

March 15, 2019

Mr. Shane Nixon
District Supervisor
MDEQ-AQQD Cadillac District
120 W. Chaplin
Cadillac, MI 49601-2158

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DEQ/AQD

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MACES _____ MAERS _____
File _____

Re: ROP Renewal Application Lambda Energy SRN:B4292

Dear Mr. Nixon:

Attached please find the Application for Renewal of the Renewable Operating Permit (ROP) for Lambda Energy located in Kalkaska. The package includes

- application forms, including original signed certification page
- table listing of exempt devices
- markup of the current ROP
- copy of the consent decree with EPA.
-

This application is due by May 10, 2019.

The application has also been submitted electronically to the AQD.

We look forward to a determination of administrative completeness. If you have any questions regarding this package, please contact me at 616-512-7033.

Sincerely,



Tammi Van Til
Senior Environmental Consultant

Cc: Jim McGrath, Lambda Energy

Puite, Tammie (DEQ)

From: Tammi VanTil <TVanTil@barr.com>
Sent: Friday, March 15, 2019 10:25 AM
To: DEQ-ROP
Cc: 'Jim McGrath'; Tammi VanTil; Brian P. Greenwald
Subject: ROP Renewal Application: SRN: B4292 Lambda Energy
Attachments: ROP Renewal App_Lambda Energy_031519.pdf

Attached please find the ROP renewal application for Lambda Energy SRN: B4292.

Hardcopy is being mailed to Mr. Shane Nixon, District Supervisor.

Tammi VanTil

Senior Environmental Consultant
Grand Rapids, MI office: 616.512.7033
TVanTil@barr.com
www.barr.com

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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 B4292	SIC Code 1311	NAICS Code 211111	Existing ROP Number MI-ROP-B4292-2014a	Section Number (if applicable)
Source Name Lambda Energy Resources, LLC				
Street Address 1080 Prough Road SW				
City Kalkaska	State MI	ZIP Code 49646	County Kalkaska	
Section/Town/Range (if address not available)				
Source Description Natural gas processing facility				
<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 Lambda Energy Resources, LLC	Section Number (if applicable)			
Mailing address (<input type="checkbox"/> check if same as source address) 1510 Thomas Road SW				
City Kalkaska	State MI	ZIP Code 49646	County Kalkaska	Country USA

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 McGrath		Title Plant Manager		
Company Name & Mailing address (<input type="checkbox"/> check if same as source address) 1510 Thomas Road SW, P.O. Box 550				
City Kalkaska	State MI	ZIP Code 49646	County Kalkaska	Country US
Phone number 231-258-6422		E-mail address jmcgrath@lambdaenergyllc.com		

Contact 2 Name (optional) Tammi Van Til		Title Consultant		
Company Name & Mailing address (<input type="checkbox"/> check if same as source address) Barr Engineering Co. 4771 - 50th SE				
City Grand Rapids	State MI	ZIP Code 49512	County Kent	Country US
Phone number 616-512-7033		E-mail address TVanTil@Barr.com		

RESPONSIBLE OFFICIAL INFORMATION

Responsible Official 1 Name Jim McGrath		Title Plant Manager		
Company Name & Mailing address (<input type="checkbox"/> check if same as source address) Lambda Energy Resources, LLC				
City Kalkaska	State MI	ZIP Code 49646	County Kalkaska	Country US
Phone number 231-258-6422		E-mail address jmcgrath@lambdaenergyllc.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 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 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 checked="" 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 type="checkbox"/> Compliance Assurance Monitoring (CAM) Plan	<input checked="" type="checkbox"/> Electronic documents provided (optional)
<input 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)

Jim McGrath, Plant Manager

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

3/15/19
Date

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 type="checkbox"/> Yes <input checked="" 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, NO _x , PM ₁₀ , PM _{2.5} , SO ₂ , 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 type="checkbox"/> Yes <input checked="" 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 type="checkbox"/> Yes <input checked="" 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 the MDEQ, 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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input 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 type="checkbox"/> Yes <input checked="" 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 type="checkbox"/>	Check here if an AI-001 Form is attached to provide more information for Part C. Enter AI-001 Form ID: AI-	

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.

F1. Has the source obtained any PTIs where the applicable requirements from the PTI have not been incorporated into the existing ROP? If Yes, complete the following table. Yes No
If No, go to Part G.

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
1-15	KGPS	PTI for equipment changes at South Plant KGPS	N/A

F2. Do any of the PTIs listed above change, add, or delete terms/conditions to **established emission units** in the existing ROP? If Yes, 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. Yes No

F3. Do any of the PTIs listed above identify **new emission units** that need to be incorporated into the ROP? If Yes, 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. Yes No

F4. Are there any stacks with applicable requirements for emission unit(s) identified in the PTIs listed above that were not reported in MAERS for the most recent emissions reporting year? If Yes, identify the stack(s) that were not reported on the applicable MAERS form(s). Yes No

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 Yes, describe the changes on an AI-001 Form. Yes No

Comments:
PTI 1-15 was issued in July 2015. This PTI is still listed as active on the AQD permits website; however, the activities described in the permit application have not taken place to date. Pursuant to Rule 201(4), this PTI has expired. Therefore, PTI 1-15 is not proposed to be incorporated into the renewed ROP.

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

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 – <i>Provide Emission Unit ID and a description of Process Equipment, Control Devices and Monitoring Devices</i>	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 type="checkbox"/> Rule 290 process with limited emissions		

Comments:

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

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. Consent Decree US District Court, Civil Action No 1:15-cv-455; copy included herein for application.	<input checked="" type="checkbox"/> Yes <input 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. Add references to OOOOa</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. Add references to OOOOa</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. Add references to OOOOa</p>	<input checked="" type="checkbox"/> Yes <input 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. Add references to OOOOa</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. Add references to OOOOa</p>	<input checked="" type="checkbox"/> Yes <input 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 the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. Yes No

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

Add OOOOa and reference to Consent Decree

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-**



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: B4292	Section Number (if applicable):
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1. Additional Information ID AI-EXEMPT
--

Additional Information

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

Permit to Install exempt equipment required to be listed in the ROP renewal application pursuant to R336.1212(4) of the Michigan Air Pollution Control Rules is presented on the attached table, since there are more emission units than allowed within the format of the Part D renewal form.

LAMBDA ENERGY RESOURCES, LLC
PART D: PTI EXEMPT EMISSION UNITS INFORMATION LISTING
FOR ROP RENEWAL APPLICATION

Exempt Emission Unit ID	Description of Exempt Emission Unit	Rule 212(4) Exemption	Rule 201 Exemption
EU-KGPS-PH1	0.1 MMBtu/hr natural gas space heater	Rule 212(4)(c)	Rule 282(2)(b)(i)
EU-KGPS-PH2	0.1 MMBtu/hr natural gas space heater	Rule 212(4)(c)	Rule 282(2)(b)(i)
EU-KGPS-PH3	0.1 MMBtu/hr natural gas space heater	Rule 212(4)(c)	Rule 282(2)(b)(i)
EU-KGPS-PH4	0.1 MMBtu/hr natural gas space heater	Rule 212(4)(c)	Rule 282(2)(b)(i)
EU-KGPS-PH5	0.1 MMBtu/hr natural gas space heater	Rule 212(4)(c)	Rule 282(2)(b)(i)
EU-KGPS-PH6	0.08 MMBtu/hr natural gas space heater	Rule 212(4)(c)	Rule 282(2)(b)(i)
EU-KGPS-PH7	0.1 MMBtu/hr natural gas space heater	Rule 212(4)(c)	Rule 282(2)(b)(i)
EU-KGPS-PH8	0.1 MMBtu/hr natural gas space heater	Rule 212(4)(c)	Rule 282(2)(b)(i)
EU-KGPS-KNOCKOUT	10,569 gallon flare knock-out tank	Rule 212(4)(d)	Rule 284(2)(e)
EU-KGPS-LEANOIL1	16,800 gallon lean oil storage tank	Rule 212(4)(d)	Rule 284(2)(i)
EU-KGPS-LEANOIL2	16,800 gallon lean oil storage tank	Rule 212(4)(d)	Rule 284(2)(i)
EU-KGPS-LEANOIL3	8,820 gallon lean oil storage tank	Rule 212(4)(d)	Rule 284(2)(i)
EU-KGPS-LEANOIL4	6,300 gallon lean oil storage tank	Rule 212(4)(d)	Rule 284(2)(i)
EU-KGPS-SLOP	26,800 gallon slop oil tank	Rule 212(4)(d)	Rule 284(2)(i)
EU-KGPS-EG1	6,300 gallon ethylene glycol storage tank	Rule 212(4)(d)	Rule 284(2)(i)
EU-KGPS-EG2	4,200 gallon ethylene glycol storage tank	Rule 212(4)(d)	Rule 284(2)(i)
EU-KGPS-EG3	8,820 gallon ethylene glycol storage tank	Rule 212(4)(d)	Rule 284(2)(i)
EU-KGPS-REFRIG	12,343 gallon refrigerant (propane) storage tank	Rule 212(4)(d)	Rule 284(2)(b)
EU-KGPS-WATER	16,800 gallon waste water storage tank	Rule 212(4)(d)	Rule 284(2)(i)
EU-KGPS-MED	20 MMBtu/hr natural gas fired heat medium heater	Rule 212(4)(c)	Rule 282(2)(b)(i)
EU-KGPS-FRAC	18.5 MMBtu/hr natural gas fired fractionation heater	Rule 212(4)(c)	Rule 282(2)(b)(i)
EU-KGPS-STAB	14 MMBtu/hr natural gas fired stabilizer heater	Rule 212(4)(c)	Rule 282(2)(b)(i)
EU-KGPN-WATER1	8,820 gallon waste water storage tank	Rule 212(4)(d)	Rule 284(2)(i)
EU-KGPN-FURNACE	23.5 MMBtu/hr natural gas fired heating oil furnace	Rule 212(4)(c)	Rule 282(2)(b)(i)
EU-KGPN-MERCAPTAN	2,000 gallon ethyl mercaptan storage tank and 80 gallon day tank	Rule 212(4)(d)	Rule 284(2)(i)
EU-KGPN-GASOLINE	500 gallon gasoline storage tank	Rule 212(4)(d)	Rule 284(2)(g)
EU-KGPN-DIESEL	500 gallon diesel fuel storage tank	Rule 212(4)(d)	Rule 284(2)(g)
EU-KGPN-AMINE	1,000 gallon amine storage tank	Rule 212(4)(d)	Rule 284(2)(i)
EU-KGPN-HEATER	10 MMBtu/hr natural gas fired heating medium heater	Rule 212(4)(c)	Rule 282(2)(b)(i)

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

EFFECTIVE DATE: November 10, 2014

REVISION DATE: September 4, 2018

ISSUED TO:

LAMBDA ENERGY RESOURCES, LLC – KALKASKA GAS PLANT

State Registration Number (SRN): B4292

LOCATED AT:

1080 Prough Road SW, Kalkaska, Kalkaska County, Michigan 49646

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-B4292-2014a

Expiration Date: November 10, 2019

Administratively Complete ROP Renewal Application Due Between:
May 10, 2018 and May 10, 2019

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-B4292-2014a

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 Environmental Quality

Shane Nixon, Cadillac District Supervisor

TABLE OF CONTENTS

AUTHORITY AND ENFORCEABILITY	3
A. GENERAL CONDITIONS.....	4
Permit Enforceability	4
General Provisions.....	4
Equipment & Design	5
Emission Limits.....	5
Testing/Sampling	5
Monitoring/Recordkeeping	6
Certification & Reporting	6
Permit Shield	7
Revisions	8
Reopenings.....	8
Renewals.....	9
Stratospheric Ozone Protection	9
Risk Management Plan.....	9
Emission Trading	9
Permit To Install (PTI)	10
B. SOURCE-WIDE CONDITIONS	11
C. EMISSION UNIT CONDITIONS	12
EMISSION UNIT SUMMARY TABLE.....	12
EU-KGPN	14
EU-KGPN-TURB-C.....	<u>3432</u>
EU-KGPS	<u>3735</u>
D. FLEXIBLE GROUP CONDITIONS.....	<u>4745</u>
FLEXIBLE GROUP SUMMARY TABLE.....	<u>4745</u>
FG-KGPS-TURB.....	<u>4846</u>
FG-EMERGENS	<u>5048</u>
FG-RULE 290	<u>5354</u>
E. NON-APPLICABLE REQUIREMENTS	<u>5654</u>
APPENDICES	<u>5755</u>
Appendix 1. Abbreviations and Acronyms.....	<u>5755</u>
Appendix 2. Schedule of Compliance.....	<u>5856</u>
Appendix 3. Monitoring Requirements	<u>5957</u>
Appendix 4. Recordkeeping	<u>5957</u>
Appendix 5. Testing Procedures	<u>5957</u>
Appendix 6. Permits to Install.....	<u>5957</u>
Appendix 7. Emission Calculations	<u>5957</u>
Appendix 8. Reporting	<u>5957</u>

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 Environmental Quality (MDEQ) 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 are 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 federally enforceable Source-Wide PTI pursuant to Rule 201(2)(c) are designated by footnote 2. **(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 §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))**
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). **(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. Except as provided in Subrules 2, 3, and 4 of Rule 301, states in part; "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 Rule 301(1)(a) or (b) unless otherwise specified in this ROP." The grading of visible emissions shall be determined in accordance with Rule 303. **(R 336.1301(1) in pertinent part):**
 - a. A 6-minute average of 20 percent opacity, except for one 6-minute average per hour of not more than 27 percent opacity.
 - b. A limit specified by an applicable federal new source performance standard.
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). **(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(4))**

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. **(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.

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))**
 - a. 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.
 - b. 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 2 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 2 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. **(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))**
 - a. The applicable requirements are included and are specifically identified in the ROP.
 - b. 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:
 - a. 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))**
 - b. 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))**
 - c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**
 - 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:
- Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
 - Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
 - 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))**
 - Minor Permit Modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
 - 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:
- 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))**
 - If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. **(R 336.1217(2)(a)(ii))**
 - 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))**
 - If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

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(8))**

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, Part 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, Part 68.10(a):
- June 21, 1999,
 - Three years after the date on which a regulated substance is first listed under 40 CFR, Part 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))**

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, MDEQ. 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, or has been interrupted for 18 months, the applicable terms and conditions from that PTI 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, MDEQ, 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).

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.

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
EU-KGPN	Natural gas liquid extraction and fractionation plant. Emissions due to upsets and/or emergencies are controlled by the Kalkaska Gas Plant North (KGPN) flare.	1-1-1972 / 3-28-2007	NA
EU-KGPN-TURB-C	A 60.2 MMBtu per hour natural gas fired turbine and 28.0 MMBtu per hour natural gas-fired duct burner in the waste heat recovery unit. The turbine is used for plant electrical production and the WHRU is used to heat thermal oil for other processes.	12-13-2005	NA
EU-KGPS	An idled refrigerated lean oil absorption natural gas liquid recovery process consisting of a lean oil absorber, a rich oil demethanizer, and a rich oil still to separate the natural gas liquids from the lean oil. This is a closed system. Additional components of the emission unit, including the pressurized natural gas storage tanks, heat medium heater, fuel gas system, and flare system, are operated in support of the operation of EU-KGPN.	3-1-1973	NA
EU-KGPS-TURB-A	19,750 hp natural gas-fired G.E. Frame 5 turbine with a 7.5 MW electrical generator and a 55 MMBTU per hour natural gas-fired duct burner in the waste heat recovery unit. The turbine is used for plant electrical production and the WHRU is used to heat thermal oil for other processes.	3-1-1973 / 3-1-1979	FG-KGPS-TURB
EU-KGPS-TURB-B	19,750 hp natural gas-fired G.E. Frame 5 turbine with a 7.5 MW electrical generator and a 55 MMBTU per hour natural gas-fired duct burner in the waste heat recovery unit. The turbine is used for plant electrical production and the WHRU is used to heat thermal oil for other processes.	3-1-1973 / 3-1-1979	FG-KGPS-TURB
EU-KGPN-GENERATOR	275 horsepower International Harvester gas-fired emergency generator.	10-1-1972	FG-EMERGENS
EU-KGPS-GENERATOR	1,090 horsepower Waukesha gas-fired emergency generator.	5-1-1973	FG-EMERGENS

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-KGPN-FIREWATER	125 horsepower Cummins gas-fired emergency fire water engine.	10-1-1972	FG-EMERGENS
EU-KGPS-FIREWATER	145 horsepower Minneapolis Moline gas-fired emergency fire water engine.	5-1-1973	FG-EMERGENS
EU-RULE290	Any existing or future emission unit exempt from R 336.1201 pursuant to R 336.1278 and R 336.1290	NA	FG-RULE290

**EU-KGPN
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Natural Gas Liquid Extraction and Fractionation Plant.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Closed vent system and flare

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

Note that compressor requirements under OOOO and OOOOa contain a % reduction requirement for VOCs in 40 CFR 60.5380(a)(1) and .5380a(a)(1) for centrifugal compressors using wet seals. To be consistent with the rest of the permit that has template language for KKK, OOOO, and OOOOa, the MDEQ may choose to add this language as the facility has a centrifugal compressor under KKK that would trigger OOOOa if modified.

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NOTE: Since OOOO and OOOOa equipment leak standards (LDAR) are identical in their reference back to VV standards, we just added the UAR for OOOOa under the existing OOOO sections. Alternatively, this could be set up to have the same conditions repeated with another set of conditions for OOOOa with the September 18 2015 and after date referenced. However, there are numerous cross references that need to be checked/changed if condition numbers change.

Affected Facilities for which Construction, Reconstruction, or Modification Commenced after January 20, 1984 and on or before August 23, 2011.

1. The permittee shall operate a continuously burning pilot flame at the flare. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame. **(40 CFR 60.18(c)(2), 40 CFR 60.18(f)(2), 40 CFR 60.633(g))**
2. The permittee shall not operate the natural gas processing plant unless the flare which controls its emissions is installed and operating properly. **(40 CFR 60.18(e), 40 CFR 60.633(g))**
3. The flare shall be operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. **(40 CFR 60.18(c)(1), 40 CFR 60.633(g))**

4. The closed vent system and flare shall be operated at all times when emissions may be vented to them.
(40 CFR 60.482-10(m), 40 CFR 60.632(a))

Affected Facilities for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

5. The closed vent system and flare shall be operated at all times when emissions may be vented to them. **(40 CFR 60.482-10a(m), 40 CFR 60.5400(a), [40 CFR 5400a\(a\)](#))**

Leak Detection and Repair for Affected Facilities for which Construction, Reconstruction, or Modification Commenced after January 20, 1984 and on or before August 23, 2011.

6. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Conditions III.38-43. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. **(40 CFR 60.482-2(c), 40 CFR 60.482-2(d)(6), 40 CFR 60.482-3(g), 40 CFR 60.482-7(d), 40 CFR 482-8(c), 40 CFR 60.483-1(b)(3), 40 CFR 60.632(a))**

Leak Detection and Repair for Affected Facilities for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

7. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 days after it is detected, except as provided in Conditions III.44-49 (Delay of Repair). A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. **(40 CFR 60.482-2a(c), 40 CFR 60.482-3a(g), 40 CFR 60.482-8a(c), 40 CFR 60.482-11a(d), 40 CFR 60.483-1a(b)(3), 40 CFR 60.482-7a(d), 40 CFR 60.5400(a) and (b), [40 CFR 60.5400a\(a\) and \(b\)](#))**
8. If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method, from a pressure relief device in light liquid service, the permittee shall monitor the equipment within 5 days or eliminate the visual, audible, olfactory, or other indication of a potential leak within 5 calendar days of detection. **(40 CFR 60.482-8a(a), 40 CFR 60.5400(a), [40 CFR 60.5400a\(a\)](#))**
9. If any inaccessible connector in gas/vapor service or light liquid service is observed by visual, audible, olfactory, or other means, to be leaking, the visual, audible, olfactory, or other indications of a leak to the atmosphere shall be eliminated as soon as practicable. **(40 CFR 60.482-11a(f)(2), 40 CFR 60.5400(a), [40 CFR 60.5400a\(a\)](#))**

Valves in Gas/Vapor Service and in Light Liquid Service for which Construction, Reconstruction, or Modification Commenced after January 20, 1984 and on or before August 23, 2011.

10. Each open-ended valve or line equipped with a second valve shall be operated in such a manner that the valve on the process fluid end is closed before the second valve is closed. **(40 CFR 60.482-6(b), 40 CFR 60.632(a))**
11. When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with Condition IV.2 at all other times. **(40 CFR 60.482-6(c), 40 CFR 60.632(a))**
12. Any valve in gas/vapor or light liquid service that is designated for no detectable emissions, as indicated by an instrument reading of less than 500 parts per million (ppm) above background, is exempt from the requirements of Conditions V.8 and V.9 provided that the valve has no external actuating mechanism in contact with the process fluid, and is operated with emissions less than 500 ppm above background. **(40 CFR 60.482-7(f)(1) and (2), 40 CFR 60.632(a))**
13. The permittee may elect to comply with an allowable percentage of valves leaking of equal to or less than 2.0 percent. **(40 CFR 60.483-1(a), 40 CFR 60.483-1(d), 40 CFR 60.632(b))**

Valves in Gas/Vapor Service and in Light Liquid Service for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

14. Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed. **(40 CFR 60.482-6a(b), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))**
15. When a double block-and-bleed system is used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with Condition IV.3 at all other times. **(40 CFR 60.482-6a(c), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))**
16. Any valve in gas/vapor or light liquid service that is designated for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Conditions V.15 and V.16 provided that the valve has no external actuating mechanism in contact with the process fluid and is operated with emissions less than 500 ppm above background. **(40 CFR 60.5400(a), 40 CFR 60.5400a(a), 40 CFR 60.482-7a(f)(1), 40 CFR 60.482-7a(f)(2))**
17. The permittee may elect to comply with an allowable percentage of valves leaking of equal to or less than 2.0 percent. **(40 CFR 60.483-1a(a), 40 CFR 60.483-1a(d), 40 CFR 60.5400(b), 40 CFR 60.5400a(b))**

Compressors in VOC service or wet gas service for which Construction, Reconstruction, or Modification Commenced after January 20, 1984 and on or before August 23, 2011.

18. Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of Volatile Organic Chemicals (VOC) to the atmosphere, except as provided in Conditions III.20 and V.2. The barrier fluid system for each compressor shall be in heavy liquid service or shall not be in VOC service. Each compressor seal system shall be: **(40 CFR 60.482-3(a), 40 CFR 60.482-3(b), and 40 CFR 60.482-3(c), 40 CFR 60.632(a))**
 - a. Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or
 - b. Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of 40 CFR 60.482-10; or
 - c. Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.
19. Each compressor barrier fluid system as described in Condition III.18 shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both. Each sensor shall be checked daily or shall be equipped with an audible alarm. Based on design considerations and operating experience, the permittee shall determine a criterion that indicates failure of the seal system, barrier fluid system, or both. If the sensor indicates failure of the seal system, barrier fluid system, or both, based on the established criterion, a leak is detected. **(40 CFR 60.482-3(d), 40 CFR 60.482-3 (e), 40 CFR 60.482-3 (f), 40 CFR 60.632(a))**
20. Any compressor that is designated and demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background is exempt from the requirements of Conditions III.18 and III.19. **(40 CFR 60.482-3(i), 40 CFR 60.632(a))**
21. Reciprocating compressors in wet gas service are exempt from the compressor control requirements of Conditions III.18-19 and 40 CFR 60.482-3. **(40 CFR 60.633(f))**

Compressors for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

NOTE: There are separate requirements in OOOO as well as OOOOa for compressors. Both 40 CFR 60.5400 and 5400a LDAR sections say 'except for compressors'. Therefore, this section (conditions 22 to 24) should be removed and replaced with appropriate language. To be consistent with the format of the ROP, the requirements under 60.5380 and .6385 under OOOO and 60.5380a and .6385a under OOOOa could be added using DEQ boilerplate language as applicable. Note that there are several sections under OOOO and OOOOa that would be applicable.

