$

TOTAL VAPOR DISPLACEMENT

$$\text{ft}^3/\text{year} = \text{total displacement from level N}_2 + \text{displacement from TCP transfer}$$

$$\text{TOTAL VAPOR DISPLACED} = 56413 \text{ ft}^3/\text{year}$$

VENT COMPOSITION DETERMINATION

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Mole fraction trimer in vent = vapor pressure of trimer / total pressure

vapor mole fraction trimer = 0.00001

vent mole density = 7883 high pressure [psia] / (10.73 psia • ft³/lbmol • R) / TEMP R

mol density of vent = 0.00252 lbmol/ft³

7.12 - EU800-01 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [V_p(i)] of pure component x Mole Fraction of the component in the liquid [Y(i)]

$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [X(i)]

where X(i) = Partial Pressure Vapor / Total System Pressure

$$X(i) = P_v / P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;

SCFH (standard cubic feet per hour) is based on EGLE standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas [X(i)]}$$

OR

$$\begin{aligned} & (\text{Lbs of Compound A / hour}) \times (\text{lbmol / MW of Compound A}) \times (1 \text{ Mole Compound A} / 1 \text{ Mole Compound B}) \\ & \times (\text{MW of Compound B} / \text{lbmol of Compound B}) = \text{Lbs of Compound B Emitted per Hour} \end{aligned}$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

OR

$$\begin{aligned} & (\text{Ton Compound A / hour}) \times (\text{lbmol / MW of Compound A}) \times (1 \text{ Mole of Compound A} / 1 \text{ Mole of Compound B}) \\ & \times (\text{MW of Compound B} / \text{lbmol of Compound B}) = \text{Tons of Compound B Emitted per Hour} \end{aligned}$$

7.13 - FGHP2012A2A - Recordkeeping Provisions for Source Using Actual to Projected-Actual Applicability Test

All information in this Appendix shall be maintained pursuant to R 336.2818 and 40 CFR 52.21(r)(6)(i) for ten years after issuance of Permit to Install No. 91-07C, and shall be provided to the Department for the first year and thereafter made available to the Department upon request.

A. Project Description:

—Dow Corning removed the facility wide HAP emission limits, which allows increased emissions of HAPs and criteria pollutants.

B. Applicability Test Description:

—The actual to projected actual applicability test was used to demonstrate that PSD does not apply to removal of the HAP emission limits.

C. Emission Projections:

Emission Unit/Flexible Group-ID	Pollutant	Emissions (tpy)			Reason-for-Exclusion
		Baseline Actual	Projected Actual/Potential	Excluded	
FGHAP2012A2A	VOC	147	176	-	NA
FGHAP2012A2A	NOx	50	80	-	NA

Note Dow Corning did not consider any emissions to be excludable for this applicability test.

7.14 - EU502-04- HCl Equivalents and SiO2 Equivalents

HCl Equivalents

"HCl equivalents" refers to a theoretical mass of hydrogen chloride calculated from the chlorine composition of chlorosilane compounds in an exhaust stream, presuming complete hydrolysis of the exhaust stream's chlorosilane compounds. The calculation uses chemical principles to determine the stoichiometric amount of HCl from the chlorosilane compounds in the exhaust stream.

For each chlorosilane compound:

$$\frac{MF_{Cl\ compound}}{MW_{of\ MF}} \times \#\ of\ Cl\ atoms \times MW_{HCl} = MF_{HCl}$$

For the entire exhaust stream:

$$Total\ MF_{HCl} = \sum MF_{HCl}$$

Term	Explanation/Definition
MF _{Cl compound}	The mass flow or pound per hour mass emission rate of each chlorosilane compound in the exhaust stream
MW _{of MF}	The molecular weight of the chlorosilane compound
# of Cl _{atoms}	The number of chlorine atoms in the chlorosilane compound
MW _{HCl}	Molecular weight of HCl: 36.5 lbs/lb-mole
MF _{HCl}	The theoretical mass flow (pound per hour) emission rate of HCl equivalents for the chlorosilane compound
Total MF _{HCl}	The total HCl equivalents for the exhaust stream