- ~~22. Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in Conditions III.24 and V.3. The barrier fluid system shall be in heavy liquid service or shall not be in VOC service. Each compressor seal system shall be: (40 CFR 60.482-3a(a), 40 CFR 60.482-3a (b), 40 CFR 60.482-3a (c), 40 CFR 60.5400(a))~~
- ~~a. Operated with a barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or~~
- ~~b. Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system connected by a closed vent system to a control device that complies with the requirements of 40 CFR 60.482-10a; or~~
- ~~c. Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.~~
- ~~23. Each compressor barrier fluid system as described in Condition III.22 shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both. Each sensor shall be checked daily or shall be equipped with an audible alarm. Based on design considerations and operating experience, the permittee shall determine a criterion that indicates failure of the seal system, barrier fluid system, or both. If the sensor indicates failure of the seal system, barrier fluid system, or both, based on the established criterion, a leak is detected. (40 CFR 60.482-3a(d), 40 CFR 60.482-3a (e), 40 CFR 60.482-3a (f), 40 CFR 60.5400(a))~~
- ~~24. Any compressor that is designated and demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background is exempt from the requirements of Conditions III.22 and III.23. (40 CFR 60.482-3a(i)(1), 40 CFR 60.5400(a))~~

Pressure Relief Devices in Gas/Vapor Service for which Construction, Reconstruction, or Modification Commenced after January 20, 1984 and on or before August 23, 2011.

- 25-23. Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background. **(40 CFR 60.482-4(a), 40 CFR 60.632(a))**
- 26-24. After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in Conditions III.38 and III.39. **(40 CFR 60.482-4a(b)(1), 40 CFR 60.632(a))**
- 27-25. Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device is exempted from the requirements of Conditions III.25, III.26, and V.22. **(40 CFR 60.482-4(c), 40 CFR 60.632(a))**
- 28-26. Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of Conditions III.38, III.39, and V.22 provided that a new rupture disk is installed after each pressure release as soon as practicable but no later than 5 calendar days after each pressure release, except as provided in Conditions III.38 and 39. **(40 CFR 60.482-4(d), 40 CFR 60.632(a))**
- 29-27. If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method, from a pressure relief device in light liquid service and connectors, the permittee shall eliminate the potential leak within 5 calendar days of detection or the permittee shall monitor the equipment within 5 days. If a leak is detected, it shall be repaired as soon as practicable but not later than 15 calendar days after it is detected, except as provided in Conditions III.38 and 39. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. **(40 CFR 60.482-8(a), 40 CFR 60.632(a))**

Pressure Relief Devices in Gas/Vapor Service for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

- 30-28. Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background. **(40 CFR 60.482-4a(a), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))**

~~31-29.~~ After each pressure release, the pressure relief shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background as soon as practicable but no later than 5 calendar days after the pressure release, except as provided in Conditions III.44 and 45. **(40 CFR 60.482-4a(b)(1), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))**

~~32-30.~~ Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device is exempted from the requirements of Conditions III.30, III.31 and V.23. **(40 CFR 60.482-4a(c), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))**

~~33-31.~~ Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of Conditions III.30, III.31, and V.23 provided that a new rupture disk is installed upstream of the pressure relief device as soon as practicable but no later than 5 calendar days after each pressure release, except as provided in in Conditions III.44 and 45. **(40 CFR 60.482-4a(d), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))**

Pumps in Light Liquid Service for which Construction, Reconstruction, or Modification Commenced after January 20, 1984 and on or before August 23, 2011.

~~34-32.~~ Any pump in light liquid service that is designated for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Conditions V.4, V.5, and IV.4 provided that the pump has no externally actuated shaft penetrating the pump housing and is demonstrated to be operating with no detectable emissions. **(40 CFR 60.482-2(e)(1) and (2), 40 CFR 60.632(a))**

~~35-33.~~ Any pump in light liquid service that is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or a control device is exempt from the requirements of Conditions V.4, V.5, and IV.4. **(40 CFR 60.482-2(f), 40 CFR 60.632(a))**

Pumps in Light Liquid Service for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

~~36-34.~~ Any pump in light liquid service that is designated for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Conditions V.6, V.7, and IV.5 provided that the pump has no externally actuated shaft penetrating the pump housing and is demonstrated to be operating with no detectable emissions. **(40 CFR 60.482-2a(e), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))**

~~37-35.~~ Any pump in light liquid service that is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or a control device is exempt from the requirements of Conditions V.6, V.7, and IV.5. **(40 CFR 60.482-2a(f), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))**

Delay of Repair for which Construction, Reconstruction, or Modification Commenced after January 20, 1984 and on or before August 23, 2011.

~~38-36.~~ The delay of repair for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. Monitoring to verify repair must occur within 15 days after startup of the process unit. **(40 CFR 60.482-9(a), 40 CFR 60.632(a))**

~~39-37.~~ The delay of repair for equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service. **(40 CFR 60.482-9(b), 40 CFR 60.632(a))**

- ~~40-38.~~ Delay of repair for valves will be allowed if: **(40 CFR 60.482-9(c), 40 CFR 60.632(a))**
- The permittee demonstrates that the emissions of purged material resulting from immediate repair are greater than fugitive emissions likely to result from delay of repair and when repair, and
 - When repair procedures are affected, the purged material is collected and destroyed or recovered in a control device complying with 40 CFR 60.482-10.
- ~~44-39.~~ Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown. **(40 CFR 60.482-9(e), 40 CFR 60.632(a))**
- ~~42-40.~~ When a delay of repair is allowed for a leaking pump or valve that remains in service, the pump or valve may be considered repaired and no longer subject to delay of repair requirements if 2 consecutively monthly monitoring instrument readings are below the leak definition. **(40 CFR 60.482-9(f), 40 CFR 60.632(a))**
- ~~43-41.~~ Delay of repair for pumps will be allowed if the repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and the repair is completed as soon as practicable, but not later than 6 months after the leak was detected. **(40 CFR 60.482-9(d), 40 CFR 60.632(a))**

Delay of Repair for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

- ~~44-42.~~ The delay of repair for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of the equipment shall occur before the end of the next process unit shutdown. Monitoring to verify repair must occur within 15 days after startup of the process unit. **(40 CFR 60.5400(a), 40 CFR 5400a(a), 40 CFR 60.482-9a(a))**
- ~~45-43.~~ The delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service. **(40 CFR 60.5400(a), 40 CFR 5400a(a), 40 CFR 60.482-9a(b))**
- ~~46-44.~~ Delay of repair for valves and connectors will be allowed if: **(40 CFR 60.5400(a), 40 CFR 60.5400a(a), 40 CFR 60.482-9a(c))**
- The permittee demonstrates that emissions of purged material resulting from the immediate repair are greater than the fugitive emissions likely to result from the delay of repair, and
 - When repair procedures are effected, the purged material is collected and destroyed or recovery in a control device complying with 40 CFR 60.482-10a.
47. Delay of repair beyond a process unit shutdown will be allowed for a valve, if the valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown. **(40 CFR 60.5400(a), 40 CFR 60.5400a(a), 40 CFR 60.482-9a(e))**
48. Delay of repair for pumps will be allowed if repair requires the use of a dual mechanical seal system that includes a barrier fluid system and repair is completed as soon as practicable, but not later than 6 months after the leak was detected. **(40 CFR 60.5400(a), 40 CFR 60.5400a(a), 40 CFR 60.482-9a(d))**
49. When delay of repair is allowed for a leaking pump, valve, or connector that remains in service, the pump, valve, or connector may be considered to be repaired and no longer subject to delay of repair requirements if 2 consecutive monthly monitoring instrument readings are below the leak definition. **(40 CFR 60.5400(a), 40 CFR 60.5400a(a), 40 CFR 60.482-9a(f))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall comply with the heat content specifications in 40 CFR 60.18(c)(3)(ii) and the maximum tip velocity specifications in 40 CFR 60.18(c)(4), or comply with the requirements of 40 CFR 60.18(c)(3)(i). **(40 CFR 60.18(c)(3) and (4), 40 CFR 60.633(g))**

Open-Ended Valves or Lines for which Construction, Reconstruction, or Modification Commenced after January 20, 1984 and on or before August 23, 2011.

2. Except as provided in 40 CFR 60.482-6(d) and (e), each open-ended valve or line shall be equipped with a cap, blind flange, plug, or second valve. The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line. **(40 CFR 60.482-6(a), 40 CFR 60.632(a))**

Open-Ended Valves or Lines for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

3. Except as provided in 40 CFR 60.482-6a(d), each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve. The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations required process fluid flow through the open ended valve or line. **(40 CFR 60.482-6a(a), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))**

Pumps in Light Liquid Service for which Construction, Reconstruction, or Modification Commenced after January 20, 1984 and on or before August 23, 2011.

4. Each pump in light liquid service equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of Conditions V.4 and V.5, provided that the pump meets the following: **(40 CFR 60.482-2(d)(1), (2), (3), and (5), 40 CFR 60.632(a))**
 - a. Each dual mechanical seal system is:
 - i. Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or
 - ii. Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of 40 CFR 60.482-10; or
 - iii. Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.
 - b. The barrier fluid system is in heavy liquid service or is not in VOC service.
 - c. Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.
 - i. Each sensor shall be checked daily or equipped with an audible alarm.
 - ii. The permittee determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.
 - iii. If the sensor indicates failure of the seal system, the barrier fluid system, or both, based on the criterion established, a leak is detected and shall be repaired as specified in Condition III.6.

Pumps in Light Liquid Service for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

5. Each pump in light liquid service equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of Conditions V.6 and V.7, provided that the pump meets the following: **(40 CFR 60.482-2a(d)(1), (2), (3), (4), and (5), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))**
 - a. Each dual mechanical seal system is:
 - i. Operated with no barrier fluid at a pressure that is all times greater than the pump stuffing box pressure; or
 - ii. Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of 40 CFR 60.482-10; or
 - iii. Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.
 - b. The barrier fluid system is in heavy liquid service or is not in VOC service.
 - c. Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.
 - i. Each sensor shall be checked daily or equipped with an audible alarm.
 - ii. The permittee determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.
 - iii. If the sensor indicates failure of the seal system, the barrier fluid system, or both, based on criterion established, a leak is detected and shall be repaired as specified in Condition III.7.
 - d. Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals. If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the permittee shall perform the following procedures prior to the next required inspection.
 - i. Monitor the pump within 5 business days to determine if there is a leak of VOC in the barrier fluid; or
 - ii. Designate the visual indications of liquids dripping as a leak.

NOTE: Compressors have a design requirement in the OOOO and OOOOa under 40 CFR 60.5380(2) and .5380a(2) for centrifugal compressors, and 40 CFR 60.5385 and .5385a for reciprocating compressors.

V. TESTING/SAMPLING

Records shall be maintained on file for a period of 5 years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall perform non-certified visible emissions observations using USEPA Method 22 to determine the presence of visible emissions from the flare. The visible emissions observations shall be performed on a quarterly basis and the observation period shall be 2 hours. **(40 CFR 60.18(f)(1), 40 CFR 60.633(g), R 336.1213(3))**

Affected Facilities for which Construction, Reconstruction, or Modification Commenced after January 20, 1984 and on or before August 23, 2011.

2. Each compressor, each pump in light liquid service, and each valve in gas/vapor and in light liquid service designated for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background shall be tested for compliance annually and at other times requested by the AQD. **(40 CFR 60.482-2(e)(3), 40 CFR 60.482-7(f)(3), 40 CFR 60.482-3(i)(2), 40 CFR 60.632(a))**

Affected Facilities for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

3. Each pump in light liquid service, ~~compressor~~, and each valve in gas/vapor service and in light liquid service designated for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background shall be tested for compliance initially upon designation, annually, and at other times requested by the AQD. **(40 CFR 60.482-2a(e), 40 CFR 60.482-3a(i)(2), 40 CFR 60.482-7a(f)(3), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))**

Pumps in Light Liquid Service for which Construction, Reconstruction, or Modification Commenced after January 20, 1984 and on or before August 23, 2011.

4. Except as provided in Conditions III.34, III.35, and IV.4, each pump in light liquid service shall be monitored monthly to detect leaks. A pump that begins operation in light liquid service after the initial startup date of the process unit must be monitored for the first time within thirty days after the end of its startup period except for a pump that replaces a leaking pump and except as provided in Conditions III.34, III.35 and IV.4. A leak is detected when an instrument reading of 10,000 ppm or greater is measured. **(40 CFR 60.482-2(a)(1), 40 CFR 60.482-2(b)(1), 40 CFR 60.632(a))**
5. Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. If liquids are dripping from the pump seal, the permittee shall either designate the visual indications as a leak and repair the leak within 15 days of detection by eliminating the visual indications of liquids dripping or monitor the pump within 5 days and repair the leak using the procedures specified in Condition III.6. **(40 CFR 60.482-2(a)(2), 40 CFR 60.482-2(b)(2), 40 CFR 60.482-2(d)(4), 40 CFR 60.632(a))**

Pumps in Light Liquid Service for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

6. Except as provided in Conditions III.36, III.37, and IV.5, each pump in light liquid service shall be monitored monthly to detect leaks. A pump that begins operation in light liquid service after the initial startup date of the process unit must be monitored for the first time within thirty days after the end of its startup period except for a pump that replaces a leaking pump and except as provided in Condition III.36, III.37, and IV.5. A leak is detected when an instrument reading of 2,000 ppm or greater is measured. **(40 CFR 60.482-2a(b)(1)(ii), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))**
7. Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. If liquids are dripping from the pump seal, the permittee shall either designate the visual indications as a leak and repair the leak within 15 days of detection by eliminating the visual indications of liquids dripping or monitor the pump within 5 days and repair the leak using the procedures in Condition III.6. **(40 CFR 60.482-2a(a)(2), 40 CFR 60.482-2a(b)(2), 40 CFR 60.482-2a(d)(4), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))**

Valves in Gas/Vapor Service and in Light Liquid Service for which Construction, Reconstruction, or Modification Commenced after January 20, 1984 and on or before August 23, 2011.

8. Except as provided in Conditions III.12, V.10, V.11, V.12, IX.6, or IX.7, each valve in gas/vapor service and light liquid service shall be monitored monthly to detect leaks. A leak is detected when an instrument reading of 10,000 ppm or greater is measured. If a leak is not detected for 2 successive months, the valve may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected. As an alternative to monitoring all of the valves in the first month of the quarter, the permittee may elect to subdivide the process unit into two or three subgroups and monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every three months. When a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months. The permittee may elect to comply with the alternative work practices specified in Conditions V.10 and V.11. **(40 CFR 60.482-7(a)(1), (b), (c)(1)(i) and (ii), (c)(2), 40 CFR 60.483-2(a)(1), 40 CFR 60.632(a))**

9. Except for a valve that replaces a leaking valve and except as provided in Conditions III.12, V.10, V.11, V.12, IX.6, and IX.7, a valve that begins operation in gas/vapor service or light liquid service after the initial startup date for the process unit must be: **(40 CFR 60.482-7(a)(2), 40 CFR 60.632(a))**
 - a. Monitored as in Condition V.8. The valve must be monitored for the first time within 30 days after the end of its startup period to ensure proper installation; or
 - b. If the valves in the process unit are monitored in accordance with Condition III.13, V.10, or V.11, count the new valve as leaking when calculating the percentage of valves leaking as described in 483-2(b)(5). If less than 2.0 percent of the valves are leaking for that process unit, the valve must be monitored for the first time during the next scheduled monitoring event for existing valves in the process unit or within 90 days, whichever comes first.
10. After initially complying with Condition V.8 for 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, the permittee may begin to skip 1 of the quarterly leak detection periods for the valves in gas/vapor or light liquid service. If the percent of valves leaking is greater than 2.0, the permittee shall comply with Condition V.8 but may elect to use this section again. **(40 CFR 60.483-2(a), 40 CFR 60.483-2 (b)(1), 40 CFR 60.483-2(2), 40 CFR 60.483-2(4))**
11. After initially complying with Conditions V.8 and V.10 for 5 consecutive quarterly leak detection periods with the percent valves leaking equal to or less than 2.0, an owner or operator may begin to skip 3 of the quarterly leak detection periods for the valves in gas/vapor or light liquid service. If the percent of valves leaking is greater than 2.0, the permittee shall comply with Condition V.8 but may elect to use this section again. **(40 CFR 60.483-2(a), 40 CFR 60.483-2(b)(1), 40 CFR 60.483-2(3), 40 CFR 60.483-2(4))**
12. If electing to comply with Condition III.13 for valves, the permittee shall monitor for leaks on an annual basis. **(40 CFR 60.483-1(b)(2))**
13. Any valve in gas/vapor service or light liquid service that is designated as unsafe-to-monitor shall be monitored as frequently as practicable during safe-to-monitor times. **(40 CFR 60.482-7(g)(2), 40 CFR 60.632(a))**
14. Any valve in gas/vapor service or light liquid service that is designated as difficult-to-monitor shall be monitored at least once per calendar year. **(40 CFR 60.482-7(h)(3), 40 CFR 60.632(a), R 336.1213(3))**

Valves in Gas/Vapor Service and in Light Liquid Service for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

15. Except as provided in Conditions III.16, V.18, V.19, V.20, IX.9, or IX.12, each valve in gas/vapor service shall be monitored monthly to detect leaks. A leak is detected when an instrument reading of 500 ppm or greater is measured. If a leak is not detected for 2 successive months, the valve may be monitored the first month of every quarter, beginning the next quarter, until a leak is detected. As an alternative to monitoring all of the valves in the first month of the quarter, the permittee may elect to subdivide the process unit into two or three subgroups and monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every three months. When a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months. The permittee may elect to comply with the alternative work practices specified in Conditions V.19 and V.20. **(40 CFR 60.482-7a(1), 40 CFR 60.482-7a(b), 40 CFR 60.482-7a(c)(1)(i) and (ii), 40 CFR 60.482-7a(c)(2), 40 CFR 60.482-3a(a)(1), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))**
16. Except for a valve that replaces a leaking valve and except as provided in Conditions III.16, V.18, V.19, V.20, IX.9, or IX.12, a valve that begins operation in gas/vapor service or light liquid service after the initial startup date for the process unit must be: **(40 CFR 60.482-7a(a)(2), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))**
 - a. Monitored as in Condition V.15. The valve must be monitored for the first time within 30 days after the end of its startup period to ensure proper installation; or
 - b. If the existing valves in the process unit are monitored in accordance with Conditions III.17, V.18, or V.19, count the new valve as leaking when calculating the percentage of valves leaking as described in 40 CFR 60.483-2a(b)(5). If less than 2.0 percent of the valves are leaking for that process unit, the valve must be monitored for the first time during the next scheduled monitoring event for existing valves in the process unit or within 90 days, whichever comes first.

17. Any valve in gas/vapor or light liquid service that is designated as unsafe-to-monitor shall be monitored as frequently as practicable during safe-to-monitor times and any valve that is designated as difficult-to-monitor shall be monitored at least once per calendar year. (40 CFR 60.482-7a(g)(2), 40 CFR 60.482-7a(h)(3), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))
18. If electing to comply with Condition III.17 for valves, the permittee shall monitor for leaks initially upon designation, annually, and at other times requested by the AQD. (40 CFR 60.483-1a(b)(2), 40 CFR 60.5400(b), 40 CFR 60.5400a(b))
19. After initially complying with Condition V.15 for 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, the permittee may begin to skip one of the quarterly leak detection periods for the valves in gas/vapor or light liquid service. If the percent of valves leaking is greater than 2.0, the permittee shall comply with Condition V.15 but may elect to use this section again. (40 CFR 60.483-2a(a), (b)(1), (2), and (4), 40 CFR 60.5400(b), 40 CFR 60.5400a(b))
20. After initially complying with Conditions V.15 and V.19 for 5 consecutive quarterly leak detection periods with the percent valves equal to or less than 2.0, the permittee may begin to skip three of the quarterly leak detection periods for the valves in in gas/vapor or light liquid service. If the percent of valves leaking is greater than 2.0, the permittee shall comply with Condition V.15 but may elect to use this section again. (40 CFR 60.483-2a(a), (b)(1), (3), and (4), 40 CFR 60.5400(b), 40 CFR 60.5400a(b))
21. A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for a process unit following one of the alternative standards in this section must be monitored in accordance with Conditions V.15 and 16 before the provisions of Condition V.19 and 20 can be applied to that valve. (40 CFR 60.483-2a(b)(7), 40 CFR 60.5400(b), 40 CFR 60.5400a(b))

Pressure Relief Devices in Gas/Vapor Service for which Construction, Reconstruction, or Modification Commenced after January 20, 1984 and on or before August 23, 2011.

22. No later than 5 calendar days after a pressure release, the pressure relief device in gas/vapor service shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background. (40 CFR 60.482-4(b)(2), 40 CFR 60.632(a))

Pressure Relief Devices in Gas/Vapor Service for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

23. No later than 5 calendar days after a pressure release, the pressure relief device in gas/vapor service shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background. (40 CFR 60.5400(a), 40 CFR 60.5400a(a), 40 CFR 60.482-4a(b)(2))

Connectors in Gas/Vapor Service and in Light Liquid Service for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

24. The permittee shall initially monitor all connectors in the process unit for leaks by the later of either 12 months after the compliance date or 12 months after the initial startup. A leak is detected if an instrument reading of greater than or equal to 500 ppm is measured. If all connectors in the process unit have been monitored for leaks prior to the compliance date, no initial monitoring is required provided either no process changes have been made since the monitoring or the permittee can determine that the results of the monitoring, with or without adjustments, reliably demonstrate compliance despite process changes. If required to monitor because of a process change, the permittee is required to monitor only those connectors involved in the process change. (40 CFR 60.482-11a(a), 40 CFR 60.482-11a(b)(2), 40 CFR 60.482-1a(a), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))

25. The permittee shall perform monitoring, subsequent to the initial monitoring required in Condition V.24. The required period in which monitoring must be conducted shall be determined by the following schedule using the monitoring results from the preceding monitoring period. If a connector is found to be leaking, it shall be re-monitored once within 90 days after repair to confirm that it is not leaking: **(40 CFR 60.482-11a(b)(3), 40 CFR 60.482-11a(b)(3)(iv), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))**
- a. If the percent leaking connectors in the process unit were greater than or equal to 0.5 percent, then monitor within 12 months (1 year).
 - b. If the percent leaking connectors in the process unit was greater than or equal to 0.25 percent but less than 0.5, then monitor within 4 years. The permittee may comply with the requirements of this paragraph by monitoring at least 40 percent of the connectors within 2 years of the start of the monitoring period, provided all connectors have been monitored by the end of the 4 year monitoring period.
 - c. If the percent leaking connectors in the process unit was less than 0.25 percent, then monitor as at least 50 percent of the connectors within four years of the start of the monitoring period; and
 - i. If the percent of leaking connectors calculated from the monitoring results is greater than or equal to 0.35 percent of the monitored connectors, the permittee shall monitor as soon as practical, but within the next 6 months, all connectors that have not yet been monitored during the monitoring period. At the conclusion of monitoring, a new monitoring period shall be started based on the percent of leaking connectors within the total monitored connectors; or
 - ii. If the percent of leaking connectors calculated from the monitoring results is less than 0.35 percent of the monitored connectors, the permittee shall monitor all connectors that have not yet been monitored within eight years of the start of the monitoring period.

NOTE: Centrifugal Compressors routed to a control device have a testing requirement in the OOOO and OOOOa under 40 CFR 60.5413 and .5413a

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of 5 years. **(R 336.1213(3)(b)(ii))**

Affected Facilities for which Construction, Reconstruction, or Modification Commenced after January 20, 1984 and on or before August 23, 2011.