HCl Equivalents Example

An exhaust stream contains trichlorosilane (TCS) and hexachlorodisilane (HCDS), with no other chlorosilane compounds:

Compound	Exhaust stream flow	Molecular weight	# of Cl atoms
TCS	4.0 lb/hr	135.5 lb/lb-mole	3
HCDS	2.0 lb/hr	268.9 lb/lb-mole	6

For TCS:

$$\frac{4.0}{135.5} \times 3 \times 36.5 = 3.15 \frac{lb}{hr} = MF_{HCl}$$

For HCDS:

$$\frac{2.0}{268.5} \times 3 \times 36.5 = 1.58 \frac{lb}{hr} = MF_{HCl}$$

For the entire exhaust stream:

$$Total\ MF_{HCl} = 3.15 + 1.58 = 4.73 \frac{lb}{hr}\ HCl\ equivalents$$

SiO₂ Equivalents

“SiO₂ equivalents” refers to a theoretical mass of silicon dioxide calculated from the silicon composition of silicon-containing compounds in an exhaust stream, presuming complete oxidation of the exhaust stream’s silicon-containing compounds. The calculation uses chemical principles to determine the stoichiometric amount of SiO₂ from the amount of silicon in the exhaust stream.

For each silicon-containing compound:

$$\frac{MF_{Si\ compound}}{MW_{of\ MF}} \times \#\ of\ Si\ atoms \times MW_{SiO_2} = MF_{SiO_2}$$

For the entire exhaust stream:

$$Total\ MF_{SiO_2} = \sum MF_{SiO_2}$$

Term	Explanation/Definition
MF _{Si compound}	The mass flow or pound per hour mass emission rate of each silicon-containing compound in the exhaust stream
MW _{of MF}	The molecular weight of the silicon-containing compound
# of Si atoms	The number of silicon atoms in the silicon-containing compound
MW _{SiO₂}	The molecular weight of SiO ₂ : 60.08 lbs/lb-mole
MF _{SiO₂}	The theoretical mass flow (pound per hour) loading of SiO ₂ equivalents for the silicon-containing compound
Total MF _{SiO₂}	The total SiO ₂ equivalents for the exhaust stream

SiO₂ Equivalents Example

An exhaust stream contains trichlorosilane (TCS) and hexachlorodisilane (HCDS), with no other silicon-containing compounds:

Compound	Exhaust stream flow	Molecular weight	# of Si atoms
TCS	4.0 lb/hr	135.5 lb/lb-mole	1
HCDS	2.0 lb/hr	268.9 lb/lb-mole	2

For TCS:

$$\frac{4.0}{135.5} \times 1 \times 60.08 = 1.79 \frac{lb}{hr} = MF_{SiO_2}$$

For HCDS:

$$\frac{2.0}{268.5} \times 2 \times 60.08 = 0.90 \frac{lb}{hr} = MF_{SiO_2}$$

For the entire exhaust stream:

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$$Total MF_{SiO_2} = 1.79 + 0.90 = 2.69 \frac{lb}{hr} SiO_2 \text{ equivalents}$$

Appendix 8. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

The permittee shall use the EGLE, AQD, Report Certification form (EQP 5736) and EGLE, AQD, Deviation Report form (EQP 5737) for the annual, semiannual and deviation certification reporting referenced in the Reporting Section of the Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Alternative formats must meet the provisions of Rule 213(4)(c) and Rule 213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

B. Other Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, Part B of this appendix is not applicable.

From: [Schneider, Mary Jo \(M\)](#)
To: [EGLE-ROP](#)
Cc: [Hare, Chris \(EGLE\)](#); [Owens, Caryn \(EGLE\)](#); [Dole, Jamie \(J\)](#); [Alger, Jim \(J\)](#); [Schneider, Mary Jo \(M\)](#)
Subject: Electronic Submittal: DOW SILICONES CORPORATION RULE 216(2) CHANGE NOTIFICATION: EU601-01
Date: Tuesday, August 1, 2023 8:36:59 AM
Attachments: [EU601-01 Cover Letter Minor Mod.pdf](#)
[EU601-01 DSC C-001 Form.pdf](#)
[EU0601-01 DSC M-001 Form.docx](#)