1. The following information pertaining to all equipment subject to the requirements of 40 CFR 60.482-1 to 10 shall be recorded in a log that is kept in a readily accessible location: **(40 CFR 60.486(e), 40 CFR 60.632(e))**
 - a. A list of identification numbers for equipment subject to the requirements of 40 CFR, Part 60, Subparts VV and KKK.
 - b. A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of Conditions III.12, III.20, and III.34.
 - c. The designation of equipment as subject to the requirements of Conditions III.12, III.20, and III.34 shall be signed by the permittee.
 - d. The dates of each compliance test as required in Condition V.2.
 - e. The background level measured during each compliance test.
 - f. The maximum instrument reading measured at the equipment during each compliance test.
 - g. A list of identification numbers for equipment in vacuum service.
2. When a leak is detected from a pump in light liquid service, a compressor, a valve in gas/vapor service or light liquid service, a pressure relief device in light liquid service, or connectors, the following information shall be recorded in a log and shall be kept in a readily accessible location: **(40 CFR 60.635(b)(2), 40 CFR 60.486(c))**
 - a. The instrument and operator identification numbers and the equipment identification number.
 - b. The date the leak was detected and the dates of each attempt to repair the leak.
 - c. Repair methods applied in each attempt to repair the leak.
 - d. "Above 10,000 ppm" if the maximum instrument reading measured after each repair attempt is equal to or greater than 10,000 ppm.
 - e. "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
 - f. The signature of the owner or operator whose decision it was that repair could not be affected without a process unit shutdown.
 - g. The expected date of successful repair of the leak, if a leak is not repaired within 15 calendar days.

- h. Dates of process unit shutdown that occurs while the equipment is unrepaired.
 - i. The date of successful repair of the leak.
3. The following information pertaining to all unsafe-to-monitor and difficult-to-monitor valves and all unsafe to monitor pumps shall be recorded in a log that is kept in a readily accessible location: **(40 CFR 60.486(f), 40 CFR 60.632(e))**
- a. A list of identification numbers for valves and pumps that are designated as difficult-to-monitor or unsafe-to-monitor.
 - b. An explanation for each valve or pump stating why it is difficult-to-monitor or unsafe-to-monitor.
 - c. The plan for monitoring each unsafe-to-monitor valve or pump.
 - d. The schedule for monitoring each unsafe-to-monitor valve or pump.
4. The following information shall be recorded for valves complying with Conditions V.10 and V.11 (Alternative Standards for Valves – Skip Period Leak Detection and Repair): **(40 CFR 60.486(g), 40 CFR 60.483-2(b)(6), 40 CFR 60.632(e))**
- a. A schedule for monitoring.
 - b. The percent of valves found leaking during each monitoring period.
5. The permittee shall keep the following information for closed vent systems and flares described in 40 CFR 60.482-10 in a readily accessible location: **(40 CFR 60.486(d))**
- a. Detailed schematics, design specifications, and piping and instrumentation diagrams.
 - b. The dates and descriptions of any changes in the design specifications.
 - c. A description of the parameter(s) monitored as required by 40 CFR 60.482-10(e), to ensure the control devices are operated and maintained in conformance with the design; and an explanation of why the parameter(s) were selected for the monitoring.
 - d. Periods when the closed vent systems and control devices are not operated as designed, including periods when a flare pilot light does not have a flame.
 - e. Dates of startups and shutdowns of the closed vent systems and control devices.
6. If electing to comply with the alternative monitoring requirements listed in Condition V.8 for valves in gas/vapor service and in light liquid service, the permittee shall keep records of the valves assigned to each subgroup. **(40 CFR 60.482-7(c)(ii))**

Affected Facilities for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

7. The following information pertaining to all equipment subject to the requirements of 40 CFR 60.482-1a to 60.482-10a shall be recorded in a log that is kept in a readily accessible location: **(40 CFR 60.486a(e), 40 CFR 60.5400(e), 40 CFR 60.5400a(e))**
- a. A list of identification numbers for equipment subject to the requirements of 40 CFR, Part 60, Subparts VVa and OOOO and OOOOa.
 - b. A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of Conditions III.16, III.24, and III.36.
 - c. The designation of equipment as subject to the requirements of Conditions III.16, III.31, and III.36 shall be signed by the permittee.
 - d. A list of equipment identification numbers for pressure relief devices required to comply with Conditions III.30, III.31, and V.23.
 - e. The dates of each compliance test as required in Condition V.3.
 - f. The background level measured during each compliance test.
 - g. The maximum instrument reading measured at the equipment during each compliance test.
 - h. A list of identification numbers for equipment in vacuum service.
 - i. The date and results of the weekly visual inspection for indications of liquids dripping from pumps in light liquid service.
 - j. Records of the information for monitoring instrument calibrations conducted:
 - i. Date of calibration and initials of the operator performing the calibration.
 - ii. Calibration gas cylinder identification, certification date, and certified concentration.
 - iii. Instrument scale(s) used.

- iv. A description of any corrective action taken if the meter readout could not be adjusted to correspond to the calibration gas value.
 - v. Results of each calibration drift assessment.
 - k. The connector monitoring schedule for each process unit as specified in Conditions V.24 and 25;
 - l. Records of the release from a pressure relief device subject to Condition III.31.
8. When a leak is detected from a pump in light liquid service, a compressor, a valve in gas/vapor service or light liquid service, a pressure relief device in light liquid service, or connectors, the following information shall be recorded in a log and shall be kept in a readily accessible location: **(40 CFR 60.486a(c), 40 CFR 60.5400(e), 40 CFR 60.5400a(e))**
- a. The instrument and operator identification numbers and the equipment identification number.
 - b. The date the leak was detected and the dates of each attempt to repair the leak.
 - c. Repair methods applied in each attempt to repair the leak.
 - d. Maximum instrument reading measured at the time the leak is successfully repaired or determined non-repairable, except when a pump is repaired by eliminating indications of liquids dripping.
 - e. "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
 - f. The signature of the owner or operator whose decision it was that repair could not be affected without a process unit shutdown.
 - g. The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days.
 - h. Dates of process unit shutdown that occurs while the equipment is unrepaired.
 - i. The date of successful repair of the leak.
9. The following information pertaining to all valves subject to Conditions V.17 and IX.12 and all pumps and connectors subject to the requirements of Condition IX.9 shall be recorded in a log that is kept in a readily accessible location: **(40 CFR 60.486a(f), 40 CFR 60.5400(e), 40 CFR 60.5400a(e))**
- a. A list of identification numbers for valves that are designated as unsafe to monitor, an explanation for each valve stating why the valve is unsafe-to-monitor, and the plan for monitoring each valve.
 - b. A list of identification numbers for valves, pump, and connector that are designated as difficult-to-monitor, an explanation for each valve, pump, and connector stating why the valve, pump, and connector is difficult-to-monitor, and the schedule for monitoring each valve, pump, and connector.
10. The permittee shall record a schedule of monitoring and the percent of valves found leaking during each monitoring period for valves complying with Conditions V.19 and 20. **(40 CFR 60.486a(g), 40 CFR 60.482-1a(a), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))**
11. The following information shall be recorded in a log that is kept in a readily accessible location: **(40 CFR 60.486a(h), 40 CFR 60.5400(e), 40 CFR 60.5400a(e))**
- a. Design criterion required in Conditions IV.5 and III.23 and explanation of the design criterion.
 - b. Any changes to the criterion and the reason for the changes.
12. The permittee shall keep the following information for closed vent systems and flares described in 60.482-10a in a readily accessible location: **(40 CFR 60.486a(d), 40 CFR 60.5400(e), 40 CFR 60.5400a(e))**
- a. Detailed schematics, design specifications, and piping and instrumentation diagrams.
 - b. The dates and descriptions of any changes in the design specifications.
 - c. A description of the parameter(s) monitored as required by 40 CFR 60.482-10a(e), to ensure the control devices are operated and maintained in conformance with the design and an explanation of why the parameter(s) was/were selected for the monitoring.
 - d. Periods when the closed vent systems and control devices are not operated as designed, including periods when a flare pilot light does not have a flame.
 - e. Dates of startups and shutdowns of the closed vent systems and control devices.
13. The permittee shall record the following information for each monitoring event required by Conditions V.3, V.6, V.15, V.19, V.20, V.24, and V.25: **(40 CFR 60.486a(a)(3), 40 CFR 60.5400(e), 40 CFR 60.5400a(e))**
- a. Monitoring instrument identification.
 - b. Operator identification.

- c. Equipment identification.
- d. Date of monitoring.
- e. Instrument reading.

- 14. The permittee shall keep a record of the start date and end date of each monitoring period for each connector. **(40 CFR 60.482-11a(b)(3)(v), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))**
- 15. If electing to comply with the alternative monitoring requirements listed in Condition V.15 for valves in gas/vapor service and in light liquid service, the permittee shall keep records of the valves assigned to each subgroup. **(40 CFR 60.482-7a(c)(ii))**

NOTE: Compressors have monitoring requirements under OOOO and OOOOa under 40 CFR 60.5416 and .5416a and recordkeeping requirements under 40 CFR 60.5420(c)(2)

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's 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's District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

Affected Facilities for which Construction, Reconstruction, or Modification Commenced after January 20, 1984 and on or before August 23, 2011.

- 4. The permittee shall submit semi-annual reports. The report shall be postmarked or received by the appropriate AQD's District Office by January 30 for the reporting period of July 1 to December 31 and July 30 for the reporting period of January 1 to June 30. The semi-annual reports shall contain the following information: ² **(40 CFR 60.636(a), 40 CFR 60.636(c), 40 CFR 60.487(a), 40 CFR 60.487(c))**
 - a. The process unit identification.
 - b. For each month during the semi-annual reporting period:
 - i. The number of pressure relief devices for which leaks were detected as required in 40 CFR 60.633(b)(2).
 - ii. The number of pressure relief devices for which leaks were not repaired are required in 40 CFR 60.633(b)(2).
 - iii. The number of valves for which leaks were detected as described in Conditions V.8, V.10, and V.11.
 - iv. The number of valves for which leaks were not repaired as required in Condition III.6.
 - v. The number of pumps for which leaks were detected as described in Conditions IV.4.c, V.6, and V.7.
 - vi. The number of pumps for which leaks were not repaired as required in Condition III.6.
 - vii. The number of compressors for which leaks were detected as described in Condition III.19.
 - viii. The number of compressors for which leaks were not repaired as required in Condition III.6.
 - ix. The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.
 - c. The dates of process unit shutdowns which occurred within the semi-annual reporting period.
 - d. Revisions to the number of valves, pumps, compressors, and pressure relief devices reported in the initial report if changes have occurred since the initial report or subsequent revisions to the initial report.

Affected Facilities for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

- 5. The permittee shall submit an initial semiannual report. The report shall be postmarked or received by the appropriate AQD's District Office by January 30 for the reporting period of July 1 to December 31 and July 30 for the reporting period of January 1 to June 30. The semiannual report shall contain the following information: **(40 CFR 60.487a(a) and (b), 40 CFR 60.482-1a(a), 40 CFR 60.5400(a) and (e), 40 CFR 60.5400a(a) and (e))**

- a. The process unit identification.
 - b. Number of valves subject to the requirements of 482-7(a), excluding those valves designated for no detectable emissions under the provision of 482-7a(f).
 - c. Number of pumps subject to the requirements of 482-2a, excluding those pumps designated for no detectable emissions under the provisions of 482-2a(e) and those pumps complying with 482-3a(h).
 - d. Number of connectors subject to the requirements of 482-11a.
6. The permittee shall submit semiannual reports. The reports shall be postmarked or received by the appropriate AQD's District Office by January 30 for the reporting period of July 1 to December 31 and July 30 for the reporting period of January 1 to June 30. All semiannual reports shall contain the following information: **(40 CFR 60.487a(c), 40 CFR 60.5400(e), 40 CFR 60.5400a(e))**
- a. Process unit identification;
 - b. For each month during the semiannual reporting period:
 - i. The number of valves for which leaks were detected as described in Conditions V.15, V.19, and V.20.
 - ii. The number of valves for which leaks were not repaired as required in Condition III.7.
 - iii. The number of pumps for which leaks were detected as described in Conditions IV.5.c, V.6, and V.7.
 - iv. The number of pumps for which leaks were not repaired as required in Condition III.7.
 - v. The number of compressors for which leaks were detected as described in Condition III.23.
 - vi. The number of compressors for which leaks were not repaired as required in Condition III.7.
 - vii. The number of connectors for which leaks were detected as described in Condition V.24.
 - viii. The number of connectors for which leaks were not repaired as required in Condition III.7.
 - c. Dates of process unit shutdowns which occurred within the semiannual reporting period.
 - d. Revisions to items reported if changes have occurred since the initial report or subsequent revisions to the initial report.
7. The permittee shall notify the AQD no less than 90 days prior to electing to comply with the alternative standard for valves in Conditions V.10-12. **(40 CFR 60.483-1(b)(1), 40 CFR 60.483-2(a)(2), 40 CFR 60.487(d))**
8. The permittee shall notify the AQD no less than 90 days prior to electing to comply with the alternative standard for valves in Conditions V.18-20. **(40 CFR 60.483-1a(b)(1), 40 CFR 60.483-2a(a)(2), 40 CFR 60.487a(d), 40 CFR 60.5400(e), 40 CFR 60.5400a(e))**

NOTE: OOOO and OOOOa have reporting requirements for compressors under 40 CFR 60.5420(b)(3) and .5420a(b)(3)

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
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

Affected Facilities for which Construction, Reconstruction, or Modification Commenced after January 20, 1984 and on or before August 23, 2011.

- 1. When a leak is detected from a pump in light liquid service, a valve in gas/vapor service or light liquid service, or a compressor, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. The identification on a valve may be removed after it has been

monitored for 2 successive months as specified in Condition V.8 and no leaks have been detected during those 2 months. The identification on pumps and compressors may be removed after it has been repaired. **(40 CFR 60.486(b), 40 CFR 60.632(e))**

2. The permittee shall maintain and follow an AQD approved VOC Leak Detection plan. Any updates and modifications to the plan shall be submitted to the AQD for approval.² **(40 CFR, Part 60, Subpart KKK)**
3. The permittee shall maintain a written plan that requires monitoring unsafe-to-monitor valves as frequently as practicable during safe-to-monitor times and difficult-to-monitor valves in gas/vapor service or in light liquid service at least once per calendar year. **(40 CFR 60.482-7(g)(2), 40 CFR 60.482-7(h)(3), 40 CFR 60.632(a))**
4. The permittee shall maintain a written plan that requires monitoring of pumps in light liquid service that are unsafe-to-monitor as frequently as practicable during safe-to-monitor times. **(40 CFR 60.482-2(g)(2), 40 CFR 60.632(a))**
5. The permittee shall comply with the applicable requirements of 40 CFR, Part 60, Subpart KKK – Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants for Which Construction, Reconstruction, or Modification Commenced After January 20, 1984, and on or Before August 23, 2011. **(40 CFR, Part 60, Subpart KKK)**
6. For any pump in light liquid service and any valve in gas/vapor service and in light liquid service that is unsafe-to-monitor, the permittee shall demonstrate that the pump or valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with Conditions V.4, V.5 and V.8. **(40 CFR 60.482-2(g)(1), 40 CFR 60.482-7(g)(1), 40 CFR 60.632(a))**
7. Any valve in gas/vapor service or light liquid service that is designated as difficult-to-monitor is exempt from the requirements of Condition V.8 if: **(40 CFR 60.482-7(h), 40 CFR 60.632(a))**
 - a. The permittee can demonstrate that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface;
 - b. The process unit within which the valve is located either becomes an affected facility through 40 CFR 60.14 or 60.15 or the permittee designates less than 3.0 percent of the total number of valves as difficult-to-monitor, and
 - c. The permittee follows a written plan that requires monitoring of the valve at least once per calendar year.

Affected Facilities for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

8. When a leak is detected from a pump in light liquid service, a valve in gas/vapor service or light liquid service, a compressor, or a connector in gas/vapor service or light liquid service, a weatherproof and visible identification marked with the equipment identification number, shall be attached to the leaking equipment. The identification on a valve may be removed after is has been monitored for 2 successive months as specified in Condition V.15 and no leak has been detected during those 2 months. The identification on a connector may be removed after is has been monitored as specified in Conditions V.24 and V.25 and no leak has been detected during that monitoring period. The identification equipment, except on a valve or connector, may be removed after is has been repaired. **(40 CFR 60.486a(b), 40 CFR 60.5400(e), 40 CFR 60.5400a(e))**
9. For any pump in light liquid service, any valve in gas/vapor service or in light liquid service, and any connector that is unsafe-to-monitor, the permittee shall demonstrate that the pump, valve, or connector is unsafe to monitor because monitor personnel would be exposed to an immediate danger as a consequence of complying with Conditions V.6, V.7, V.15, V.16, V.24, and V.25. **(40 CFR 60.482-2a(g)(1), 40 CFR 60.482-7a(g)(1), 40 CFR 60.482-11a(e)(1), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))**
10. The permittee shall maintain a written plan that requires monitoring of pumps in light liquid service that are unsafe-to-monitor as frequently as practicable during safe-to-monitor times. **(40 CFR 60.482-2a(g)(2), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))**
11. The permittee shall maintain a written plan that requires monitoring of connectors in gas/vapor service or light liquid service that are unsafe-to-monitor as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to

the procedures specified in Condition III.7 if a leak is detected. (**40 CFR 60.482-11a(e)(2)**, **40 CFR 60.5400(a)**, **40 CFR 60.5400a(a)**)

12. Any valve in gas/vapor service or in light liquid service that is designated as difficult-to-monitor or unsafe-to-monitor is exempt from the requirements of Condition V.15 if: **(40 CFR 60.482-7a(g) and (h), 40 CFR 60.482-1a(a), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))**
 - a. The permittee can demonstrate that the difficult-to-monitor valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface;
 - b. The process unit within which the difficult-to-monitor valve is located becomes an affected facility through 40 CFR 60.14 or 60.15 or the permittee designates less than 3.0 percent of the total number of valves as difficult-to-monitor, and
 - c. The permittee follows a written plan that requires monitoring of the difficult-to-monitor valve at least once per calendar year;
 - d. The permittee demonstrates that the valve is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with Condition V.15;
 - e. The permittee follows a written plan that requires monitoring of the unsafe-to-monitor valve as frequently as practicable during safe-to-monitor times.

13. Any connector in gas/vapor service or light liquid service that is inaccessible is exempt from the monitoring requirements of Conditions V.24 and V.25 and the leak repair requirements of Condition III.7. An inaccessible connector is one that meets any of the following: **(40 CFR 60.482-11a(f)(1), 40 CFR 60.5400(a), 40 CFR 60.5400a(a))**
 - a. Buried;
 - b. Insulated or in a manner that prevents access to the connector by a monitor probe;
 - c. Obstructed by equipment or piping that prevents access to the connector by a monitor probe;
 - d. Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold that would allow access to connectors up to 25 feet above the ground;
 - e. Inaccessible because it would require elevating the monitoring personnel more than 7 feet above a permanent support surface or would require the erection of scaffold; or
 - f. Not able to be accessed at any time in a safe manner to perform monitoring.

14. The permittee shall comply with the applicable requirements of 40 CFR, Part 60, Subpart OOOO – Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution. **(40 CFR, Part 60, Subpart OOOO)**

15. The permittee shall comply with the applicable requirements of 40 CFR, Part 60, Subpart OOOOa – Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution. (40 CFR, Part 60, Subpart OOOOa)

- 44.16. The permittee shall comply with all provisions of the Consent Decree dated July 20, 2015 (Civil Action No. 1:15-cv-455), as attached in Appendix 9, until such time that the Consent Decree is terminated by the United States.

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).

**EU-KGPN-TURB-C
 EMISSION UNIT CONDITIONS**

DESCRIPTION

A 60.2 MMBtu per hour natural gas fired turbine and 28.0 MMBtu per hour natural gas-fired duct burner in the waste heat recovery unit. The turbine is used for plant electrical production and the WHRU is used to heat thermal oil for other processes.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Low NO_x burners

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NO _x	1.2 lb/MW-hr ²	Test Protocol*	EU-KGPN-TURB-C	Conditions V.1 and V.2	40 CFR 60.4320(a)

* Test protocol will specify averaging time

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Natural Gas	Total potential sulfur emissions less than or equal to 0.060 lb SO ₂ /MMBtu heat input ²	NA	EU-KGPN-TURB-C	Condition VI.1	40 CFR 60.4330(a)(2)

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall burn only natural gas in EU-KGPN-TURB-C.² **(R 336.1225, R 336.1702(a))**
2. The permittee shall operate and maintain EU-KGPN-TURB-C in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction. **(40 CFR 60.4333(a))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain EU-KGPN-TURB-C with a low NO_x burner.² **(40 CFR 60.4320(a))**
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the natural gas usage for EU-KGPN-TURB-C on a continuous basis. **(R 336.1213(3)(b))**

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 perform annual performance tests in accordance with 40 CFR 60.4400 to demonstrate continuous compliance with the NO_x emission limit listed in Condition I.1. **(40 CFR 60.4340(a))**
2. If the NO_x emission result from testing is less than or equal to 0.9 lb/MW-hr., the frequency of testing can be reduced to once every 2 years (but no more than 26 months between tests). If the results of any subsequent performance test exceed 0.9 lb/MW-hr., annual performance testing shall be resumed. **(40 CFR 60.4340(a))**

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 fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract to demonstrate that the natural gas potential sulfur emissions do not exceed 0.060 lb SO₂/MMBtu heat input.² **(40 CFR 60.4360, 40 CFR 60.4365, R 336.1213(3)(b))**
2. The permittee shall keep, in a satisfactory manner, monthly records of the amount of fuel combusted in the duct burner for EU-KGPN-TURB-C.² **(R 336.1225, R 336.1702(a), R 336.1213(3)(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 two complete test protocols to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor for approval at least 30 days prior to the anticipated test date. The protocols shall describe the test method(s) and the maximum routine operating conditions including targets for key operational parameters associated with pollution control equipment to be monitored and recorded during testing.² **(R 336.2001(3), R 336.1213(3))**
5. The permittee shall notify the AQD Technical Programs Unit Supervisor and District Supervisor no less than 7 days prior to the anticipated test date. **(R 336.2001(4), R 336.1213(3))**
6. The permittee shall submit two complete test reports of the test results to the AQD, one to the Technical Programs Unit and one to the District Supervisor, within 60 days following the last date of the test.² **(40 CFR 4375(b), R 336.2001(5), R 336.1213(3))**

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. SV-KGPN-TURB-C-BYPASS	48 ²	48 ²	R 336.1225, 40 CFR 52.21(c) and (d)
2. SV-KGPN-TURB-C-WHRU	48 ²	48 ²	R 336.1225, 40 CFR 52.21(c) and (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the applicable requirements of 40 CFR, Part 60, Subpart KKKK – Standards of Performance for Stationary Combustion Turbines. **(40 CFR, Part 60, Subpart KKKK)**

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).

**EU-KGPS
 EMISSION UNIT CONDITIONS**

DESCRIPTION

An idled refrigerated lean oil absorption natural gas liquid recovery process consisting of a lean oil absorber, a rich oil demethanizer, and a rich oil still to separate the natural gas liquids from the lean oil. This is a closed system. Additional components of the emission unit, including the pressurized natural gas storage tanks, heat medium heater, fuel gas system, and flare system, are operated in support of the operation of EU-KGPN.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

KGPS flare for upsets/emergencies

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

Updates completed for EUKGPS to incorporate OOOOa should also be incorporated in the below sections for EUKGPN

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The closed vent system and flare shall be operated at all times when emissions may be vented to them. (40 CFR 60.482-10a(m), 40 CFR 60.5400(a))

Leak Detection and Repair for Affected Facilities for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

2. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 days after it is detected, except as provided in Conditions III.18-23 (Delay of Repair). A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. (40 CFR 60.482-2a(c), 40 CFR 60.482-3a(g), 40 CFR 60.482-8a(c), 40 CFR 60.482-11a(d), 40 CFR 60.483-1a(b)(3), 40 CFR 60.482-7a(d), 40 CFR 60.5400(a), 40 CFR 60.5400 (b))
3. If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pressure relief devices in light liquid service, the permittee shall monitor the equipment within 5 days or eliminate the visual, audible, olfactory, or other indication of a potential leak within 5 calendar days of detection. (40 CFR 60.482-8a(a), 40 CFR 60.5400(a))

4. If any inaccessible connector in gas/vapor service or light liquid service is observed by visual, audible, olfactory, or other means to be leaking, the visual, audible, olfactory, or other indications of a leak to the atmosphere shall be eliminated as soon as practicable. **(40 CFR 60.482-11a(f)(2), 40 CFR 60.5400(a))**

Valves in Gas/Vapor Service and in Light Liquid Service for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

5. Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed. **(40 CFR 60.482-6a(b), 40 CFR 60.5400(a))**
6. When a double block-and-bleed system is used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with Condition IV.1 at all other times. **(40 CFR 60.482-6a(c), 40 CFR 60.5400(a))**
7. Any valve in gas/vapor or light liquid service that is designated for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Conditions V.4 and V.5 provided that the valve has no external actuating mechanism in contact with the process fluid and is operated with emissions less than 500 ppm above background. **(40 CFR 60.5400(a), 40 CFR 60.482-7a(f)(1), 40 CFR 60.482-7a(f)(2))**
8. The permittee may elect to comply with an allowable percentage of valves leaking of equal to or less than 2.0 percent. **(40 CFR 60.483-1a(a), 40 CFR 60.483-1a(d), 40 CFR 60.5400(b))**

Compressors for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

9. Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in Conditions III.11 and V.1. The barrier fluid system shall be in heavy liquid service or shall not be in VOC service. Each compressor seal system shall be : **(40 CFR 60.482-3a(a), (b), and (c), 40 CFR 60.5400(a))**
 - a. Operated with a barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or
 - b. Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system connected by a closed vent system to a control device that complies with the requirements of 60.482-10a; or
 - c. Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.
10. Each compressor barrier fluid system as described in Condition III.9 shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both. Each sensor shall be checked daily or shall be equipped with an audible alarm. Based on design considerations and operating experience, the permittee shall determine a criterion that indicates failure of the seal system, barrier fluid system, or both. If the sensor indicates failure of the seal system, barrier fluid system, or both based on the established criterion, a leak is detected. **(40 CFR 60.482-3a(d), (e), and (f), 40 CFR 60.482-1a(a), 40 CFR 60.5400(a))**
11. Any compressor that is designated for no detectable emissions as indicated by an instrument reading of less than 500 ppm above background is exempt from the requirements of Conditions III.9 and III.10 if the compressor is demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background. **(40 CFR 60.482-3a(i)(1), 40 CFR 60.5400(a))**

Pressure Relief Devices in Gas/Vapor Service for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

12. Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background. **(40 CFR 60.482-4a(a), 40 CFR 60.5400(a))**
13. After each pressure release, the pressure relief shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background as soon as practicable but no later

than 5 calendar days after the pressure release, except as provided in Conditions III.18 and III.19. **(40 CFR 60.482-4a(b)(1), 40 CFR 60.5400(a))**

14. Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device is exempted from the requirements of Conditions III.12, III.13 and V.11. **(40 CFR 60.482-4a(c), 40 CFR 60.5400(a))**
15. Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of Conditions III.12, III.13, and V.11 provided that a new rupture disk is installed upstream of the pressure relief device as soon as practicable but no later than 5 calendar days after each pressure release, except as provided in in Conditions III.18 and III.19. **(40 CFR 60.482-4a(d), 40 CFR 60.5400(a))**

Pumps in Light Liquid Service for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

16. Any pump in light liquid service that is designated for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Conditions V.2, V.3, and IV.2 provided that the pump has no externally actuated shaft penetrating the pump housing and is demonstrated to be operating with no detectable emissions. **(40 CFR 60.482-2a(e), 40 CFR 60.5400(a))**
17. Any pump in light liquid service that is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or a control device is exempt from the requirements of Conditions V.2, V.3, and IV.2. **(40 CFR 60.482-2a(f), 40 CFR 60.5400(a))**

Delay of Repair for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

18. The delay or repair for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of the equipment shall occur before the end of the next process unit shutdown. Monitoring to verify repair must occur within 15 days after startup of the process unit. **(40 CFR 60.5400(a), 40 CFR 60.482-9a(a))**
19. The delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service. **(40 CFR 60.5400(a), 40 CFR 60.482-9a(b))**
20. Delay of repair for valves and connectors will be allowed if: **(40 CFR 60.5400(a), 40 CFR 60.482-9a(c))**
 - a. The permittee demonstrates that emissions of purged material resulting from the immediate repair are greater than the fugitive emissions likely to result from the delay of repair; and
 - b. When repair procedures are effected, the purged material is collected and destroyed or recovery in a control device complying with 40 CFR 60.482-10a.
21. Delay of repair beyond a process unit shutdown will be allowed for a valve, if the valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown. **(40 CFR 60.5400(a), 40 CFR 60.482-9a(e))**
22. Delay of repair for pumps will be allowed if repair requires the use of a dual mechanical seal system that includes a barrier fluid system and repair is completed as soon as practicable, but not later than 6 months after the leak was detected. **(40 CFR 60.5400(a), 40 CFR 60.482-9a(d))**

23. When delay of repair is allowed for a leaking pump, valve, or connector that remains in service, the pump, valve, or connector may be considered to be repaired and no longer subject to delay of repair requirements if 2 consecutive monthly monitoring instrument readings are below the leak definition. **(40 CFR 60.5400(a), 40 CFR 60.482-9a(f))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

Open-Ended Valves or Lines for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

1. Except as provided in 40 CFR 60.482-6a(d), each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve. The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations required process fluid flow through the open ended valve or line. **(40 CFR 60.482-6a(a), 40 CFR 60.5400(a))**

Pumps in Light Liquid Service for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

2. Each pump in light liquid service equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of Conditions V.2 and V.3, provided that the pump meets the following: **(40 CFR 60.482-2a(d)(1), (2), (3), (4), and (5), 40 CFR 60.5400(a))**
- a. Each dual mechanical seal system is:
 - i. Operated with no barrier fluid at a pressure that is all times greater than the pump stuffing box pressure, or
 - ii. Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of 40 CFR 60.482-10, or
 - iii. Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.
 - b. The barrier fluid system is in heavy liquid service or is not in VOC service;
 - c. Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.
 - i. Each sensor shall be checked daily or equipped with an audible alarm;
 - ii. The permittee determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both;
 - iii. If the sensor indicates failure of the seal system, the barrier fluid system, or both, based on criterion established, a leak is detected and shall be repaired as specified in Condition III.2.
 - d. Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals. If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the permittee shall perform the following procedures prior to the next required inspection.
 - i. Monitor the pump within 5 business days to determine if there is a leak of VOC in the barrier fluid, or
 - ii. Designate the visual indications of liquids dripping as a leak.

V. TESTING/SAMPLING

Records shall be maintained on file for a period of 5 years. **(R 336.1213(3)(b)(ii))**

Affected Facilities for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

1. Each pump in light liquid service, each compressor, and each valve in gas/vapor service and in light liquid service designated for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background shall be tested for compliance initially upon designation, annually, and at other times requested by the AQD. **(40 CFR 60.482-2a(e), 40 CFR 60.482-3a(i)(2), 40 CFR 60.482-7a(f)(3), 40 CFR 60.482-1a(a), 40 CFR 60.5400(a))**

Pumps in Light Liquid Service for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

2. Except as provided in Conditions III.16, III.17, and IV.2, each pump in light liquid service shall be monitored monthly to detect leaks. A pump that begins operation in light liquid service after the initial startup date of the process unit must be monitored for the first time within thirty days after the end of its startup period except for a pump that replaces a leaking pump and except as provided in Condition III.16, III.17, and IV.2. A leak is detected when an instrument reading of 2,000 ppm or greater is measured. **(40 CFR 60.482-2a(b)(1)(ii), 40 CFR 60.5400(a))**
3. Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. If liquids are dripping from the pump seal, the permittee shall either designate the visual indications as a leak and repair the leak within 15 days of detection by eliminating the visual indications of liquids dripping or monitor the pump within 5 days and repair the leak using the procedures in Condition III.2. **(40 CFR 60.482-2a(a)(2), 40 CFR 60.482-2a(b)(2), 40 CFR 60.482-2a(d)(4), 40 CFR 60.5400(a))**

Valves in Gas/Vapor Service and in Light Liquid Service for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

4. Except as provided in Conditions III.7, V.6, V.7, V.8, IX.2, or IX.5, each valve in gas/vapor service shall be monitored monthly to detect leaks. A leak is detected when an instrument reading of 500 ppm or greater is measured. If a leak is not detected for 2 successive months, the valve may be monitored the first month of every quarter, beginning the next quarter, until a leak is detected. As an alternative to monitoring all of the valves in the first month of the quarter, the permittee may elect to subdivide the process unit into two or three subgroups and monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every three months. When a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months. The permittee may elect to comply with the alternative work practices specified in Conditions V.8 and V.9. **(40 CFR 60.482-7a(1), 40 CFR 60.482-7a(b), 40 CFR 60.482-7a(c)(1)(i) and (ii), 40 CFR 60.482-7a(c)(2), 40 CFR 60.482-3a(a)(1), 40 CFR 60.482-1a(a), 40 CFR 60.5400(a))**
5. Except for a valve that replaces a leaking valve and except as provided in Conditions III.7, V.6, V.7, V.8, IX.2, or IX.5, a valve that begins operation in gas/vapor service or light liquid service after the initial startup date for the process unit must be: **(40 CFR 60.482-7a(a)(2), 40 CFR 60.5400(a))**
 - a. Monitored as in Condition V.4. The valve must be monitored for the first time within 30 days after the end of its startup period to ensure proper installation; or
 - b. If the existing valves in the process unit are monitored in accordance with Conditions III.8, V.8, or V.9, count the new valve as leaking when calculating the percentage of valves leaking as described in 483-2a(b)(5). If less than 2.0 percent of the valves are leaking for that process unit, the valve must be monitored for the first time during the next scheduled monitoring event for existing valves in the process unit or within 90 days, whichever comes first.
6. Any valve in gas/vapor or light liquid service that is designated as unsafe-to-monitor shall be monitored as frequently as practicable during safe-to-monitor times and any valve that is designated as difficult-to-monitor shall be monitored at least once per calendar year. **(40 CFR 60.482-7a(g)(2), 40 CFR 60.482-7a(h)(3), 40 CFR 60.5400(a))**
7. If electing to comply with Condition III.8 for valves, the permittee shall monitor for leaks initially upon designation, annually, and at other times requested by the AQD. **(40 CFR 60.483-1a(b)(2), 40 CFR 60.5400(b))**
8. After initially complying with Condition V.4 for 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, the permittee may begin to skip one of the quarterly leak detection periods for the valves in gas/vapor or light liquid service. If the percent of valves leaking is greater than 2.0, the permittee shall comply with Condition V.4 but may elect to use this section again. **(40 CFR 60.483-2a(a), 40 CFR 60.483-2a(b)(1), 40 CFR 60.483-2a(2), 40 CFR 60.483-2a(4), 40 CFR 60.5400(b))**
9. After initially complying with Conditions V.4 and V.8 for 5 consecutive quarterly leak detection periods with the percent valves equal to or less than 2.0, the permittee may begin to skip three of the quarterly leak detection

periods for the valves in in gas/vapor or light liquid service. If the percent of valves leaking is greater than 2.0, the permittee shall comply with Condition V.4 but may elect to use this section again. **(40 CFR 60.483-2a(a), 40 CFR 60.483-2a(b)(1), 40 CFR 60.483-2a(3), 40 CFR 60.483-2a(4), 40 CFR 60.5400(b))**

10. A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for a process unit following one of the alternative standards in this section must be monitored in accordance with Conditions V.4 and V.5 before the provisions of Condition V.8 and V.9 can be applied to that valve. **(40 CFR 60.483-2a(b)(7), 40 CFR 60.5400(b))**

Pressure Relief Devices in Gas/Vapor Service for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

11. No later than 5 calendar days after a pressure release, the pressure relief device in gas/vapor service shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background. **(40 CFR 60.5400(a), 40 CFR 60.482-4a(b)(2))**

Connectors in Gas/Vapor Service and in Light Liquid Service for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

12. The permittee shall initially monitor all connectors in the process unit for leaks by the later of either 12 months after the compliance date or 12 months after the initial startup. A leak is detected if an instrument reading of greater than or equal to 500 ppm is measured. If all connectors in the process unit have been monitored for leaks prior to the compliance date, no initial monitoring is required provided either no process changes have been made since the monitoring or the permittee can determine that the results of the monitoring, with or without adjustments, reliably demonstrate compliance despite process changes. If required to monitor because of a process change, the permittee is required to monitor only those connectors involved in the process change. **(40 CFR 60.482-11a(a), 40 CFR 60.482-11a(b)(2), 40 CFR 60.482-1a(a), 40 CFR 60.5400(a))**
13. The permittee shall perform monitoring, subsequent to the initial monitoring required in Condition V.12. The required period in which monitoring must be conducted shall be determined by the following schedule using the monitoring results from the preceding monitoring period. If a connector is found to be leaking, it shall be re-monitored once within 90 days after repair to confirm that it is not leaking: **(40 CFR 60.482-11a(b)(3), 40 CFR 60.482-11a(b)(3)(iv), 40 CFR 60.5400(a))**
 - a. If the percent leaking connectors in the process unit were greater than or equal to 0.5 percent, then monitor within 12 months (1 year).
 - b. If the percent leaking connectors in the process unit was greater than or equal to 0.25 percent but less than 0.5, then monitor within 4 years. The permittee may comply with the requirements of this paragraph by monitoring at least 40 percent of the connectors within 2 years of the start of the monitoring period, provided all connectors have been monitored by the end of the 4 year monitoring period.
 - c. If the percent leaking connectors in the process unit was less than 0.25 percent, then monitor as at least 50 percent of the connectors within four years of the start of the monitoring period, and
 - i. If the percent of leaking connectors calculated from the monitoring results is greater than or equal to 0.35 percent of the monitored connectors, the permittee shall monitor as soon as practical, but within the next 6 months, all connectors that have not yet been monitored during the monitoring period. At the conclusion of monitoring, a new monitoring period shall be started based on the percent of leaking connectors within the total monitored connectors; or
 - ii. If the percent of leaking connectors calculated from the monitoring results is less than 0.35 percent of the monitored connectors, the permittee shall monitor all connectors that have not yet been monitored within eight years of the start of the monitoring period.

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of 5 years. **(R 336.1213(3)(b)(ii))**

Affected Facilities for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

1. The following information pertaining to all equipment subject to the requirements of 40 CFR 60.482-1a to 60.482-10a shall be recorded in a log that is kept in a readily accessible location: **(40 CFR 60.486a(e), 40 CFR 60.5400(e))**
 - a. A list of identification numbers for equipment subject to the requirements of 40 CFR, Part 60, Subparts VVa and OOOO.
 - b. A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of Conditions III.7, III.11, and III.16.
 - c. The designation of equipment as subject to the requirements of Conditions III.7, III.11, and III.16 shall be signed by the permittee.
 - d. A list of equipment identification numbers for pressure relief devices required to comply with Conditions III.12, III.13, and V.11.
 - e. The dates of each compliance test as required in Condition V.1.
 - f. The background level measured during each compliance test.
 - g. The maximum instrument reading measured at the equipment during each compliance test.
 - h. A list of identification numbers for equipment in vacuum service.
 - i. The date and results of the weekly visual inspection for indications of liquids dripping from pumps in light liquid service.
 - j. Records of the information for monitoring instrument calibrations conducted:
 - i. Date of calibration and initials of the operator performing the calibration.
 - ii. Calibration gas cylinder identification, certification date, and certified concentration.
 - iii. Instrument scale(s) used.
 - iv. A description of any corrective action taken if the meter readout could not be adjusted to correspond to the calibration gas value.
 - v. Results of each calibration drift assessment.
 - k. The connector monitoring schedule for each process unit as specified in Conditions V.12 and V.13.
 - l. Records of the release from a pressure relief device subject to Condition III.13.
2. When a leak is detected from a pump in light liquid service, a compressor, a valve in gas/vapor service or light liquid service, a pressure relief device in light liquid service, or connectors, the following information shall be recorded in a log and shall be kept in a readily accessible location: **(40 CFR 60.486a(c), 40 CFR 60.5400(e))**
 - a. The instrument and operator identification numbers and the equipment identification number.
 - b. The date the leak was detected and the dates of each attempt to repair the leak.
 - c. Repair methods applied in each attempt to repair the leak.
 - d. Maximum instrument reading measured at the time the leak is successfully repaired or determined non-repairable, except when a pump is repaired by eliminating indications of liquids dripping.
 - e. "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
 - f. The signature of the owner or operator whose decision it was that repair could not be affected without a process unit shutdown.
 - g. The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days.
 - h. Dates of process unit shutdowns that occur while the equipment is unrepaired.
 - i. The date of successful repair of the leak.
3. The following information pertaining to all valves subject to Conditions V.6 and IX.5 and all pumps and connectors subject to the requirements of Condition IX.2 shall be recorded in a log that is kept in a readily accessible location: **(40 CFR 60.486a(f), 40 CFR 60.5400(e))**
 - a. A list of identification numbers for valves, pumps, and connectors that are designated as unsafe to monitor, an explanation for each valve, pump, or connector stating why the valve, pump, or connector is unsafe-to-monitor, and the plan for monitoring each valve, pump, or connector.

- b. A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve.
4. The permittee shall record a schedule of monitoring and the percent of valves found leaking during each monitoring period for valves complying with Conditions V.8 and V.9. **(40 CFR 60.486a(g), 40 CFR 60.5400(e))**
5. The following information shall be recorded in a log that is kept in a readily accessible location: **(40 CFR 60.486a(h), 40 CFR 60.5400(e))**
 - a. Design criterion required in Conditions IV.2 and III.10 and explanation of the design criterion.
 - b. Any changes to the criterion and the reason for the changes.
6. The permittee shall keep the following information for closed vent systems and flares described in 60.482-10 in a readily accessible location: **(40 CFR 60.486a(d), 40 CFR 60.5400(e))**
 - a. Detailed schematics, design specifications, and piping and instrumentation diagrams.
 - b. The dates and descriptions of any changes in the design specifications.
 - c. A description of the parameter(s) monitored as required by 40 CFR 60.482-10(e), to ensure the control devices are operated and maintained in conformance with the design and an explanation of why that parameter(s) was selected for the monitoring.
 - d. Periods when the closed vent systems and control devices are not operated as designed, including periods when a flare pilot light does not have a flame.
 - e. Dates of startups and shutdowns of the closed vent systems and control devices.
7. The permittee shall record the following information for each monitoring event required by Conditions V.1, V.2, V.4, V.8, V.9, V.12, and V.13: **(40 CFR 60.486a(a)(3), 40 CFR 60.5400(e))**
 - a. Monitoring instrument identification.
 - b. Operator identification.
 - c. Equipment identification.
 - d. Date of monitoring.
 - e. Instrument reading.
8. The permittee shall keep a record of the start date and end date of each monitoring period for each connector. **(40 CFR 60.482-11a(b)(3)(v), 40 CFR 60.5400(a))**
9. If electing to comply with the alternative monitoring requirements listed in Condition V.4 for valves in gas/vapor service and in light liquid service, the permittee shall keep records of the valves assigned to each subgroup. **(40 CFR 60.482-7a(c)(ii))**

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 an initial semiannual report. The report shall be postmarked or received by the appropriate AQD's District Office by January 30 for the reporting period of July 1 to December 31 and July 30 for the reporting period of January 1 to June 30. The semiannual report shall contain the following information: **(40 CFR 60.487a(a) and (b), 40 CFR 60.5400(a) and (e))**
 - a. The process unit identification.

- b. Number of valves subject to the requirements of 482-7(a), excluding those valves designated for no detectable emissions under the provision of 482-7a(f).
 - c. Number of pumps subject to the requirements of 482-2a, excluding those pumps designated for no detectable emissions under the provisions of 482-2a(e) and those pumps complying with 482-3a(h).
 - d. Number of connectors subject to the requirements of 482-11a.
5. The permittee shall submit semiannual reports. The reports shall be postmarked or received by the appropriate AQD's District Office by January 30 for the reporting period of July 1 to December 31 and July 30 for the reporting period of January 1 to June 30. All semiannual reports shall contain the following information: **(40 CFR 60.487a(c), 40 CFR 60.5400(e))**
- a. Process unit identification.
 - b. For each month during the semiannual reporting period:
 - i. The number of valves for which leaks were detected as described in Conditions V.4, V.8, and V.9.
 - ii. The number of valves for which leaks were not repaired as required in Condition III.2.
 - iii. The number of pumps for which leaks were detected as described in Conditions IV.2, V.2, and V.3.
 - iv. The number of pumps for which leaks were not repaired as required in Condition III.2.
 - v. The number of compressors for which leaks were detected as described in Condition III.10.
 - vi. The number of compressors for which leaks were not repaired as required in Condition III.2.
 - vii. The number of connectors for which leaks were detected as described in Conditions V.12 and V.13.
 - viii. The number of connectors for which leaks were not repaired as required in Condition III.2.
 - c. Dates of process unit shutdowns which occurred within the semiannual reporting period.
 - d. Revisions to items reported if changes have occurred since the initial report or subsequent revisions to the initial report.
6. The permittee shall notify the AQD no less than 90 days prior to electing to comply with the alternative standard for valves in Conditions V.8-9. **(40 CFR 60.483-1a(b)(1), 40 CFR 60.483-2a(a)(2), 40 CFR 60.487a(d), 40 CFR 60.5400(b), 40 CFR 60.5400(e))**

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
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

Affected Facilities for which Construction, Reconstruction, or Modification Commenced after August 23, 2011.

- 1. When a leak is detected from a pump in light liquid service, a valve in gas/vapor service or light liquid service, a compressor, or a connector in gas/vapor service or light liquid service, a weatherproof and visible identification marked with the equipment identification number, shall be attached to the leaking equipment. The identification on a valve may be removed after is has been monitored for 2 successive months as specified in Condition V.2 and no leak has been detected during those 2 months. The identification on a connector may be removed after is has been monitored as specified in Conditions V.12 and V.13 and no leak has been detected during that monitoring period. The identification equipment, except on a valve or connector, may be removed after is has been repaired. **(40 CFR 60.486a(b), 40 CFR 60.5400(e))**

2. For any pump in light liquid service, any valve in gas/vapor service or in light liquid service, and any connector that is unsafe-to-monitor, the permittee shall demonstrate that the pump, valve, or connector is unsafe to monitor because monitor personnel would be exposed to an immediate danger as a consequence of complying with Conditions V.1, V.2, V.3, V.4, V.12, and V.13. **(40 CFR 60.482-2a(g)(1), 40 CFR 60.482-7a(g)(1), 40 CFR 60.482-11a(e)(1), 40 CFR 60.5400(a))**
3. The permittee shall maintain a written plan that requires monitoring of pumps in light liquid service that are unsafe-to-monitor as frequently as practicable during safe-to-monitor times. **(40 CFR 60.482-2a(g)(2), 40 CFR 60.5400(a))**
4. The permittee shall maintain a written plan that requires monitoring of connectors in gas/vapor service or light liquid service that are unsafe-to-monitor as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures specified in Condition III.2 if a leak is detected. **(40 CFR 60.482-11a(e)(2), 40 CFR 60.5400(a))**
5. Any valve in gas/vapor service or in light liquid service that is designated as difficult-to-monitor or unsafe-to-monitor is exempt from the requirements of Condition V.4 if: **(40 CFR 60.482-7a(g) and (h), 40 CFR 60.5400(a))**
 - a. The permittee can demonstrate that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface;
 - b. The process unit within which the valve is located becomes an affected facility through 40 CFR 60.14 or 40 CFR 60.15 or the permittee designates less than 3.0 percent of the total number of valves as difficult-to-monitor;
 - c. The permittee follows a written plan that requires monitoring of the valve at least once per calendar year;
 - d. The permittee demonstrates that the valve is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with Condition V.4; and
 - e. The permittee follows a written plan that requires monitoring of the unsafe-to-monitor valve as frequently as practicable during safe-to-monitor times.
6. Any connector in gas/vapor service or light liquid service that is inaccessible is exempt from the monitoring requirements of Conditions V.12 and V.13, from the leak repair requirements of Condition III.5. An inaccessible connector is one that meets any of the following: **(40 CFR 60.482-11a(f)(1), 40 CFR 60.5400(a))**
 - a. Buried;
 - b. Insulated or in a manner that prevents access to the connector by a monitor probe;
 - c. Obstructed by equipment or piping that prevents access to the connector by a monitor probe;
 - d. Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold that would allow access to connectors up to 25 feet above the ground;
 - e. Inaccessible because it would require elevating the monitoring personnel more than 7 feet above a permanent support surface or would require the erection of scaffold; or
 - f. Not able to be accessed at any time in a safe manner to perform monitoring.
7. The permittee shall comply with the applicable requirements of 40 CFR, Part 60, Subpart OOOO – Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution. **(40 CFR, Part 60, Subpart OOOO)**

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).