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Attached is the EU601-01 Cover Letter Minor Mod and the EU601-01 DSC C-001 Form, both signed by Kristan Soto, and the EU601-01 DSC M-001 Form to serve as Dow's electronic submittal.

These documents have also been sent by mail through the US Postal Service.

Kind regards,

Mary Jo

Mary Jo Schneider
Dow Michigan Operations Administration
1790 Building, Office 207.1
Ph: (989) 636-3015
mschneider@dow.com

General Business



August 1, 2023

Michigan Department of EGLE
Air Quality Division
Grand Rapids District Office
350 Ottawa Avenue NW, Unit 10
Grand Rapids, MI 49503
EGLE-ROP@michigan.gov

cc: Chris Hare; MI Dept. of EGLE; Air Quality Division; Saginaw Bay District Office; 401 Ketchum Street Suite B; Bay City, MI 48708; harec@michigan.gov
Caryn Owens; MI Dept. of EGLE; Air Quality Division; Cadillac District Office; 120 West Chapin Street; Cadillac, MI 49601-2158; Owensc1@michigan.gov

DOW SILICONES CORPORATION RULE 216(2) CHANGE NOTIFICATION: EU601-01

Please find attached the notification forms required by Rule 216(2) for changes to Dow Silicones Corporation Renewable Operating Permit number MI-ROP-A4043-2019b.

On April 27, 2023, the Alkoxylation Process (EU601-01) received special conditions associated with permit to install application no. 534-771. Dow Silicones Corporation requests that these special conditions be included in the renewable operating permit.

Attached are the M-001 and C-001 forms. If you have questions regarding this submittal, please contact Jim Alger at (989) 615-1901.

A handwritten signature in black ink that reads "Kristan Soto".

Kristan Soto
EH&S Responsible Care Leader
1790 Building, Washington Street
Midland, MI 48674
(989) 633-1809

Enclosures



RENEWABLE OPERATING PERMIT APPLICATION C-001: CERTIFICATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to provide this information may result in civil and/or criminal penalties. Please type or print clearly.

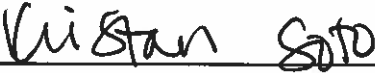
This form is completed and included as part of Renewable Operating Permit (ROP) initial and renewal applications, notifications of change, amendments, modifications, and additional information.

Form Type C-001	SRN A4043
-----------------	-----------

Stationary Source Name Dow Silicones Corporation	
City Midland	County Midland

SUBMITTAL CERTIFICATION INFORMATION	
1. Type of Submittal <i>Check only one box.</i>	
<input type="checkbox"/> Initial Application (Rule 210)	<input checked="" type="checkbox"/> Notification / Administrative Amendment / Modification (Rules 215/216)
<input type="checkbox"/> Renewal (Rule 210)	<input type="checkbox"/> Other, describe on AI-001
2. If this ROP has more than one Section, list the Section(s) that this Certification applies to _____	
3. Submittal Media <input type="checkbox"/> E-mail <input type="checkbox"/> FTP <input type="checkbox"/> Disk <input checked="" type="checkbox"/> Paper	
4. Operator's Additional Information ID - Create an Additional Information (AI) ID that is used to provide supplemental information on AI-001 regarding a submittal. AI EU601-01	

CONTACT INFORMATION	
Contact Name Jim Alger	Title Air Specialist
Phone number 989-616-1901	E-mail address james.s.alger@dow.com

This form must be signed and dated by a Responsible Official.				
Responsible Official Name Kristan Soto			Title EH&S Responsible Care Leader	
Mailing address 1790 Building, Washington Street				
City Midland	State MI	ZIP Code 48674	County Midland	Country USA
As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this submittal are true, accurate and complete.				
 _____ Signature of Responsible Official			_____ 08/01/2023 Date	



RENEWABLE OPERATING PERMIT M-001: RULE 215 CHANGE NOTIFICATION RULE 216 AMENDMENT/MODIFICATION APPLICATION

This information is required by Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment.