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
FG-KGPS-TURB	Two 19,750 hp natural gas-fired G.E. Frame 5 turbines with 7.5 MW electrical generators and 55 MMBTU per hour natural gas-fired duct burners in the waste heat recovery units. The turbines are used for plant electrical production and the WHRUs are used to heat thermal oil for other processes.	EU-KGPS-TURB-A EU-KGPS-TURB-B
FG-EMERGENS	275 horsepower International Harvester gas-fired emergency generator, 1,090 horsepower Waukesha gas-fired emergency generator, 125 horsepower Cummins gas-fired emergency fire water engine, 145 horsepower Minneapolis Moline gas-fired emergency fire water engine	EU-KGPN-GENERATOR EU-KGPS-GENERATOR EU-KGPN-FIREWATER EU-KGPS-FIREWATER
FG-RULE290	Any existing or future emission unit exempt from R 336.1201 pursuant to R 336.1278 and R 336.1290.	EURULE290

**FG-KGPS-TURB
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

19,750 hp natural gas-fired G.E. Frame 5 turbine with a 7.5 MW electrical generator and a 55 MMBTU per hour natural gas-fired duct burner in the waste heat recovery unit. The turbine is used for plant electrical production and the WHRU is used to heat thermal oil for other processes.

Emission Unit: EU-KGPS-TURB-A, EU-KGPS-TURB-B

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Natural gas	0.8 percent by weight total sulfur	NA	FG-KGPS-TURB	Condition VI.5	40 CFR 60.333(b)

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 use the gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for gaseous fuel, which specifies the maximum total sulfur content to demonstrate compliance with Conditions II.1: **(40 CFR 60.334(h)(3)(i), R 336.1213(3)(b))**
2. The permittee shall monitor and record the natural gas usage for EU-KGPS-TURB-A and EU-KGPS-TURB for each calendar year. **(R 336.1213(3)(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))**

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
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable requirements of 40 CFR, Part 60, Subpart GG – Standards of Performance for Stationary Gas Turbines. **(40 CFR, Part 60, Subpart GG)**

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).

**FG-EMERGENS
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

275 horsepower International Harvester gas-fired emergency generator, 1,090 horsepower Waukesha gas-fired emergency generator, 125 horsepower Cummins gas-fired emergency fire water engine, 145 horsepower Minneapolis Moline gas-fired emergency fire water engine

Emission Unit: EU-KGPN-GENERATOR, EU-KGPS-GENERATOR, EU-KGPN-FIREWATER, EU-KGPS-FIREWATER

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. There is no time limit on the use of Emergency Stationary RICE in emergency situations. **(40 CFR 63.6640(f)(1))**
2. The engine may operate up to a maximum of 100 hours per calendar year for maintenance checks and readiness testing provided that the tests are recommended by federal, state, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. **(40 CFR 63.6640(f)(2)(i))**
3. The engine may operate up to a maximum of 50 hours per calendar year for non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing. **(40 CFR 63.6640(f)(4))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

1. Record the number of hours of engine operation, including the number of hours for emergency and non-emergency operation. **(40 CFR 63.6655(f)(2))**
2. Records of the maintenance conducted on the emergency engine in order to demonstrate compliance with Section IX must be maintained. **(40 CFR 63.6655(e)(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
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. Change oil and filter every 500 hours of operation or annually; whichever comes first. Source has the option to utilize an oil analysis program as described in 63.6625(i) or (j) in order to extend the specified oil change requirement. **(40 CFR 63.6603(a), 40 CFR 63.6640(a))**
2. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary. **(40 CFR 63.6603(a), 40 CFR 63.6640(a))**

3. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. **(40 CFR 63.6603(a), 40 CFR 63.6640(a))**
4. The permittee shall comply with the applicable requirements of 40 CFR 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines for Area Sources. **(40 CFR, Part 63, Subpart ZZZZ)**

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).

FG-RULE 290 FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278 and 290.

Emission Unit: EU-RULE290

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

1. 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(a)(i))**
2. Each emission unit that the total uncontrolled or controlled emissions of 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(a)(ii))**
 - a. For noncarcinogenic 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 2.0 micrograms per cubic meter, the uncontrolled or controlled emissions shall not exceed 1,000 or 500 pounds per month, respectively. **(R 336.1290(a)(ii)(A))**
 - b. For noncarcinogenic 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 microgram 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(a)(ii)(B))**
 - c. For carcinogenic 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(a)(ii)(C))**
 - d. The emission unit shall not emit any 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(a)(ii)(D))**
3. Each emission unit that emits only noncarcinogenic particulate air contaminants and other air contaminants that are exempted under Rule 290(a)(i) and/or Rule 290(a)(ii), if all of the following provisions are met: **(R 336.1290(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 an exhaust gas flow rate more than 30,000 actual cubic feet per minute. **(R 336.1290(a)(iii)(A))**
 - b. The visible emissions from the emission unit are not more than 5 percent opacity in accordance with the methods contained in Rule 303. **(R 336.1290(a)(iii)(B))**
 - c. The initial threshold screening level for each particulate air contaminant, excluding nuisance particulate, is more than 2.0 micrograms per cubic meter. **(R 336.1290(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)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

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 an alternative format that is approved by 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(a)(ii) and (iii). **(R 336.1213(3))**
 - e. 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. **(R 336.1213(3), R 336.1290(c))**
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(b), R 336.1213(3))**
 - b. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(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(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))**

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

E. NON-APPLICABLE REQUIREMENTS

At the time of the ROP issuance, the AQD has determined that the requirements identified in the table below are not applicable to the specified emission unit(s) and/or flexible group(s). This determination is incorporated into the permit shield provisions set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii). If the permittee makes a change that affects the basis of the non-applicability determination, the permit shield established as a result of that non-applicability decision is no longer valid for that emission unit or flexible group.

Emission Unit/Flexible Group ID	Non-Applicable Requirement	Justification
EU-KGPN-TURB-C	40 CFR, Part 60, Subpart GG	40 CFR 60.4305(b) states that stationary combustion turbines regulated under 40 CFR, Part 60, Subpart KKKK are exempt from the requirements of 40 CFR, Part 60, Subpart GG.
EU-KGPN-TURB-C	40 CFR, Part 60, Subparts Dc	Duct burners regulated under 40 CFR, Part 60, Subpart KKKK are exempted from the requirements of 40 CFR, Part 60, Subparts Da, Db, and Dc.
FG-KGPS-TURB	40 CFR, Part 60, Subpart Dc	The waste heat recovery units and duct burners were installed prior to the promulgation date (June 9, 1989) of 40 CFR, Part 60, Subpart Dc and no modifications or reconstruction commenced after the promulgation date.

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 Environmental Quality	PM-10	Particulate Matter less than 10 microns in diameter
dscf	Dry standard cubic foot	PM-2.5	Particulate Matter less than or equal to 2.5 microns in diameter
dscm	Dry standard cubic meter	pph	Pound per hour
EPA	United States Environmental Protection Agency	ppm	Parts per million
EU	Emission Unit	ppmv	Parts per million by volume
°F	Degrees Fahrenheit	ppmw	Parts per million by weight
FG	Flexible Group	PS	Performance Specification
GACS	Gallon of Applied Coating Solids	PSD	Prevention of Significant Deterioration
GC	General Condition	psia	Pounds per square inch absolute
gr	Grains	psig	Pounds per square inch gauge
HAP	Hazardous Air Pollutant	PeTE	Permanent Total Enclosure
Hg	Mercury	PTI	Permit to Install
hr	Hour	RACT	Reasonable Available Control Technology
HP	Horsepower	ROP	Renewable Operating Permit
H ₂ S	Hydrogen Sulfide	SC	Special Condition
HVLP	High Volume Low Pressure *	scf	Standard cubic feet
ID	Identification (Number)	sec	Seconds
IRSL	Initial Risk Screening Level	SCR	Selective Catalytic Reduction
ITSL	Initial Threshold Screening Level	SO ₂	Sulfur Dioxide
LAER	Lowest Achievable Emission Rate	SRN	State Registration Number
lb	Pound	TAC	Toxic Air Contaminant
m	Meter	Temp	Temperature
MACT	Maximum Achievable Control Technology	THC	Total Hydrocarbons
MAERS	Michigan Air Emissions Reporting System	tpy	Tons per year
MAP	Malfunction Abatement Plan	µg	Microgram
MDEQ	Michigan Department of Environmental Quality	VE	Visible Emissions
mg	Milligram	VOC	Volatile Organic Compounds
mm	Millimeter	yr	Year

*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 this ROP application that this stationary source is in compliance with all applicable requirements of this ROP except for the following: 40 CFR, Part 60, Subpart KKK. As a result, the permittee was required to submit a Schedule of Compliance as defined in Rule 119(a), pursuant to Rule 210(2) and Rule 213(4).

A Schedule of Compliance for any applicable requirements that the permittee is not in compliance with at the time of the ROP issuance is supplemental to, and shall not sanction non-compliance with, the underlying applicable requirements on which it is based.

The permittee shall adhere to this schedule of compliance and submit the required certified progress reports accordingly.

Compliance Plan

The permittee outlined the details of achieving compliance in a narrative compliance plan. The details of the compliance plan are outlined below.

On January 9, 2013 the USEPA issued a Letter of Violation to Merit Energy (now Lambda Energy Resources, LLC) in relation to the leak detection and repair (LDAR) requirements pursuant to 40 CFR, Part 60, Subpart KKK. The violations were discovered during an inspection performed by USEPA staff in November 2012. USEPA and Merit Energy (now Lambda Energy Resources, LLC) are currently negotiating a resolution to the alleged violations.

Schedule of Compliance

The following schedule of compliance conforms with the provisions of Rule 119(a) and Rule 213(4).

Emission Unit/ Flexible Group ID and Condition No.	Applicable Requirement	Remedial Measure	Required Action	Milestone Date	Progress Reports
EU-KGPN	40 CFR, Part 60, Subpart KKK	Proper implementation of leak detection and repair methods.	Resolve the cited violations with USEPA.	Within timeframes established by USEPA	Semiannual updates to MDEQ AQD

Progress Reports

The permittee shall submit Certified Progress Reports to the Cadillac AQD District Supervisor using the MDEQ, AQD, Report Certification form (EQP 5736). 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. **(R 336.1213(4)(b))**

Progress reports shall contain the following information:

The projected dates for achieving scheduled activities, milestones or compliance as required in the schedule of compliance. **(R 336.1213(4)(b)(i))**

The actual dates that the activities, milestones, or compliance are achieved. **(R 336.1213(4)(b)(i))**

An explanation of why any dates in the schedule of compliance were not, or will not be met. **(R 336.1213(4)(b)(ii))**

A description of any preventative or corrective measures adopted in order to ensure that the schedule of compliance is met. **(R 336.1213(4)(b)(ii))**

Appendix 3. Monitoring Requirements

Specific monitoring requirement procedures, methods or specifications 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 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-B4292-2008. 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-B4292-2008 is being reissued as Source-Wide PTI No. MI-PTI-B4292-2014.

Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
NA	NA	NA	NA

Appendix 7. Emission Calculations

Specific emission calculations to be used with monitoring, testing or recordkeeping data are detailed in the appropriate Source-Wide, Emission Unit and/or Flexible group Special Conditions. Therefore, this appendix is not applicable.

Appendix 8. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

The permittee shall use the MDEQ, AQD, Report Certification form (EQP 5736) and MDEQ, 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.

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

_____)	
UNITED STATES OF AMERICA,)	
)	
Plaintiff,)	
)	
v.)	Civil Action No. 1:15-cv-455
)	
MERIT ENERGY COMPANY, LLC)	HONORABLE PAUL L. MALONEY
)	
Defendant.)	
)	
_____)	

CONSENT DECREE

TABLE OF CONTENTS

I. JURISDICTION AND VENUE 2

II. APPLICABILITY 3

III. DEFINITIONS 4

IV. CIVIL PENALTY 11

V. COMPLIANCE REQUIREMENTS 12

 A. Applicability of the Enhanced LDAR Program 12

 B. Facility-Wide LDAR Document 12

 C. Monitoring Frequency and Equipment 13

 D. Leak Detection and Repair Action Levels 16

 E. Repairs 17

 F. Delay of Repair 19

 G. Valve Replacement and Improvement Program 20

 H. Management of Change 25

 I. Training 26

 J. Quality Assurance (“QA”)/Quality Control (“QC”) 27

 K. LDAR Audits and Corrective Action 28

 L. Certification of Compliance 32

 M. Recordkeeping and Reporting 32

VI. NOTICES 35

VII. STIPULATED PENALTIES 37

VIII. FORCE MAJEURE 48

IX. DISPUTE RESOLUTION 50

X. INFORMATION COLLECTION AND RETENTION 53

XI. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS 54

XII. COSTS 56

XIII. EFFECTIVE DATE 56

XIV. RETENTION OF JURISDICTION 57

XV. MODIFICATION 57

XVI. TERMINATION 57

XVII. PUBLIC PARTICIPATION 58

XVIII. SIGNATORIES/SERVICE 59

XIX. INTEGRATION 59

XX. FINAL JUDGMENT 60

APPENDICES

Appendix A Factors to be Considered and Procedures to be Followed to Claim
Commercial Unavailability

CONSENT DECREE

WHEREAS, Plaintiff the United States of America (“United States”), on behalf of the United States Environmental Protection Agency (“EPA”), has filed a complaint against Merit Energy Company, LLC (“Merit,” or the “Defendant”) concurrently with the lodging of this Consent Decree;

WHEREAS Merit owns and operates a natural gas processing plant located at 1080 Prough Road SW, Kalkaska, Michigan (the “Facility”);

WHEREAS, the Complaint alleges that Defendant violated Section 111 of the Clean Air Act (“CAA”), 42 U.S.C. § 7411, Title V of the CAA, 42 U.S.C. § 7661-7661(f) and the following implementing regulations: 40 C.F.R. Part 60, Subpart KKK (National Emission Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants) and, by reference, certain provisions of 40 C.F.R. Part 60, Subpart VV, and 40 C.F.R. Part 60, Appendix A, Method 21;

WHEREAS, Merit does not admit any liability to the United States arising out of the transactions or occurrences alleged in the Complaint and nothing in the Complaint, nor in this Consent Decree, nor in the execution and implementation of this Consent Decree shall be treated as an admission of any violation of federal or state statutes or regulations in any litigation or forum whatsoever, except that the terms of this Consent Decree, and Merit’s failure to comply with the terms and conditions thereof, may be used by the United States in any action or dispute resolution proceeding to enforce the terms of this Consent Decree or as otherwise permitted by law;

WHEREAS, the United States and Merit recognize and this Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and will avoid litigation between the Parties, and that this Consent Decree is fair, reasonable, and in the public interest;

NOW, THEREFORE, before the taking of any testimony, without the adjudication or admission of any issue of fact or law except as provided in Section I, and with the consent of the Parties, IT IS HEREBY ADJUDGED, ORDERED, AND DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331, 1345, and 1355; and Section 113(b) of the CAA, 42 U.S.C. § 7413(b); and over the Parties. Venue lies in this District pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b); and 28 U.S.C. §§ 1391(b) and (c) and 1395(a), because Merit resides and is located in this judicial district, certain violations alleged in the Complaint are alleged to have occurred in this judicial district, and because Merit waives any objection to venue in this judicial district. For purposes of this Consent Decree, or any action to enforce this Consent Decree, Merit consents to this Court's jurisdiction over this Consent Decree, over any action to enforce this Consent Decree, and over Merit. Merit also consents to venue in this judicial district.

2. For purposes of this Consent Decree, Merit does not contest that the Complaint states claims upon which relief may be granted pursuant to Section 111 of the CAA, 42 U.S.C. § 7411.

3. Notice of the commencement of this action shall be given to the State of Michigan as required by Section 113(b) of the CAA, 42 U.S.C. § 7413(b).

II. APPLICABILITY

4. The obligations of this Consent Decree apply to and are binding upon the United States and upon Merit and any successors, assigns, and other entities or persons otherwise bound by law.

5. Effective from the Date of Entry of this Consent Decree and until either termination pursuant to Section XVI or transfer of the ownership or operation of the Covered Facility pursuant to this Paragraph 5 and Paragraph 6 below, Merit shall be covered by this Consent Decree. Effective from the Date of Entry of this Consent Decree, Merit shall give written notice of this Consent Decree to any successors in interest to the Covered Facility prior to the transfer of ownership or operation of any portion of the Covered Facility and shall provide a copy of this Consent Decree to any successor in interest. Merit shall notify the United States, in accordance with the notice provisions set forth in Paragraph 54 of this Decree, of any successor in interest at least 30 days prior to any such transfer. This provision does not apply to transferred equipment that is removed from, and not used at, a Covered Facility.

6. Merit shall condition any transfer, in whole or in part, of ownership of, operation of, or other interest (exclusive of any non-controlling, non-operational shareholder or membership interest) in the Covered Facility upon the execution by the transferee of a modification to this Consent Decree, which makes the terms and conditions of this Consent Decree applicable to the

transferee. In the event of transfer, Merit shall notify the United States as provided in Paragraph 5. By no earlier than 30 days after such Notice, Merit may file a motion to modify this Consent Decree with the Court to make the terms and conditions of this Consent Decree applicable to the transferee. Merit shall be released from the obligations and liabilities of this Consent Decree unless the United States opposes the motion and the Court finds that the transferee does not have the financial and technical ability to assume the obligations and liabilities under this Consent Decree.

7. Merit shall provide a copy of all relevant portions of this Consent Decree to all officers, employees, and agents whose duties might reasonably include compliance with any provision of this Consent Decree, as well as to any contractor retained to perform work required under this Consent Decree. The foregoing requirement may be satisfied by hard copy, electronic copy, or by providing on-line access with notice to the affected personnel. Merit shall condition any such contract upon performance of the work in conformity with the applicable terms of this Consent Decree.

8. In any action to enforce this Consent Decree, Merit shall not raise as a defense the failure by any of its officers, directors, employees, agents, or contractors to take any actions necessary to comply with the provisions of this Consent Decree.

III. DEFINITIONS

9. The terms used in this Consent Decree that are defined in the CAA or in federal and state regulations promulgated pursuant to the CAA shall have the meaning assigned to them in the

CAA or such regulations, unless otherwise provided in this Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

a. "Annual" or "annually" shall mean a calendar year, except as otherwise provided in applicable leak detection and repair ("LDAR") regulations.

b. "Average" shall mean the arithmetic mean.

c. "CAP" shall mean the Corrective Action Plan described in Paragraph 46 of this Consent Decree.

d. "Complaint" shall mean the Complaint filed by the United States in this action.

e. "Consent Decree" or "Decree" shall mean this Consent Decree and all appendices attached hereto, but in the event of any conflict between the text of this Consent Decree and any Appendix, the text of this Consent Decree shall control.

f. "Covered Equipment" shall mean all Covered Types of Equipment in all Covered Process Units.

g. "Covered Facility" shall mean the facility located at 1080 Prough Road SW, Kalkaska, Michigan, which is owned and operated by Merit.

h. "Covered Process Units" shall mean all affected facilities (except compressors) that commenced construction, reconstruction or modification after January 20, 1984 within the meaning of 40 C.F.R. Part 60, Subpart KKK, at the Kalkaska Gas Plant North (or "KGPN") located at the Covered Facility, which includes the following process units: cryogenic

plant, flare (utility system), gas dehydration, inlet gas (front end separation/heat exchange and amine plant), preboost compression, refrigeration system, stabilizer system, and storage tanks units.

i. “Covered Types of Equipment” shall mean all valves in light liquid or gas/vapor service (but excluding pressure relief devices) and pumps in light liquid or gas/vapor service that are regulated under any “equipment leak” provision of 40 C.F.R. Part 60.

j. “Date of Lodging of this Consent Decree” or “Date of Lodging” shall mean the date that the United States files a “Notice of Lodging” of this Consent Decree with the Clerk of this Court for the purpose of providing notice and comment to the public.

k. “Day,” for purposes of requirements uniquely imposed by the Enhanced LDAR Program and not by any applicable LDAR provisions, shall mean a calendar day. In computing any period of time under this Consent Decree for submittal of reports, where the last day would fall on a Saturday, Sunday, or federal or state holiday, the period shall include the next day that is not a Saturday, Sunday, or federal or state holiday. For all other purposes, “day” shall have the meaning provided in the applicable LDAR regulations.

l. “Defendant” shall mean Merit.

m. “DOR” shall mean Delay of Repair.

n. “Effective Date” shall have the meaning given in Section XIII (Effective Date).

o. “ELP” or “Enhanced LDAR Program” shall mean the Enhanced Leak Detection and Repair Program specified in Paragraphs 13–53 of this Decree.

p. “EPA” shall mean the United States Environmental Protection Agency and any of its successor departments or agencies.

q. “Finding of Violation” shall mean the Finding of Violation issued by EPA Region 5 to Merit dated January 9, 2013.

r. “LDAR” or “Leak Detection and Repair” shall mean the leak detection and repair activities required by any applicable “equipment leak” regulations set forth in 40 C.F.R. Part 60, Subparts KKK, VV, VVA and OOOO. LDAR also shall mean any state or local equipment leak regulations that: require the use of Method 21 to monitor for equipment leaks and also require the repair of leaks discovered through such monitoring.

s. “LDAR Audit Commencement Date” or “Commencement of an LDAR Audit” shall mean the first day of the on-site inspection that accompanies an LDAR audit.

t. “LDAR Audit Completion Date” or “Completion of an LDAR Audit” shall mean 120 days after the LDAR Audit Commencement Date.

u. “LDAR Personnel” shall mean all Merit’s contractors and employees who perform any of the following activities at the Facility: LDAR monitoring, LDAR data input, maintenance of LDAR monitoring devices, leak repairs on equipment subject to LDAR, and/or any other field duties generated by LDAR regulations or the ELP.

v. “Low-Emissions Packing” or “Low-E Packing” shall mean either of the following:

- (i) A valve packing product, independent of any specific valve, for which the manufacturer has issued a written warranty that the packing

will not emit fugitives at greater than 100 ppm, and that, if it does so emit at greater than 100 ppm at any time in the first five years after installation, the manufacturer will replace the product; provided, however, that no packing product shall qualify as “Low-E” by reason of written warranty unless the packing first was tested by the manufacturer or a qualified testing firm pursuant to generally-accepted good engineering practices for testing fugitive emissions; or

- (ii) A valve packing product, independent of any specific valve, that has been tested by the manufacturer or a qualified testing firm pursuant to generally-accepted good engineering practices for testing fugitive emissions, and that, during the test, at no time leaked at greater than 500 ppm, and on average, leaked at less than 100 ppm.

w. “Low-Emissions Valve” or “Low-E Valve” shall mean either of the

following:

- (i) A valve (including its specific packing assembly or stem sealing component) for which the manufacturer has issued a written warranty that it will not emit fugitives at greater than 100 ppm, and that, if it does so emit at greater than 100 ppm at any time in the first five years after installation, the manufacturer will replace the valve; provided, however, that no valve shall qualify as “Low-E” by reason of written warranty unless the valve (including its specific packing assembly) either:
 - (a) first was tested by the manufacturer or a qualified testing firm pursuant to generally-accepted good engineering practices for testing fugitive emissions; or
 - (b) is an “extension” of another valve that qualified as “Low-E” under Subparagraph (i)(a) above;or
- (ii) A valve (including its specific packing assembly) that:
 - (a) has been tested by the manufacturer or a qualified testing firm pursuant to generally-accepted good engineering practices for

testing fugitive emissions and that, during the test, at no time leaked at greater than 500 ppm, and on average, leaked at less than 100 ppm; or

- (b) is an “extension” of another valve that qualified as “Low-E” under Subparagraph (ii)(a) above.