1. SRN A4043	2. ROP Number MI-ROP-A4043-2019b	3. County Midland
4. Stationary Source Name Dow Silicones Corporation		
5. Location Address 3901 S. Saginaw Road		6. City Midland
<p>7. Submittal Type - <i>The submittal must meet the criteria for the box checked below. Check only one box. Attach a mark-up of the affected ROP pages for applications for Rule 216 changes.</i></p> <p><input type="checkbox"/> Rule 215(1) Notification of change. <i>Complete Items 8 – 10 and 14</i></p> <p><input type="checkbox"/> Rule 215(2) Notification of change. <i>Complete Items 8 – 10 and 14</i></p> <p><input type="checkbox"/> Rule 215(3) Notification of change. <i>Complete Items 8 – 11 and 14</i></p> <p><input type="checkbox"/> Rule 215(5) Notification of change. <i>Complete Items 8 – 10 and 14</i></p> <p><input type="checkbox"/> Rule 216(1)(a)(i)-(iv) Administrative Amendment. <i>Complete Items 8 – 10 and 14</i></p> <p><input type="checkbox"/> Rule 216(1)(a)(v) Administrative Amendment. <i>Complete Items 8 – 14. Results of testing, monitoring & recordkeeping must be submitted. See detailed instructions.</i></p> <p><input checked="" type="checkbox"/> Rule 216(2) Minor Modification. <i>Complete Items 8 – 12 and 14</i></p> <p><input type="checkbox"/> Rule 216(3) Significant Modification. <i>Complete Items 8 – 12 and 14, and provide any additional information needed on ROP application forms. See detailed instructions.</i></p> <p><input type="checkbox"/> Rule 216(4) State-Only Modification. <i>Complete Items 8 – 12 and 14</i></p>		
8. Effective date of the change. (MM/DD/YYYY) <i>See detailed instructions.</i> <u>08/04/2023</u>		9. Change in emissions? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>10. Description of Change - <i>Describe any changes or additions to the ROP, including any changes in emissions and/or pollutants that will occur. If additional space is needed, complete an Additional Information form (AI-001).</i></p> <p>On April 27, 2023, the Alkoxylation Process (EU601-01) received special conditions associated with permit to install application no. 534-771. Dow Silicones Corporation requests that these special conditions be included in the renewable operating permit.</p>		
11. New Source Review Permit(s) to Install (PTI) associated with this application? If Yes, enter the PTI Number(s) <u>534-771</u> - - - -		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>12. Compliance Status - <i>A narrative compliance plan, including a schedule for compliance, must be submitted using an AI-001 if any of the following are checked No.</i></p> <p>a. Is the change identified above in compliance with the associated applicable requirement(s)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>b. Will the change identified above continue to be in compliance with the associated applicable requirement(s)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>c. If the change includes a future applicable requirement(s), will timely compliance be achieved? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>		
13. Operator's Additional Information ID - <i>Create an Additional Information (AI) ID for the associated AI-001 form used to provide supplemental information.</i>		AI
14. Contact Name Jim Alger	Telephone No. (989) 615-1901	E-mail Address james.s.alger@dow.com
15. This submittal also updates the ROP renewal application submitted on ____/____/____ <i>(If yes, a mark-up of the affected pages of the ROP must be attached.)</i>		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A

NOTE: A CERTIFICATION FORM (C-001) SIGNED BY A RESPONSIBLE OFFICIAL MUST ACCOMPANY ALL SUBMITTALS

For Assistance
Contact: 800-662-9278

www.michigan.gov/egle