For purposes of Subparagraphs (i)(b) and (ii)(b), being an “extension of another valve” means that the characteristics of the valve that affect sealing performance (*e.g.*, type of valve, stem motion, tolerances, surface finishes, loading arrangement, and stem and body seal material, design, and construction) are the same or essentially equivalent as between the tested and the untested valve.

- x. “Method 21” shall mean the test method found at 40 C.F.R. Part 60, Appendix A, Method 21. To the extent that the Covered Equipment is subject to regulations that modify Method 21, those modifications shall be applicable.

- y. “Paragraph” shall mean a portion of this Consent Decree identified by an Arabic numeral.

- z. “Parties” shall mean the United States and Merit.

- aa. “Process Unit” means equipment assembled for the extraction of natural gas liquids from field gas, the fractionation of the liquids into natural gas products, or other operations associated with the processing of natural gas products. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the products.

- bb. “Process Unit Shutdown” shall mean a work practice or operational procedure that stops production from a process unit or part of a process unit during which it is

technically feasible to clear process material from a process unit or part of a process unit consistent with safety constraints and during which repairs can be accomplished. The following are not considered Process Unit Shutdowns:

- (i) An unscheduled work practice or operational procedure that stops production from a process unit or part of a process unit for less than 24 hours.
- (ii) An unscheduled work practice or operational procedure that would stop production from a process unit or part of a process unit for a shorter period of time than would be required to clear the process unit or part of the process unit of materials and start up the unit, and would result in greater emissions than delay of repair of leaking components until the next scheduled Process Unit Shutdown.
- (iii) The use of spare equipment and technically feasible bypassing of equipment without stopping production.

cc. “Quarter” or “quarterly” shall mean a calendar quarter (January through March, April through June, July through September, October through December) except as otherwise provided in applicable LDAR regulations.

dd. “Repair Verification Monitoring” shall mean the utilization of monitoring (or other method that indicates the relative size of the leak) to be completed by no later than the next calendar day after each attempt at repair of a leaking piece of equipment in order to determine whether the leak has been eliminated or is below the applicable leak definition in this ELP.

ee. “Screening Value” shall mean the highest emission level that is recorded at each piece of equipment as it is monitored in compliance with Method 21.

ff. “Section” shall mean a portion of this Consent Decree that has a heading identified by a Roman numeral.

gg. “Subsection” shall mean a portion of a Section of this Consent Decree that has a heading identified by a capital letter.

hh. “United States” shall mean the United States of America, acting on behalf of EPA.

ii. “Week” or “weekly” shall mean the standard calendar period, except as otherwise provided in applicable LDAR regulations.

IV. CIVIL PENALTY

10. By no later than 30 days after the Effective Date of this Consent Decree, Merit shall pay the sum of \$885,000 as a civil penalty. Merit shall pay the civil penalty by FedWire Electronic Funds Transfer (“EFT”) to the U.S. Department of Justice in accordance with written instructions to be provided to Merit by the Financial Litigation Unit of the U.S. Attorney’s Office for the Western District of Michigan following lodging of the Consent Decree. At the time of payment, Merit shall send a copy of the EFT authorization form, the EFT transaction record, and a transmittal letter: (i) to the United States in the manner set forth in Section VI of this Decree (Notices), (ii) by email to acctsreceivable.CINWD@epa.gov; and (iii) by mail to:

EPA Cincinnati Finance Office
26 Martin Luther King Drive
Cincinnati, Ohio 45268

The transmittal letter shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in United States v. Merit Energy Company, LLC, and shall reference the civil action number, and DOJ case number 90-5-2-110951.

11. If any portion of the civil penalty due to the United States is not paid when due, Merit shall pay interest on the amount past due, accruing from the Effective Date through the date of payment, at the rate specified in 28 U.S.C. § 1961. Interest payment under this Paragraph shall be in addition to any stipulated penalty due.

12. Merit shall not deduct any penalties paid under this Decree pursuant to this Section or Section VII (Stipulated Penalties) in calculating its federal income tax.

V. COMPLIANCE REQUIREMENTS

A. Applicability of the Enhanced LDAR Program (Subsection A)

13. The requirements of this ELP shall apply to all Covered Equipment and all Covered Process Units at the Facility. The requirements of this ELP are in addition to, and not in lieu of, the requirements of any other LDAR regulation that may be applicable to a piece of Covered Equipment. If there is a conflict between an LDAR regulation and this ELP, Merit shall follow the more stringent of the requirements.

B. Facility-Wide LDAR Document (Subsection B)

14. By no later than three months after the Effective Date of this Consent Decree, Merit shall develop a facility-wide document that describes: (i) the facility-wide LDAR program (*e.g.*, applicability of regulations to process units and/or specific equipment; leak definitions; monitoring

frequencies); (ii) a tracking program (*e.g.*, Management of Change as provided in Paragraph 37) that ensures that new pieces of equipment added to the Facility for any reason are integrated into the LDAR program and that pieces of equipment that are taken out of service are removed from the LDAR program; (iii) the roles and responsibilities of all employee and contractor personnel assigned to LDAR functions at the Facility; (iv) how the number of personnel dedicated to LDAR functions is sufficient to satisfy the requirements of the LDAR program; and (v) how the Facility plans to implement this ELP. Once developed, Merit shall review the facility-wide LDAR document annually and update it as needed by no later than December 31 of each year.

C. Monitoring Frequency and Equipment (Subsection C)

15. Beginning no later than six months after the Effective Date, for all Covered Equipment, Merit shall comply with the following periodic monitoring frequencies, unless: (i) more frequent monitoring is required by federal, state, or local laws or regulations; or (ii) the relevant Covered Process Unit has been permanently shut down:

- a. Valves – Quarterly
- b. Pumps – Monthly.

Compliance with the monitoring frequencies in this Paragraph 15 is not required when a specific, applicable LDAR provision excludes or exempts, fully or partially, monitoring at a periodic frequency (*e.g.*, an exemption for equipment that is designated as unsafe-to-monitor or difficult-to-monitor or an exemption for pumps that have no externally actuated shaft), provided that Merit satisfies all applicable conditions and requirements for the exclusion or exemption set forth in the

regulation.

16. Alternative Monitoring Frequencies for Valves After Two Years. At any time after two consecutive years of monitoring valves at the frequency specified in Paragraph 15.a, Merit may elect to comply with the monitoring requirements set forth in this Paragraph 16 by notifying EPA no later than three months prior to changing to the monitoring frequency specified under this Paragraph. Merit may elect to comply with the monitoring requirements of this Paragraph at the Covered Process Units but may not make this election for anything less than all pieces of Covered Equipment in one entire Covered Process Unit. An election to comply with the monitoring requirements of Subparagraph 16.a must include an election to comply with Subparagraph 16.b; Merit may not elect to comply with Subparagraph 16.a without also complying with Subparagraph 16.b.

a. For Valves that Have Not Leaked at any Time for at Least Two Consecutive Years of Monitoring. For valves that have not leaked at any time for at least the two years prior to electing this alternative, Merit shall monitor valves one time per year. If any leaks are detected during this alternative monitoring schedule or during an LDAR audit or a federal, state or local audit or inspection, Merit immediately shall start monitoring the leaking valve (or valves) pursuant to the requirements of Subparagraph 16.b.

b. For Valves that Have Leaked at any Time in the Prior Two Years of Monitoring. For valves that have leaked at any time in the prior two years of monitoring, Merit shall monitor each such valve until it shows no leaks for six consecutive months, at which time

Merit may commence monitoring at the frequency set forth in Subparagraph 16.a. The alternative monitoring schedule shall continue to apply to non-leaking valves in the Covered Process Unit.

17. Beginning no later than six months after the Effective Date, for all Covered Equipment, Merit shall comply with Method 21 in performing LDAR monitoring, using an instrument attached to a data logger (or an equivalent instrument) which directly records electronically the Screening Value detected at each piece of Covered Equipment, the date and time that each Screening Value is taken, and the identification numbers of the monitoring instrument and the technician. Merit shall transfer this monitoring data to an electronic database on at least a weekly basis for recordkeeping purposes.

18. If, during monitoring in the field, a piece of Covered Equipment is discovered that is not listed in the data logger, Merit is permitted to monitor the piece of Covered Equipment and record, by any means available, the Screening Value, the date and time of the Screening Value, and the identification numbers of the monitoring instrument and technician. In such an instance, the failure to initially record the information electronically, in the data logger, does not constitute a violation of this Paragraph's requirement to record the required information electronically, provided that Merit thereafter promptly adds the piece of Covered Equipment and the information regarding the monitoring event to the LDAR database.

D. Leak Detection and Repair Action Levels (Subsection D)19. Action Levels

a. Beginning no later than six months after the Effective Date of this Consent Decree and continuing until termination, for all leaks from Covered Equipment detected at or above the leak definitions listed in Table 1 for each of the specific Covered Types of Equipment, Merit shall perform repairs in accordance with Paragraphs 20–25.

Table 1: Leak Definitions for Covered Types of Equipment

Covered Type of Equipment	Lower Leak Definition (ppm)
Valves	500
Pumps	2,000

b. For purposes of these lower leak definitions, Merit may elect to adjust or not to adjust the monitoring instrument readings for background pursuant to any provisions of applicable LDAR requirements that address background adjustment, provided that Merit complies with the requirements for doing so or not doing so.

c. Beginning no later than six months after the Effective Date of this Consent Decree, for all Covered Equipment, and all valves and pumps in heavy liquid service, at any time, including outside of periodic monitoring, evidence of a potential leak is detected through audio, visual, or olfactory sensing, Merit shall comply with all applicable regulations and, if repair is required, with Paragraphs 20–25.

E. Repairs (Subsection E)

20. Except as provided in Subparagraph 31.d.i, by no later than five days after detecting a leak, Merit shall perform a first attempt at repair. By no later than 15 days after detection, Merit shall perform a final attempt at repair of the leaking piece of Covered Equipment or may place the piece of Covered Equipment on the Delay of Repair list provided that Merit has complied with all applicable regulations and with the requirements of Paragraphs 21–25 and 27 (valve replacement and improvement).

21. Except as provided in Subparagraph 31.d.i, beginning no later than six months after the Effective Date of this Consent Decree and continuing until termination, Merit shall perform Repair Verification Monitoring as set forth in Paragraphs 22 - 25.

22. Repair Attempt for Valves (other than Control Valves) with Screening Values greater than or equal to 250 and less than 500 ppm. For any valve, excluding control valves, that has a Screening Value greater than or equal to 250 and less than 500 ppm, Merit shall make an initial attempt to repair the valve and eliminate the leak by no later than five days after detecting the leak. Repair Verification Monitoring shall be performed to determine if the initial repair has been successful. If, upon Repair Verification Monitoring, the Screening Value is less than 500 ppm, no further actions shall be required for that monitoring event for that valve. If, upon Repair Verification Monitoring, the Screening Value is greater than or equal to 500 ppm, Merit shall undertake the requirements for repair required by this Consent Decree (and all deadlines for such requirements shall be based on the date of the failed Repair Verification Monitoring).

23. Drill and Tap for Valves (other than Control Valves).

a. Except as provided in Subparagraph 23.b, for leaking valves (other than control valves), when other repair attempts have failed to reduce emissions below the applicable leak definition and Merit is not able to remove the leaking valve from service, Merit shall attempt at least one drill-and-tap repair (with a second injection of an appropriate sealing material if the first injection is unsuccessful at repairing the leak) before placing the valve (other than provisionally, as set forth in Subparagraph 23.c) on the DOR list.

b. Drill-and-tap is not required: (i) when Subparagraph 31.d.i applies; or (ii) when there is a major safety, mechanical, product quality, or environmental issue with repairing the valve using the drill-and-tap method, in which case, Merit shall document the reason(s) why any drill-and-tap attempt was not performed prior to placing any valve on the DOR list.

c. If a drill-and-tap attempt can reasonably be completed within the 15-day repair period, Merit shall complete the drill-and-tap attempt in that time period. If a drill-and-tap attempt cannot reasonably occur within the 15-day repair period (*e.g.*, if Merit's drill-and-tap contractor is not local and must mobilize to the Facility), Merit provisionally may place the valve on the DOR list pending attempting the drill-and-tap repair as expeditiously as practical. In no event may Merit take more than 30 days from the initial monitoring to attempt a drill-and-tap repair. If upon Repair Verification Monitoring, drill-and-tap is deemed successful by reference to a Screening Value of less than 500 ppm, the valve shall be removed from the provisional DOR list and considered repaired.

24. Except as provided in Subparagraph 31.d.i , for each leak, Merit shall record the following information: the date of all repair attempts; the repair methods used during each repair attempt; the date, time and Screening Values for all re-monitoring events; and, if applicable, documentation of compliance with Paragraphs 23 and 26 for Covered Equipment placed on the DOR list.

25. Nothing in Paragraphs 20–24 is intended to prevent Merit from taking a leaking piece of Covered Equipment out of service; provided, however, that prior to placing the leaking piece of Covered Equipment back in service, Merit must repair the leak or must comply with the requirements of Subsection F (Delay of Repair) to place the piece of Covered Equipment on the DOR list.

F. Delay of Repair (Subsection F)

26. Beginning no later than the Effective Date of this Consent Decree for the requirements in Subparagraphs 26.b and 26.c.(i), and beginning no later than three months after the Effective Date of this Consent Decree for the other requirements set forth below in this Paragraph, for all Covered Equipment placed on the DOR list, Merit shall:

a. Require sign-off from the relevant process unit supervisor or person of similar authority that the piece of Covered Equipment is technically infeasible to repair without a Process Unit Shutdown;

b. Undertake periodic monitoring of the Covered Equipment placed on the DOR list at the frequency specified in Paragraph 15 required for other pieces of Covered

Equipment of that type in the process unit; and

c. (i) Repair the piece of Covered Equipment within the time frame required by the applicable LDAR regulation; or (ii) if applicable under Subsection G, replace, repack, or improve the piece of Covered Equipment by the timeframes set forth in Subsection G.

G. Valve Replacement and Improvement Program (Subsection G)

27. Commencing no later than six months after the Effective Date of this Consent Decree, and continuing until termination, Merit shall implement the program set forth in Paragraphs 28–36 to improve the emissions performance of the valves that are Covered Equipment in each Covered Process Unit. All references to “valves” in Paragraphs 28–36 exclude pressure relief valves.

28. List of all Existing Valves in the Covered Process Units. In the first compliance status report required under Paragraph 49, Merit shall include a list of the tag numbers of all valves subject to this ELP, broken down by Covered Process Unit, that are in existence as of the Effective Date. The valves on this list shall be the “Existing Valves” for purposes of Paragraphs 29–31.

29. Proactive Initial Valve Tightening Work Practices Relating to each New Valve that Is Installed and each Existing Valve that Is Repacked. Merit shall undertake the following work practices with respect to each new valve that is subject to LDAR that is installed (whether the new valve replaces an Existing Valve or is newly added to a Covered Process Unit) and each Existing Valve that is repacked:

a. Upon installation (or re-installation in the case of repacking), Merit shall

tighten the valve's packing gland nuts or their equivalent (*e.g.*, pushers) to: (i) the manufacturer's recommended gland nut or packing torque; or (ii) any appropriate tightness that will minimize the potential for fugitive emission leaks of any magnitude. This practice shall be implemented prior to the valve's exposure (or re-exposure, in the case of repacking) to process fluids.

30. Installing New Valves. Except as provided in Subparagraphs 30.a, 30.b, or Paragraph 33, Merit shall ensure that each new valve (other than a valve that serves as the closure device on an open-ended line) that it installs in each Covered Process Unit, and that, when installed, will be regulated under LDAR, either is a Low-E Valve or is fitted with Low-E Packing. This requirement applies to entirely new valves that are added to a Covered Process Unit and to Existing Valves that are replaced for any reason in a Covered Process Unit.

a. Paragraph 30 shall not apply in emergencies or exigent circumstances requiring immediate installation or replacement of a valve where a Low-E Valve or Low-E Packing is not available on a timely basis. Any such instance shall be reported in the next ELP compliance status report.

b. Paragraph 30 shall not apply to valves that are installed temporarily for a short-term purpose and then removed (*e.g.*, valves connecting a portion of the Covered Process Unit to a testing device).

31. Replacing or Repacking Existing Valves that Have Screening Values at or above 500 ppm with Low-E Valves or Low-E Packing.

a. Existing Valves Required to Be Replaced or Repacked. Except as provided

in Paragraph 33, for each Existing Valve that has a Screening Value at or above 500 ppm during any monitoring event, Merit shall either replace or repack the Existing Valve with a Low-E Valve or with Low-E Packing.

b. Timing: If Replacing or Repacking Does Not Require a Process Unit Shutdown. If replacing or repacking does not require Process Unit Shutdown, Merit shall replace or repack the Existing Valve by no later than 30 days after the monitoring event that triggers the replacing or repacking requirement, unless Merit complies with the following:

i. Prior to the deadline, Merit must take all actions necessary to obtain the required valve or valve packing, including all necessary associated materials, as expeditiously as practical, and retain documentation of the actions taken and the date of each such action;

ii. If, despite Merit's efforts to comply with Subparagraph 31.b.i, the required valve or valve packing, including all necessary associated materials, is not available in time to complete the installation within 30 days, Merit must take all reasonable actions to minimize emissions from the valve pending completion of the required replacing or repacking. Examples include:

(a) Repair;

(b) More frequent monitoring, with additional repairs as needed;
or

(c) Where practical, interim replacing or repacking of a valve with a valve that is not a Low-E Valve or with packing that is not Low-E Packing; and

iii. Merit must promptly perform the required replacing or repacking after Merit's receipt of the valve or valve packing, including all necessary associated materials.

c. Timing: If Replacing or Repacking Requires a Process Unit Shutdown. If replacing or repacking requires a Process Unit Shutdown, Merit shall replace or repack the Existing Valve during the first Process Unit Shutdown that follows the monitoring event that triggers the requirement to replace or repack the valve, unless Merit documents that insufficient time existed between the monitoring event and the Process Unit Shutdown to enable Merit to purchase and install the required valve or valve packing technology. In that case, Merit shall undertake the replacing or repacking at the next Process Unit Shutdown that occurs after Merit's receipt of the valve or valve packing, including all necessary associated materials.

d. Actions Required Pending Replacings or Repackings Pursuant to Subparagraph 31.a-c.

i. Actions Required Pursuant to Subsection E:

Merit shall not be required to comply with Subsection E (Repairs) e.g. drill and tap, pending replacing or repacking pursuant to Subparagraphs 31.a-c if Merit completes the replacing or repacking by the date that is no later than 30 days after detecting the leak. If Merit does not complete the replacing or repacking within 30 days, or if at the time of the leak detection Merit reasonably can anticipate that it might not be able to complete the replacing or repacking within 30 days, Merit shall comply with all applicable requirements of Subsection E (Repairs).

ii. Actions Required Pursuant to Applicable Regulations.

For each Existing Valve that has a Screening Value at or above 500 ppm, Merit shall comply with all applicable regulatory requirements, including repair and "delay of repair," pending replacing or repacking pursuant to Subparagraphs 31.a-c.

32. Provisions Related to Low-E Valves and Low-E Packing.

a. Low-E Status Not Affected by Subsequent Leaks. If, during monitoring or after installation, a Low-E Valve or a valve using Low-E Packing has a Screening Value at or above 500 ppm, the leak is not a violation of this Decree, does not invalidate the “Low-E” status or use of that type of valve or packing technology, and does not require replacing other, non-leaking valves or packing technology of the same type.

b. Repairing Low-E Valves. If, during monitoring after installation, a Low-E Valve or a valve using Low-E Packing has a Screening Value at or above 500 ppm, Paragraphs 20, 21, 23, 24, 25 and 26 shall apply.

c. Replacing or Repacking Low-E Valves. On any occasion when a Low-E Valve or a valve that utilizes Low-E Packing has a Screening Value at or above 500 ppm, Merit shall replace or repack it pursuant to the requirements of Paragraph 31.

33. Commercial Unavailability of a Low-E Valve or Low-E Packing. Merit shall not be required to utilize a Low-E Valve or Low-E Packing to replace or repack a valve if a Low-E Valve or Low-E Packing is commercially unavailable. The factors relevant to the question of commercial unavailability and the procedures that Merit must follow to assert that a Low-E Valve or Low-E Packing is commercially unavailable are set forth in Appendix A.

34. Records of Low-E Valves and Low-E Packing. Prior to installing any Low-E Valves or Low-E Packing, or if not possible before installation, then as soon as possible after installation, Merit shall secure from each manufacturer documentation that demonstrates that the proposed valve

or packing technology meets the definition of “Low-E Valve” and/or “Low-E Packing.” Merit shall make the documentation available upon request.

35. Nothing in Paragraphs 30–33 requires Merit to utilize any valve or valve packing technology that is not appropriate for its intended use in a Covered Process Unit.

36. In each Compliance Status Report due under Paragraph 49 of this Decree, Merit shall include a separate section in the Report that: (i) describes the actions it took to comply with this Subsection G, including identifying each piece of equipment that triggered a requirement in Subsection G, the Screening Value for that piece of equipment, the type of action taken (*i.e.*, replacement, repacking, or improvement, and the date when the action was taken); (ii) identifies any required actions that were not taken and explains why; and (iii) identifies the schedule for any known, future replacements, repackings, improvements, or eliminations.

H. Management of Change (Subsection H)

37. Management of Change. To the extent not already done, beginning no later than three months after the Effective Date of this Consent Decree, Merit shall ensure that each valve and pump added to the Covered Process Units at the Covered Facility for any reason is evaluated to determine if it is subject to LDAR regulations. Merit also shall ensure that each valve and pump that was subject to the LDAR program is eliminated from the LDAR program if it is physically removed from a Covered Process Unit. This evaluation shall be a part of Merit’s facility-wide Management of Change protocol.

I. Training (Subsection I)

38. By no later than nine months after the Effective Date of this Consent Decree, Merit shall develop a training protocol (or, as applicable, require its contractor to develop a training protocol for the contractor's employees) and shall ensure that all LDAR Personnel have completed training on all aspects of LDAR, including this ELP, that are relevant to the person's duties. Once per calendar year starting in the calendar year after completion of initial training, Merit shall ensure that refresher training is performed with respect to each employee or contractor; provided, however, that refresher training is not required if an individual's employment at the Facility ceases prior to the end of the calendar year or no longer involves duties relevant to LDAR. Beginning no later than the Effective Date of this Consent Decree and continuing until termination of this Consent Decree, Merit shall ensure (or as applicable, require its contractor to ensure for the contractor's employees) that new LDAR Personnel are sufficiently trained prior to any field involvement (other than supervised involvement for purposes of training) in the LDAR program.

J. Quality Assurance ("QA")/Quality Control ("QC") (Subsection J)

39. Daily Certification by Monitoring Technicians. Commencing by no later than one month after the Effective Date of this Consent Decree, on each day that monitoring occurs, at the end of such monitoring, Merit shall ensure that each monitoring technician certifies that the data collected accurately represents the monitoring performed for that day by requiring the monitoring technician to sign a form that includes the following certification:

On [insert date], I reviewed the monitoring data that I collected today and to the best of my knowledge and belief, the data accurately

represents the monitoring that I performed today.

40. Commencing by no later than the first full calendar quarter after the Effective Date of this Consent Decree, at times that are not announced to the LDAR monitoring technicians, an LDAR-trained employee or contractor of Merit, who does not serve on a routine basis as an LDAR monitoring technician at the Facility, shall undertake the following no less than once per calendar quarter:

- a. Verify that equipment was monitored at the appropriate frequency;
- b. Verify that proper documentation and sign-offs have been recorded for all equipment placed on the DOR list;
- c. Ensure that repairs have been performed in the required periods;
- d. Review monitoring data and equipment counts (e.g., number of pieces of equipment monitored per day) for feasibility and unusual trends;
- e. Verify that proper calibration records and monitoring instrument maintenance information are maintained;
- f. Verify that other LDAR program records are maintained as required; and
- g. Observe in the field each LDAR monitoring technician who is conducting leak detection monitoring to ensure that monitoring during the quarterly QA/QC is being conducted as required.

Merit promptly shall correct any deficiencies detected or observed. Merit shall maintain a log that: (i) records the date and time that the reviews, verifications, and observations required by

this Paragraph are undertaken; and (ii) describes the nature and timing of any corrective actions taken.

K. LDAR Audits and Corrective Action (Subsection K)

41. LDAR Audit Schedule: Until termination of this Consent Decree, Merit shall ensure that an LDAR audit of all Covered Process Units at the Covered Facility is conducted once every two years in accordance with the following schedule: for the first LDAR audit, the LDAR Audit Commencement Date shall be no later than twelve months after the Effective Date of this Consent Decree; for each subsequent LDAR audit, the LDAR Audit Completion Date shall occur within the same calendar quarter that the first LDAR Audit Completion Date occurred.

42. Requirements related to persons conducting LDAR audits. For the LDAR audits to be conducted every two years under this Consent Decree, Merit shall retain a third party with experience in conducting LDAR audits. Merit shall select a different company than the Facility's regular LDAR contractor to perform the third-party audit and Merit may not hire that company as the Facility's regular LDAR contractor during the life of this Consent Decree.

43. For each Covered Process Unit, each LDAR audit shall include: (i) reviewing compliance with all applicable LDAR regulations, including LDAR requirements related to valves and pumps in heavy liquid service; (ii) reviewing and/or verifying the same items that are required to be reviewed and/or verified in Subparagraphs 40.a-40.f; (iii) reviewing whether any pieces of equipment that are required to be in the LDAR program are not included; and (iv) "comparative monitoring" as described in Paragraph 44. LDAR audits after the first audit also shall include

reviewing the Facility's compliance with this ELP.

44. Comparative Monitoring. Comparative monitoring during LDAR Audits shall be undertaken as follows:

a. Calculating a Comparative Monitoring Audit Leak Percentage. Covered Types of Equipment shall be monitored in order to calculate a leak percentage for the Covered Process Units. For descriptive purposes under this Section, the monitoring that takes place during an LDAR Audit shall be called "comparative monitoring" and the leak percentages derived from the comparative monitoring shall be called the "Comparative Monitoring Audit Leak Percentages." Merit shall undertake comparative monitoring of the Covered Types of Equipment in the Covered Process Units during each LDAR Audit. In undertaking Comparative Monitoring, Merit shall not be required to monitor every component in each Covered Process Unit.

b. Calculating the Historic, Average Leak Percentage from Prior Periodic Monitoring Events. The historic, Average Leak percentage from prior periodic monitoring events, broken down by Covered Type of Equipment shall be calculated. Four complete monitoring periods immediately preceding the comparative monitoring shall be used for this purpose. The preceding monitoring periods may comprise a mix of the monitoring periods and frequencies specified in Paragraph 15, 16 or 17.

c. Calculating the Comparative Monitoring Leak Ratio. For the Covered Process Units, the ratio of the Comparative Monitoring Audit Leak Percentage from Subparagraph 44.a to the historic, average leak percentage from Subparagraph 44.b shall be calculated. This ratio

shall be called the “Comparative Monitoring Leak Ratio.” If the denominator in this calculation is “zero,” it shall be assumed (for purposes of this calculation but not for any other purpose under this Consent Decree or under any applicable laws and regulations) that one leaking piece of Covered Equipment was found in the process unit through routine monitoring during the 12-month period before the comparative monitoring.

45. When More Frequent Periodic Monitoring is Required. If a Comparative Monitoring Audit Leak Percentage calculated pursuant to Subparagraph 44.a triggers a more frequent monitoring schedule under any applicable federal, state, or local law or regulation than the frequencies listed in either Paragraph 15, 16, or 17 as applicable for the Covered Type of Equipment in that Covered Process Unit, Merit shall monitor the Covered Type of Equipment at the greater frequency unless and until less frequent monitoring is again allowed under the specific federal, state, or local law or regulation. At no time may Merit monitor at intervals less frequently than those listed in the applicable Paragraph in Subsection V.C.

46. Corrective Action Plan (“CAP”).

a. Requirements of a CAP. By no later than the date that is 30 days after each LDAR Audit Completion Date, Merit shall develop a preliminary Corrective Action Plan if: (i) the results of an LDAR audit identify any deficiencies; or (ii) a Comparative Monitoring Leak Ratio calculated pursuant to Subparagraph 44.c is 3.0 or higher and the Comparative Monitoring Audit Leak Percentage calculated pursuant to Subparagraph 44.a is greater than or equal to 0.5 percent. The preliminary CAP shall describe the actions that Merit has taken or shall take to address: (i) the

deficiencies and/or (ii) the causes of a Comparative Monitoring Leak Ratio that is 3.0 or higher (but only if the Comparative Monitoring Audit Leak Percentage is at or above 0.5 percent). Merit shall include a schedule by which actions that have not yet been completed shall be completed. Merit promptly shall complete each corrective action item with the goal of completing each action within 90 days after the LDAR Audit Completion Date. If any action is not completed or not expected to be completed within 90 days after the LDAR Audit Completion Date, Merit shall explain the reasons and propose a schedule for prompt completion in the final CAP to be submitted under Subparagraph 46.b.

b. Submission of the Final CAP to EPA. By no later than 120 days after the LDAR Audit Completion Date, Merit shall submit the final CAP to EPA, together with a certification of the completion of each item of corrective action. If any action is not completed within 90 days after the LDAR Audit Completion Date, Merit shall explain the reasons, together with a proposed schedule for prompt completion. Merit shall submit a supplemental certification of completion by no later than 30 days after completing all actions.

c. EPA Comment on CAP. EPA may submit comments on the CAP. Within 30 days after receipt of any comments from EPA, Merit shall submit a reply. Disputes arising with respect to any aspect of a CAP shall be resolved in accordance with the dispute resolution provisions of this Decree.

L. Certification of Compliance (Subsection L)

47. Within 180 days after the initial LDAR Audit Completion Date, Merit shall certify to EPA that, to the signer's best knowledge and belief formed after reasonable inquiry: (i) except as otherwise identified, the Facility is in compliance with all applicable LDAR regulations and this ELP; (ii) Merit has completed all corrective actions, if applicable, or is in the process of completing all corrective actions pursuant to a CAP; and (iii) all equipment at the Facility that is regulated under LDAR has been identified and included in the Facility's LDAR program. To the extent that Merit cannot make the certification in all respects, it shall specifically identify any deviations from Items (i)–(iii) in this Paragraph.

M. Recordkeeping and Reporting (Subsection M)

48. Merit shall keep all records required by this ELP, including each LDAR audit report, to document compliance with the requirements of this ELP as provided in Paragraph 84. Upon request by EPA, Merit shall make all such documents available to EPA and shall provide, in electronic format if so requested, all LDAR monitoring data generated during the life of this Consent Decree.

49. ELP Compliance Status Reports. On the dates and for the time periods set forth in Paragraph 50, Merit shall submit to EPA, in the manner set forth in Section VI (Notices), Paragraph 54, the following information:

a. The number of LDAR Personnel at the Facility (excluding Personnel whose functions involve the non-monitoring aspects of repairing leaks) and the approximate percentage of time each such person dedicated to performing his/her LDAR functions;

b. An identification and description of any non-compliance with the requirements of Section V (Compliance Requirements);

c. An identification of any problems encountered in complying with the requirements of Section V (Compliance Requirements);

d. The information required by Paragraph 36;

e. The information required by Paragraph 40 of Subsection V.G;

f. A description of the trainings done in accordance with this Consent Decree;

g. Any deviations identified in the QA/QC performed under Subsection V.J, as well as any corrective actions taken under that Subsection;

h. A summary of LDAR audit results including specifically identifying all alleged deficiencies; and

i. The status of all actions under any CAP that was submitted during the reporting period, unless the CAP was submitted less than one month before the compliance status report.

50. Due Dates. The first compliance status report shall be due 31 days after the first full year after the Effective Date of this Consent Decree until termination of this Decree, and each subsequent report will be due annually on the same date in the following year and shall cover the prior full year.

51. Each report submitted under this Consent Decree shall be signed by a Merit official (head of those responsible for environmental management and compliance), and shall include the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

52. All Reports under this Consent Decree shall be submitted to EPA in the manner designated in Section VI of this Consent Decree (Notices).

53. The reporting requirements of this Consent Decree do not relieve Merit of any reporting obligations required by the CAA or implementing regulations, or by any other federal, state, or local law, regulation, permit, or other requirement. The reporting requirements of this Section are in addition to any other reports, plans or submissions required by other Sections of this Consent Decree.

VI. NOTICES

54. Unless otherwise specified herein, whenever notifications, submissions, or communications are required by this Consent Decree, they shall be made in writing and addressed to the persons set forth below. Submission of hard copies is required and shall be sufficient to comply with the notice requirements of this Consent Decree. The email addresses listed below are to permit the submission of courtesy copies.

Notice or submission to the United States:

Department of Justice:

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
Box 7611 Ben Franklin Station
Washington, DC 20044-7611
Re: DOJ No. 90-5-2-110951

EPA

Air and Radiation Division
EPA Region 5
77 W. Jackson Blvd. (AE-17J)
Chicago, IL 60604
Attn: Compliance Tracker

Office of Regional Counsel
EPA Region 5
77 West Jackson Blvd. (C-14J)
Chicago, IL 60604

Notice or submission to EPA only:

Air and Radiation Division
EPA Region 5
77 W. Jackson Blvd. (AE-17J)
Chicago, IL 60604
Attn: Compliance Tracker

and

Office of Regional Counsel
EPA Region 5
77 West Jackson Blvd. (C-14J)
Chicago, IL 60604

For courtesy purposes only, electronic copies to:

loukeris.constantinos@epa.gov
carlson.deborahA@epa.gov

Notice or submission to Merit:

Sean Craven, Regulatory Analyst
Merit Energy Kalkaska Gas Plant
1510 Thomas Road SW
Kalkaska, Michigan 49646

and

Jeffrey W. Schwarz
Carver Schwarz McNab Kamper and Forbes, LLC
1600 Stout Street, Suite 1700
Denver, Colorado 80202

For courtesy purposes only, electronic copies to:

sean.craven@meritenergy.com
jschwarz@csmkf.com

55. Any Party may, by written notice to the other Party, change its designated notice recipient(s) or notice address(es) provided above. Notices submitted pursuant to this Section shall be deemed submitted upon mailing, unless otherwise provided in this Consent Decree or by mutual agreement of the Parties in writing.

VII. STIPULATED PENALTIES

56. Failure to Pay Civil Penalty. If Defendant fails to pay any portion of the civil penalty required to be paid under Section IV of this Decree (Civil Penalty) when due, Defendant shall pay a stipulated penalty of \$2,500 per day for each day that the payment is late. Late payment of the civil penalty and any accrued stipulated penalties shall be made in accordance with Paragraph 10.

57. Failure to Meet ELP Consent Decree Obligations. Defendant shall be liable for stipulated penalties to the United States for violations of this Consent Decree as specified in Table 2 below unless excused under Section VIII (Force Majeure).

Table 2

Violation	Stipulated Penalty	
57.a. Failure to timely develop a Facility-Wide LDAR document as required by Paragraph 14 or failure to timely update the document on an annual basis if needed pursuant to Paragraph 14	<u>Period of noncompliance</u>	<u>Penalty per day</u> <u>late</u>
	1 - 15 days	\$300
	16 - 30 days	\$400
	31 days or more	\$500

Violation	Stipulated Penalty												
57.b. Each failure to perform monitoring at the frequencies set forth in Paragraph 15 or, if applicable, Paragraphs 16 and 17	\$100 per component per missed monitoring event, not to exceed \$25,000 per month per Covered Process Unit												
57.c. Each failure to comply with Method 21 in performing LDAR monitoring, in violation of Paragraph 17	<table border="0"> <thead> <tr> <th>Monitoring frequency <u>for the component</u></th> <th><u>Penalty per monitoring event per process unit</u></th> </tr> </thead> <tbody> <tr> <td>Every 2 years</td> <td>\$25,000</td> </tr> <tr> <td>Annual</td> <td>\$20,000</td> </tr> <tr> <td>Semi-Annual</td> <td>\$15,000</td> </tr> <tr> <td>Quarterly</td> <td>\$10,000</td> </tr> <tr> <td>Monthly</td> <td>\$5,000</td> </tr> </tbody> </table>	Monitoring frequency <u>for the component</u>	<u>Penalty per monitoring event per process unit</u>	Every 2 years	\$25,000	Annual	\$20,000	Semi-Annual	\$15,000	Quarterly	\$10,000	Monthly	\$5,000
Monitoring frequency <u>for the component</u>	<u>Penalty per monitoring event per process unit</u>												
Every 2 years	\$25,000												
Annual	\$20,000												
Semi-Annual	\$15,000												
Quarterly	\$10,000												
Monthly	\$5,000												
57.d. For each failure to use a monitoring device that is attached to a datalogger and for each failure, during each monitoring event, to directly electronically record the Screening Value, date, time, identification number of the monitoring instrument, and the identification of technician, in violation of these requirements of Paragraph 18	\$100 per failure per piece of equipment monitored												
57.e. Each failure to transfer monitoring data to an electronic database on at least a weekly basis, in violation of this requirement in Paragraph 18	\$150 per day for each day that the transfer is late												

Violation	Stipulated Penalty		
<p>57.f. Each failure to timely perform a first repair as required by Paragraph 20 or 22. For purposes of these stipulated penalties, the term “repair” includes the required remonitoring in Paragraph 22 after the repair attempt; the stipulated penalties in Subparagraph 57.h do not apply.</p>	<p>\$150 per day for each late day, not to exceed \$1,500 per leak</p>		
<p>57.g. Each failure to timely perform a final attempt at repair as required by Paragraph 20 unless not required to do so under Subparagraph 31.d. For purposes of these stipulated penalties, the term “repair” includes the required remonitoring in Paragraph 22 after the repair attempt; the stipulated penalties in Subparagraph 57.h do not apply.</p>	<p>Equipment <u>type</u></p> <p>Valves</p> <p>Pumps</p>	<p>Penalty per component <u>per day late</u></p> <p>\$300</p> <p>\$1,200</p>	<p>Not to <u>exceed</u></p> <p>\$37,500</p> <p>\$150,000</p>
<p>57.h. Each failure to timely perform Repair Verification Monitoring as required by Paragraph 21 in circumstances where the first attempt to adjust, or otherwise alter, the piece of equipment to eliminate the leak was made within five days and the final attempt to adjust, or otherwise alter, the piece of equipment to eliminate the leak was made within 15 days</p>	<p>Equipment <u>type</u></p> <p>Valves</p> <p>Pumps</p>	<p>Penalty per component <u>per day late</u></p> <p>\$150</p> <p>\$600</p>	<p>Not to <u>exceed</u></p> <p>\$18,750</p> <p>\$75,000</p>

Violation	Stipulated Penalty		
57.i. Each failure to undertake the drill-and-tap method as required by Paragraph 23	Period of <u>noncompliance</u> Between 1 and 15 days Between 16 and 30 days Over 30 days		Penalty per component per day <u>late</u> \$200 \$350 \$500 per day for each day over 30, not to exceed \$37,500
57.j. Each failure to record the information required by Paragraph 25	\$100 per component per item of missed information		
57.k. Each improper placement of a piece of Covered Equipment on the DOR list (e.g., placing a piece of Covered Equipment on the DOR list even though it is feasible to repair it without a Process Unit Shutdown) required by Paragraph 20	<u>Equipment type</u> Valve Pumps	Penalty per component <u>per day on list</u> \$300 \$1,200	Not to <u>exceed</u> \$75,000 \$300,000
57.l. Each failure to comply with the requirement in Subparagraph 26.a that a relevant unit supervisor or person of similar authority sign off on placing a piece of Covered Equipment on the DOR list	\$250 per piece of Covered Equipment		
57.m. Each failure to comply with the requirements of Subparagraph 26.c.(i)	Refer to the applicable stipulated penalties in Subparagraphs 57.f and 57.g		

Violation	Stipulated Penalty
57.n. Each failure to comply with the requirements of Subparagraph 26.c.(ii)	Refer to the applicable stipulated penalties in Subparagraphs 57.p –57.u.
57.o. Each failure to comply with the work practice standards in Paragraph 29	\$50 per violation per valve per day, not to exceed \$30,000 for all valves in a Covered Process Unit per quarter.
57.p. Each failure to install a Low-E Valve or a valve fitted with Low-E Packing when required to do so pursuant to Paragraph 30	\$20,000 per failure, except as provided in Paragraph 58 below
57.q. Each failure, in violation of Subparagraph 32.b, to timely comply with the requirements relating to installing a Low-E Valve or Low-E Packing if a Process Unit Shutdown is not required	\$500 per day per failure, not to exceed \$20,000, except as provided in Paragraph 58 below
57.r. Each failure, in violation of Subparagraph 32.c, to install a Low-E Valve or Low-E Packing when required to do so during a Process Unit Shutdown	\$20,000 per failure, except as provided in Paragraph 58 below
57.s. Each failure to add a piece of Covered Equipment to the LDAR program when required to do so pursuant to the evaluation required by Paragraph 37 (MOC)	\$300 per piece of Covered Equipment (plus an amount, if any, due under Paragraph 57.b for any missed monitoring event related to a component that should have been added to the LDAR program but was not)

Violation	Stipulated Penalty								
57.t. Each failure to remove a piece of Covered Equipment from the LDAR program when required to do so pursuant to Paragraph 37	\$150 per failure per piece of Covered Equipment								
57.u. Each failure to timely develop a training protocol as required by Paragraph 38	\$50 per day late								
57.v. Each failure to perform initial, refresher, or new personnel training as required by Paragraph 38	\$1,000 per person per month late								
57.w. Each failure of a monitoring technician to complete the certification required in Paragraph 39	\$100 per failure per technician								
57.x. Each failure to perform any of the requirements relating to QA/QC in Paragraph 39	\$1,000 per missed requirement per quarter								
57.y. Each failure to conduct an LDAR audit in accordance with the schedule set forth in Paragraph 41	<table border="0"> <thead> <tr> <th><u>Period of noncompliance</u></th> <th><u>Penalty per day</u></th> </tr> </thead> <tbody> <tr> <td>1-15 days</td> <td>\$300</td> </tr> <tr> <td>16-30 days</td> <td>\$400</td> </tr> <tr> <td>31 days or more</td> <td>\$500, not to exceed \$100,000 per audit</td> </tr> </tbody> </table>	<u>Period of noncompliance</u>	<u>Penalty per day</u>	1-15 days	\$300	16-30 days	\$400	31 days or more	\$500, not to exceed \$100,000 per audit
<u>Period of noncompliance</u>	<u>Penalty per day</u>								
1-15 days	\$300								
16-30 days	\$400								
31 days or more	\$500, not to exceed \$100,000 per audit								

Violation	Stipulated Penalty										
57.z. Each failure to use a third party as an auditor; each use of a third party auditor that is not experienced in LDAR audits; and each use of Defendant's regular LDAR contractor to conduct the third party audit, in violation of the requirements of Paragraph 42	\$25,000 per audit										
57.aa. Except for the requirement to undertake Comparative Monitoring, each failure to substantially comply with the LDAR audit requirements in Paragraph 43	\$100,000 per audit										
57.bb. Each failure to substantially comply with the Comparative Monitoring requirements of Paragraph 44	\$50,000 per audit										
57.cc. Each failure to timely submit a Corrective Action Plan that substantially conforms to the requirements of Paragraph 46	<table> <thead> <tr> <th><u>Period of noncompliance</u></th> <th><u>Penalty per day per violation</u></th> </tr> </thead> <tbody> <tr> <td>1-15 days</td> <td>\$100</td> </tr> <tr> <td>16-30 days</td> <td>\$250</td> </tr> <tr> <td>31 days or more</td> <td>\$500</td> </tr> <tr> <td colspan="2">Not to exceed \$100,000 per audit</td> </tr> </tbody> </table>	<u>Period of noncompliance</u>	<u>Penalty per day per violation</u>	1-15 days	\$100	16-30 days	\$250	31 days or more	\$500	Not to exceed \$100,000 per audit	
<u>Period of noncompliance</u>	<u>Penalty per day per violation</u>										
1-15 days	\$100										
16-30 days	\$250										
31 days or more	\$500										
Not to exceed \$100,000 per audit											

Violation	Stipulated Penalty										
57.dd. Each failure to implement a corrective action within 90 days after the LDAR Audit Completion Date or pursuant to the schedule that Defendant must propose pursuant to Subparagraph 46.b if the corrective action cannot be completed in 90 days	<table border="0"> <tr> <td><u>Period of noncompliance</u></td> <td><u>Penalty per day per violation</u></td> </tr> <tr> <td>1-15 days</td> <td>\$500</td> </tr> <tr> <td>16-30 days</td> <td>\$750</td> </tr> <tr> <td>31 days or more</td> <td>\$1,000</td> </tr> <tr> <td colspan="2">Not to exceed \$200,000 per audit</td> </tr> </table>	<u>Period of noncompliance</u>	<u>Penalty per day per violation</u>	1-15 days	\$500	16-30 days	\$750	31 days or more	\$1,000	Not to exceed \$200,000 per audit	
<u>Period of noncompliance</u>	<u>Penalty per day per violation</u>										
1-15 days	\$500										
16-30 days	\$750										
31 days or more	\$1,000										
Not to exceed \$200,000 per audit											
57.ee. Each failure to timely submit a Certification of Compliance that substantially conforms to the requirements of Paragraph 47	<table border="0"> <tr> <td><u>Period of noncompliance</u></td> <td><u>Penalty per day per violation</u></td> </tr> <tr> <td>1-15 days</td> <td>\$100</td> </tr> <tr> <td>16-30 days</td> <td>\$250</td> </tr> <tr> <td>31 days or more</td> <td>\$500</td> </tr> <tr> <td colspan="2">Not to exceed \$75,000</td> </tr> </table>	<u>Period of noncompliance</u>	<u>Penalty per day per violation</u>	1-15 days	\$100	16-30 days	\$250	31 days or more	\$500	Not to exceed \$75,000	
<u>Period of noncompliance</u>	<u>Penalty per day per violation</u>										
1-15 days	\$100										
16-30 days	\$250										
31 days or more	\$500										
Not to exceed \$75,000											
57.ff. Each failure to substantially comply with any recordkeeping, submission, or reporting requirement in Subsection V.M not specifically identified above in this Table 2.	<table border="0"> <tr> <td><u>Period of noncompliance</u></td> <td><u>Penalty per day per violation</u></td> </tr> <tr> <td>1-15 days</td> <td>\$100</td> </tr> <tr> <td>16-30 days</td> <td>\$250</td> </tr> <tr> <td>31 days or more</td> <td>\$500</td> </tr> </table>	<u>Period of noncompliance</u>	<u>Penalty per day per violation</u>	1-15 days	\$100	16-30 days	\$250	31 days or more	\$500		
<u>Period of noncompliance</u>	<u>Penalty per day per violation</u>										
1-15 days	\$100										
16-30 days	\$250										
31 days or more	\$500										

58. Stipulated Penalties in Lieu of those in Subparagraphs 57.p, 57.q, 57.r.

a. For purposes of this Paragraph, the term “Non-Compliant Valve” means a valve that is either: (i) not a Low-E Valve; or (ii) not fitted with Low-E Packing. The term “Compliant Valve” means a valve that is either: (i) a Low-E Valve; or (ii) fitted with Low-E Packing.

b. The stipulated penalties in Subparagraph 58.c are to be used instead of those in Subparagraphs 57.p, 57.q, or 57.r when a Non-Compliant Valve is installed instead of a Compliant Valve and all of the following requirements are met:

- i. Defendant, and not a government agency, discovers the failure involved;
- ii. Defendant promptly reports the failure to EPA;
- iii. In the report, Defendant sets forth a schedule for promptly replacing the Non-Compliant Valve with a Compliant Valve; provided, however, that Defendant shall not be required to undertake an unscheduled shutdown of the affected Covered Process Unit in proposing the schedule unless Defendant so chooses;
- iv. Defendant monitors the Non-Compliant Valve once a month from the time of its discovery until the valve is replaced with a Compliant Valve and no Screening Values above 100 ppm are recorded;
- v. Defendant replaces the Non-Compliant Valve with a Compliant Valve in accordance with the schedule set forth in 58.b.iii; and
- vi. Defendant demonstrates that in good faith it intended to install a Compliant Valve but inadvertently installed a Non-Compliant Valve.

c. The following stipulated penalties shall apply under the circumstances in Paragraph 58:

- i. In lieu of the penalty in Subparagraph 57.p, \$2,000 per failure.
- ii. In lieu of the penalty in Subparagraph 57.q, \$50 per day per failure, not to exceed \$2,000.
- iii. In lieu of the penalty in Subparagraph 57.r, \$2,000 per failure.

59. Waiver of Payment. The United States may, in its unreviewable discretion, reduce or waive payment of stipulated penalties otherwise due to it under this Consent Decree.

60. Demand for Stipulated Penalties. A written demand for the payment of stipulated penalties will identify the particular violation(s) to which the stipulated penalty relates; the stipulated penalty amount (as can be best estimated) that the United States is demanding for each violation; the calculation method underlying the demand; and the grounds upon which the demand is based. Prior to issuing a written demand for stipulated penalties, the United States may, in its unreviewable discretion, contact Merit for informal discussion of matters that the United States believes may merit stipulated penalties.

61. Stipulated Penalties' Accrual. Stipulated penalties will begin to accrue on the day after performance is due or the day a violation occurs, whichever is applicable, and will continue to accrue until performance is satisfactorily completed or the violation ceases. Stipulated penalties shall accrue simultaneously for separate violations of this Consent Decree.

62. Stipulated Penalties Payment Due Date. Stipulated penalties shall be paid no later than 60 days after receipt of a written demand by the United States unless the demand is disputed through compliance with the requirements of the dispute resolution provisions of this Decree.

63. Manner of Payment of Stipulated Penalties. Stipulated penalties owing to the United States of under \$10,000 will be paid by check and made payable to "U.S. Department of Justice," referencing DOJ Number 90-5-2-110951, and delivered to the U.S. Attorney's Office in the Western District of Michigan, 330 Ionia Ave. NW, Suite 501 Grand Rapids, MI 49503. Stipulated

penalties owing to the United States of \$10,000 or more will be paid in the manner set forth in Section IV (Civil Penalty) of this Consent Decree. All transmittal correspondence shall state that the payment is for stipulated penalties, shall identify the violations to which the payment relates, and shall include the same identifying information required by Paragraph 10.

64. Disputes Over Stipulated Penalties. By no later than 60 days after receiving a demand for stipulated penalties, Merit may dispute liability for any or all stipulated penalties demanded by invoking the dispute resolution procedures of Section X. If Merit fails to pay stipulated penalties when due and does not prevail in dispute resolution, Merit shall be liable for interest at the rate specified in 28 U.S.C. § 1961, accruing as of the date payment became due.

65. No amount of the stipulated penalties paid by Merit shall be used to reduce its federal tax obligations.

66. Subject to the provisions of Section XI of this Consent Decree (Effect of Settlement/Reservation of Rights), the stipulated penalties provided for in this Decree shall be in addition to any other rights, remedies, or sanctions available to the United States for a violation of this Consent Decree or applicable law. In addition to injunctive relief or stipulated penalties, the United States may elect to seek mitigating emissions reductions equal to or greater than the excess amounts emitted if the violations result in excess emissions. Merit reserves the right to challenge the United States' exercise of this option. Where a violation of this Consent Decree is also a violation of the CAA or its implementing regulations, Merit shall be allowed a credit, for any stipulated penalties paid, against any statutory penalties imposed for such violation.

VIII. FORCE MAJEURE

67. “Force Majeure,” for purposes of this Consent Decree, is defined as any event beyond the control of Merit, its contractors, or any entity controlled by Merit that delays the performance of any obligation under this Consent Decree despite Merit’s best efforts to fulfill the obligation. The requirement that Merit exercise “best efforts to fulfill the obligation” includes using best efforts to anticipate any potential force majeure event and best efforts to address the effects of any such event: (a) as it is occurring; and (b) after it has occurred, to prevent or minimize any resulting delay.

68. “Force Majeure” does not include Merit’s financial inability to perform any obligation under this Consent Decree. Unanticipated or increased costs or expenses associated with the performance of Merit’s obligations under this Consent Decree shall not constitute circumstances beyond Merit’s control nor serve as the basis for an extension of time under this Section VIII.

69. If any event occurs which causes or may cause a delay or impediment to performance in complying with any provision of this Consent Decree, Merit shall notify EPA in writing promptly but not later than 14 business days after the time Merit first knew or should have known by the exercise of due diligence that the event might cause a delay. In the written notice, Merit shall specifically reference this Paragraph 69 of the Consent Decree and shall provide, to the extent such information is available at the time, an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or

mitigate the delay or the effect of the delay; Merit's rationale for attributing such delay to a Force Majeure event; and a statement as to whether, in the opinion of the Merit, such event may cause or contribute to an endangerment to public health, welfare or the environment. Merit shall be deemed to know of any circumstance of which Merit, any entity controlled by Merit, or Merit's contractors knew or should have known. The written notice required by this Paragraph shall be effective upon the mailing of the same by overnight mail or by certified mail, return receipt requested, to EPA in the manner set forth in Section VI (Notices).

70. Failure by Merit to materially comply with the notice requirements specified in Paragraph 69 shall preclude Merit from asserting any claim of Force Majeure with respect to the particular event involved, unless the United States, in its unreviewable discretion, permits Merit to assert a Force Majeure claim with respect to the particular event.

71. The United States shall respond in writing to Merit regarding Merit's claim of Force Majeure within 45 days of receipt of the notice required under Paragraph 69. After this initial response, the parties may confer.

72. If EPA initially or ultimately agrees that the delay or anticipated delay is attributable to a Force Majeure event, the time for performance of the obligations under this Consent Decree that are affected by the Force Majeure event will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the Force Majeure event shall not, of itself, extend the time for performance of any other obligation. However, Merit may request that the time be extended for performance of any other

obligation that is affected by the Force Majeure event. EPA will notify Merit in writing of the length of the extension, if any, for performance of the obligations affected by the Force Majeure event.

73. If EPA does not agree that the delay or anticipated delay has been or will be caused by a Force Majeure event, or if the parties fail to agree on the length of the delay attributable to the Force Majeure event, EPA will so notify Merit in writing of its final decision.

74. If Merit elects to invoke the dispute resolution procedures set forth in Section IX (Dispute Resolution), it shall do so no later than 45 days after receipt of EPA's notice under Paragraph 71 (if the parties do not confer after that notice), or under Paragraph 73 (if the parties confer after the Paragraph 69 notice). In any such proceeding, Merit shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a Force Majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Merit materially complied with the requirements of Paragraphs 67 and 69. If Merit carries this burden, the delay at issue shall be deemed not to be a violation by Merit of the affected obligation of this Consent Decree identified to EPA and the Court.

IX. DISPUTE RESOLUTION

75. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree.

76. Informal Dispute Resolution. The first stage of dispute resolution shall consist of informal negotiations. The dispute shall be considered to have arisen when one Party sends the other Party a written Notice of Dispute. Such Notice of Dispute shall state clearly the matter in dispute. The period of informal negotiations shall not exceed 30 days after the Notice of Dispute, unless that period is modified by written agreement. If the Parties cannot resolve the dispute by informal negotiations, then the position advanced by the United States shall be considered binding unless within 45 days after the conclusion of the informal negotiation period, Merit invokes formal dispute resolution procedures set forth below.

77. Formal Dispute Resolution. Merit shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by serving on the United States a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting Merit's position and any supporting documentation relied upon by Defendant. Merit and the United States may hold additional discussions, which may, in the unreviewable discretion of each party, include higher-level representatives of any of the parties.

78. The United States shall serve its Statement of Position within 45 days of receipt of Merit's Statement of Position. The United States' Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the United States. The United States' Statement of Position shall be

binding on Merit unless Merit files a motion for judicial review of the dispute in accordance with the following Paragraph.

79. Merit may seek judicial review of the dispute by filing with the Court and serving on the United States, in accordance with Section VI of this Consent Decree (Notices), a motion requesting judicial resolution of the dispute. The motion must be filed within 60 days of receipt of the United States' Statement of Position pursuant to the preceding Paragraph. The motion shall contain a written statement of Merit's position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

80. The United States shall respond to Merit's motion within the time period allowed by the Local Rules of this Court for responses to dispositive motions. Merit may file a reply memorandum, to the extent permitted by the Local Rules.

81. In a formal dispute resolution proceeding under this Section, Merit shall bear the burden of demonstrating that its position complies with this Consent Decree and the CAA and that they are entitled to relief under applicable principles of law. The United States reserves the right to argue that its position is reviewable only on the administrative record and must be upheld unless arbitrary and capricious or otherwise not in accordance with law, and Merit reserves the right to argue to the contrary.

82. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of Merit under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first day of noncompliance, but payment shall be stayed pending resolution of the dispute. If Merit does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section VIII (Stipulated Penalties).

X. INFORMATION COLLECTION AND RETENTION

83. The United States and its representatives and employees shall have the right of entry into the Covered Facility, at all reasonable times, upon presentation of credentials and any other documentation required by law, to:

- a. monitor the progress of activities required under this Consent Decree;
- b. verify any data or information submitted to the United States in accordance with the terms of this Consent Decree;
- c. obtain documentary evidence, including photographs and similar data, relevant to compliance with the terms of this Consent Decree; and
- d. assess Merit's compliance with this Consent Decree.

84. Until two years after termination of this Consent Decree, Merit shall retain, and shall instruct its contractors and agents to preserve, all documents, records, or other information, regardless of storage medium (*e.g.*, paper or electronic) in their or their contractors' or agents' possession or control, or that come into their or their contractors' or agents' possession or control, and that directly relate to Merit's performance of its obligations under this Consent Decree. This

information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information-retention period, the United States may request copies of any documents, records, or other information required to be maintained under this Paragraph.

85. Except for emissions data, including Screening Values, Merit may also assert that information required to be provided under this Section is protected as Confidential Business Information (“CBI”) under 40 C.F.R. Part 2. As to any information that Merit seeks to protect as CBI, Merit shall follow the procedures set forth in 40 C.F.R. Part 2, where applicable. Except for emissions data, including Screening Values, Merit reserves the right to assert any legal privilege and the United States reserves the right to challenge any claim of privilege.

86. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States pursuant to applicable federal laws, regulations, or permits, nor does it limit or affect any duty or obligation of Merit to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

XI. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

87. This Consent Decree resolves the civil claims of the United States for the violations alleged in the Complaint filed in this action and the Finding of Violation from the date those claims accrued through the Date of Lodging.

88. The United States reserves all legal and equitable remedies available to enforce the provisions of this Consent Decree, except as expressly stated in Paragraph 87. This Consent Decree shall not be construed to limit the rights of the United States to obtain penalties or injunctive relief under the CAA or implementing regulations, or under other federal laws, regulations, or permit conditions, except as expressly specified in Paragraph 87. The United States further reserves all legal and equitable remedies to address any situation that may present an imminent and substantial endangerment to the public health or welfare or the environment arising at, or posed by, the Covered Facility, whether related to the violations addressed in this Consent Decree or otherwise.

89. In any subsequent administrative or judicial proceeding initiated by the United States for injunctive relief, civil penalties, or other appropriate relief relating to the Covered Facility, Merit shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States in the subsequent proceeding were or should have been brought in the instant case, except with respect to claims that have been specifically resolved pursuant to Paragraph 87 of this Section.

90. This Consent Decree is not a permit, or a modification of any permit, under any federal, state, or local laws or regulations. Merit is responsible for achieving and maintaining compliance with all applicable federal, state, and local laws, regulations, and permits and Merit's compliance with this Consent Decree shall be no defense to any action commenced pursuant to any such laws, regulations, or permits. The United States does not, by its consent to the entry of this

Consent Decree, warrant or aver in any manner that Merit's compliance with any aspect of this Consent Decree will result in compliance with provisions of the CAA, or with any other provisions of federal, state, or local laws, regulations, or permits.

91. This Consent Decree does not limit or affect the rights of Merit or of the United States against any third parties, not party to this Consent Decree, nor does it limit the rights of third parties not party to this Consent Decree, against Merit, except as otherwise provided by law.

92. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party that is not a Party to this Consent Decree.

XII. COSTS

93. The Parties shall bear their own costs of this action, including attorneys' fees, except that the United States shall be entitled to collect the costs (including attorneys' fees) against Merit incurred in any action necessary to enforce this Consent Decree or to collect any portion of the civil penalty or any stipulated penalties due but not paid by Merit.

XIII. EFFECTIVE DATE

94. The Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted, whichever occurs first, as recorded on the Court's docket; provided, however, that Merit hereby agrees that it shall be bound upon the Date of Lodging to comply with obligations of Merit specified in this Consent Decree as accruing upon the Date of Lodging. In the event the United States withdraws or withholds consent to this Consent Decree before entry, or the Court declines to enter the Consent

Decree, then the preceding requirement to comply with requirements of this Consent Decree upon the Date of Lodging shall terminate.

XIV. RETENTION OF JURISDICTION

95. The Court shall retain jurisdiction over this case until termination of this Consent Decree for the purposes of resolving disputes arising under this Decree, entering orders modifying this Decree, or effectuating or enforcing compliance with the terms of this Decree.

XV. MODIFICATION

96. The terms of this Consent Decree may be modified only by a subsequent written agreement signed by the United States and Merit. Where the modification constitutes a material change to any term of this Consent Decree, it shall be effective only upon approval by the Court.

97. Any disputes concerning modification of this Decree shall be resolved pursuant to Section IX of this Decree (Dispute Resolution); provided, however, that instead of the burden of proof as provided by Paragraph 81, the Party seeking the modification bears the burden of demonstrating that it is entitled to the requested modification in accordance with Federal Rule of Civil Procedure 60(b).

XVI. TERMINATION

98. By no sooner than after completion of the third LDAR audit required pursuant to Subsection V.K of this Decree, Merit may send the United States a Request for Termination of this Consent Decree with respect to its Covered Facility. In the Request for Termination, Merit must demonstrate that it has maintained satisfactory compliance with this Consent Decree for the two-

year period immediately preceding the Request for Termination. In no event may this Consent Decree be terminated with respect to Merit if the civil penalty and/or any outstanding stipulated penalties have not been paid. Any Request for Termination shall include all necessary supporting documentation.

99. Following receipt by the United States of a Request for Termination, the Parties shall confer informally concerning the Request and any disagreement that the Parties may have as to whether the Merit has satisfactorily complied with the requirements for termination. If the United States agrees that the Decree may be terminated with respect to the Defendant, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Decree.

100. If the United States does not agree that the Decree may be terminated, Merit may invoke dispute resolution under Section IX of this Decree. However, Merit shall not invoke dispute resolution for any dispute regarding termination until 60 days after sending its Request for Termination.

XVII. PUBLIC PARTICIPATION

101. This Consent Decree shall be lodged with the Court for a period of not less than 30 days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate. Merit consents to entry of this Consent Decree without further notice.

XVIII. SIGNATORIES/SERVICE

102. The undersigned representatives of Merit and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice (or his or her designee) each certify that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party he or she represents to this document.

103. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis.

104. Merit agrees not to oppose entry of this Consent Decree by the Court or to challenge any provision of the Decree unless the United States has notified Merit in writing that it no longer supports entry of the Decree.

105. Merit agrees to accept service of process by mail with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons. Merit need not file an answer to the complaint in this action unless or until the Court expressly declines to enter this Consent Decree.

XIX. INTEGRATION

106. This Consent Decree and its Appendix constitute the final, complete, and exclusive agreement and understanding between the Parties with respect to the settlement embodied in this Consent Decree and its Appendix, and supersede all prior agreements and understandings, whether oral or written, concerning the settlement embodied herein. No other document, except for any

plans or other deliverables that are submitted and approved pursuant to this Decree, nor any representation, inducement, agreement, understanding, or promise, constitutes any part of this Decree or the settlement it represents, and no such extrinsic document or statement of any kind shall be used in construing the terms of this Decree.

XX. FINAL JUDGMENT

107. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court in this action as to the United States and Merit. The Court finds that there is no just reason for delay and therefore enters this judgment as a final judgment under FED. R. CIV. P. 54 and 58.

DATED this 20th day of July 2015.

/s/ Paul L. Maloney
UNITED STATES DISTRICT JUDGE
WESTERN DISTRICT OF MICHIGAN

We hereby consent to the entry of the Consent Decree in the matter of United States v. Merit Energy Company, LLC, subject to public notice and comment.

FOR THE UNITED STATES OF AMERICA



THOMAS A. MARIANI, JR.
Deputy Chief
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice



JEFFREY A. SPECTOR
Senior Attorney
Environmental Enforcement Section
Environment and Natural Resources Division
United States Department of Justice
P.O. Box 7611
Washington, D.C. 20044-7611
(202) 514-4432
(202) 616-6584 (fax)

PATRICK A. MILES, JR.
United States Attorney

ADAM B. TOWNSHEND
Assistant U.S. Attorney
U.S. Attorney's Office, Western District of Michigan
330 Ionia Ave. NW, Suite 501
Grand Rapids, MI 49503
(616) 808-2130
(616) 456-2510 (fax)

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THOMAS A. MARIANI, JR.
Deputy Chief
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Environment and Natural Resources Division
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Environmental Enforcement Section
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United States Department of Justice
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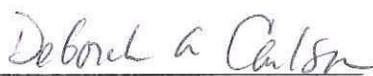
ADAM B. TOWNSHEND
Assistant U.S. Attorney
U.S. Attorney's Office, Western District of Michigan
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FOR THE UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY

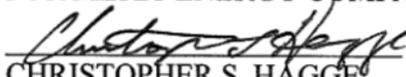

for: BERTRAM C. FREY
Acting Regional Counsel
U.S. Environmental Protection Agency
Region 5
Chicago, IL


SUSAN HEDMAN
Regional Administrator
U.S. Environmental Protection Agency
Region 5
Chicago, IL


DEBORAH A. CARLSON
Associate Regional Counsel
U.S. Environmental Protection Agency
Region 5
Chicago, IL

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FOR MERIT ENERGY COMPANY, LLC



CHRISTOPHER S. HAGGE

General Counsel

Merit Energy Company, LLC

APPENDIX A

APPENDIX A

**Factors to be Considered and Procedures to be Followed
To Claim Commercial Unavailability**

This Appendix outlines the factors to be taken into consideration and the procedures to be followed for Merit to assert that a Low-E Valve or Low-E Packing is “commercially unavailable” pursuant to Paragraph 33 of the Consent Decree.

I. FACTORS

A. Nothing in this Consent Decree or this Appendix requires Merit to utilize any valve or packing that is not suitable for its intended use in a Covered Process Unit.

B. The following factors are relevant in determining whether a Low-E Valve or Low-E Packing is commercially available to replace or repack an existing valve:

1. Valve type (*e.g.*, ball, gate, butterfly, needle) (this ELP does not require consideration of a different type of valve than the type that is being replaced);
2. Nominal valve size (*e.g.*, 2 inches, 4 inches);
3. Compatibility of materials of construction with process chemistry and product quality requirements;
4. Valve operating conditions (*e.g.*, temperature, pressure);
5. Service life;
6. Packing friction (*e.g.*, impact on operability of valve);
7. Whether the valve is part of a packaged system or not;
8. Retrofit requirements (*e.g.*, re-piping or space limitations);
9. Other relevant considerations

C. The following factors may also be relevant, depending upon the process unit or equipment where the valve is located:

10. In cases where the valve is a component of equipment that Merit is licensing or leasing from a third party, valve or valve packing specifications identified by the lessor or licensor of the equipment of which the valve is a component
11. Valve or valve packing vendor or manufacturer recommendations for the relevant process unit components.

II. PROCEDURES THAT MERIT SHALL FOLLOW TO ASSERT COMMERCIAL UNAVAILABILITY

A. Merit shall comply with the following procedures if it seeks to assert commercial unavailability under Paragraph 33 of the Consent Decree:

1. Merit must contact a reasonable number of vendors of valves or valve packing that Merit, in good faith, believes may have valves or valve packing suitable for the intended use taking into account the relevant factors listed in Section I above.

- a. For purposes of this Consent Decree, a reasonable number of vendors presumptively shall mean no less than three.
- b. If fewer than three vendors are contacted, the determination of whether such fewer number is reasonable shall be based on Factors (10) and (11) or on a demonstration that fewer than three vendors offer valves or valve packing considering Factors (1) – (9).

2. Merit shall obtain a written representation from each vendor, or equivalent documentation, that a particular valve or valve packing is not available as “Low-Emissions” from that vendor for the intended conditions or use.

a. “Equivalent documentation” may include e-mail or other correspondence or data showing that a valve or valve packing suitable for the intended use does not meet the definition of “Low-E Valve” or “Low-E Packing” in the Consent Decree or that the valve or packing is not suitable for the intended use.

b. If the vendor does not respond or refuses to provide documentation, “equivalent documentation” may consist of records of Merit’s attempts to obtain a response from the vendor.

3. Each Compliance Status Report required by Section V of the Consent Decree shall identify each valve that Merit otherwise was required to replace or repack, but for which, during the time period covered by the Report, Merit determined that a Low-E Valve and/or Low-E Packing was not commercially-available. Merit shall provide a complete explanation of the basis for its claim of commercial unavailability, including, as an attachment to the Compliance Status Report, all relevant documentation. This report shall be valid for a period of twelve months from the date of the report for the specific valve involved and all other similar valves, taking into account the factors listed in Part I.

III. OPTIONAL EPA REVIEW OF DEFENDANT'S ASSERTION OF COMMERCIAL UNAVAILABILITY

A. At its option, EPA may review an assertion by Merit of commercial unavailability. If EPA disagrees with Merit's assertion, EPA shall notify Merit in writing, specifying the Low-E Valve or Low-E Packing that EPA believes to be commercially available and the basis for its view that such valve or packing is appropriate taking into consideration the Factors described in Part I. After Merit receives EPA's notice, the following shall apply:

1. Merit shall not be required to retrofit the valve or valve packing for which it asserted commercial unavailability (unless Merit is otherwise required to do so pursuant to another provision of the Consent Decree).

2. Merit shall be on notice that EPA will not accept a future assertion of commercial unavailability for: (i) the valve or packing that was the subject of the unavailability assertion; and/or (ii) a valve or packing that is similar to the subject assertion, taking into account the Factors described in Part I.

3. If Merit disagrees with EPA's notification, Merit and EPA shall informally discuss the basis for the claim of commercial unavailability. EPA may thereafter revise its determination, if necessary.

4. If Merit makes a subsequent commercial unavailability claim for the same or similar valve or packing that EPA previously rejected, and the subsequent claim also is rejected by EPA, Merit shall retrofit the valve or packing with the commercially available valve or packing unless Merit is successful under Subsection III.B below.

B. Any disputes under this Appendix first shall be subject to informal discussions between Merit and EPA for a period not to exceed 30 days before Merit shall be required to invoke the Dispute Resolution provisions of Section IX of the Consent Decree. Thereafter, if the dispute remains, Merit shall invoke the Dispute Resolution provisions.