



25 August 2023

Michigan Department of Environment, Great Lakes, and  
Energy Air Quality Division – Permit Section  
Kalamazoo District Office  
7953 Adobe Road,  
Kalamazoo, MI 49009-5026

Reference: 0698881

Subject: BASF Toda America, LLC  
SRN P0089

Please find the enclosed Renewable Operating Permit (ROP) initial documentation for the BASF Toda America LLC (BTA) facility located in Battle Creek, Michigan. As requested by the Kalamazoo District Office Air Quality Environmental Engineer, Cody Yazzie, the following documents are provided to incorporate applicable NESHAP and NSPS standards into a Renewable Operating Permit:

- Attachment 1 - Michigan ROP Initial Application Form package;
  - This package includes forms requested by EGLE via email,
  - The current PTI 70-10C,
  - NSPS IIII Requirements for CI-ICE engines (GEN1),
  - PTE Calcs, and
  - The current Control Device Monitoring Plan for the 6V NESHAP (CMAS).

Should there be any question regarding this submittal, please contact David Sheaves via email [david.sheaves@basf.com](mailto:david.sheaves@basf.com) and TJ Stewart via email at [thomas.stewart@basf.com](mailto:thomas.stewart@basf.com) on behalf of BTA.

Yours sincerely,

Valerie Guenther  
Principal Consultant

CC: David Sheaves, BASF  
TJ Stewart, BASF  
Wirianto Wong BASF Toda America  
Mark Di Prinzio, ERM  
Thomas O'Connell, ERM

**ATTACHMENT 1 – MICHIGAN ROP FORMS**



## RENEWABLE OPERATING PERMIT INITIAL APPLICATION ASC-001 APPLICATION SUBMITTAL AND CERTIFICATION

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

Source Name: <b>BASF Toda America, Inc.</b>	SRN: <b>P0089</b>	Section Number (if applicable):
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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. A Responsible Official must sign and date this form.

<b>Listing of ROP Application Contents. See the initial application instructions for guidance regarding which forms and attachments are required for your source. Check the box for the items included with your application.</b>	
<input checked="" type="checkbox"/> Completed ROP Initial Application Forms (required)	<input type="checkbox"/> Copies of all Consent Orders/Consent Judgments
<input type="checkbox"/> MAERS Forms (to report emissions not previously submitted)	<input type="checkbox"/> Compliance Plan/Schedule of Compliance
<input checked="" type="checkbox"/> HAP/Criteria Pollutant Potential to Emit Calculations	<input type="checkbox"/> Acid Rain Initial Permit Application
<input type="checkbox"/> Stack information	<input type="checkbox"/> Cross-State Air Pollution Rule (CSAPR) Information
<input checked="" type="checkbox"/> Copies of all active Permit(s) to Install (required)	<input checked="" type="checkbox"/> Additional Information (AI-001) Forms
<input type="checkbox"/> Compliance Assurance Monitoring (CAM) Plan	<input checked="" type="checkbox"/> Paper copy of all documentation provided (required)
<input type="checkbox"/> Other Plans (e.g., Malfunction Abatement, Fugitive Dust, Operation and Maintenance, etc.)	<input checked="" type="checkbox"/> Electronic documents provided (optional)
<input type="checkbox"/> Confidential Information	<input checked="" type="checkbox"/> Other, explain: <b>6V Monitoring Plan</b>

<b>Compliance Statement</b>	
This source is in compliance with <b>all</b> of its applicable requirements, including those contained in Permits to Install, this application and other applicable requirements that the source is subject to.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
This source will continue to be in compliance with all of its applicable requirements, including those contained in Permits to Install, this application and other applicable requirements that the source is subject to.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
This source will meet, in a timely manner, applicable requirements that become effective during the permit term.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
The method(s) used to determine compliance for each applicable requirement is/are the method(s) specified in the existing Permits to Install, this application and all other applicable requirements that the source is subject to.	
If any of the above are checked No, identify the emission unit(s) or flexible group(s) affected and the applicable requirement for which the source is or will be out of compliance at the time of issuance of the ROP 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)**

***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	8/25/2023 Date
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## RENEWABLE OPERATING PERMIT INITIAL APPLICATION

### S-001 STATIONARY SOURCE 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. Refer to "Renewable Operating Permit Initial Application Instructions" for additional information to complete the application.*

SRN: <b>P0089</b>	Section Number (if applicable):
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<b>SOURCE INFORMATION</b>				SIC Code	NAICS Code <b>325180</b>
Source Name <b>BASF Toda America, Inc.</b>					
Street Address <b>4750 West Dickman Road</b>					
City <b>Battle Creek</b>	State <b>MI</b>	ZIP Code <b>49037</b>	County <b>Calhoun</b>		
Section/Town/Range (if street address not available)					
Source Description  BTA manufactures Lithium cathode powder on two separate lines (EULINE1 and EULINE2). Both lines are continuous batch processes with the following process steps: 1. Raw material handling and mixing; 2. Calcination; 3. Pulverization; 4. Blending and Packaging.  This renewal is being submitted to incorporate NSPS IIII and NESHAP 6V requirements from PTI 70-10C into the ROP.					

### OWNER INFORMATION

Owner Name <b>BASF Corporation</b>				
Mailing address ( <input type="checkbox"/> check if same as source address)  <b>100 Park Avenue</b>				
City <b>Florham Park</b>	State <b>NJ</b>	ZIP Code <b>07932</b>	County <b>Morris</b>	Country <b>US</b>

<input type="checkbox"/> Check if an AI-001 Form is attached to provide more information for S-001. Enter AI-001 Form ID: <b>AI-</b>
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## RENEWABLE OPERATING PERMIT INITIAL APPLICATION FORM

### S-002 CONTACT AND RESPONSIBLE OFFICIAL 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. Refer to "Renewable Operating Permit Initial Application Instructions" for additional information to complete the application.*

SRN: P0089	Section Number (if applicable):
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At least one contact and one Responsible Official must be identified. Additional contacts and Responsible Officials may be included if necessary.

#### CONTACT INFORMATION

Contact 1 Name <b>David Sheaves</b>		Title <b>Expert, Environmental Protection</b>		
Company Name & Mailing address ( <input type="checkbox"/> check if same as source address) <b>BASF Corporation - 1609 Biddle Avenue</b>				
City <b>Wyandotte</b>	State <b>MI</b>	ZIP Code <b>48192</b>	County <b>Wayne</b>	Country <b>US</b>
Phone number <b>734-476-7608</b>		E-mail address <b>david.sheaves@basf.com</b>		

Contact 2 Name (optional) <b>TJ Stewart</b>		Title <b>EHS Team Leader</b>		
Company Name & Mailing address ( <input checked="" type="checkbox"/> check if same as source address)				
City	State	ZIP Code	County	Country
Phone number <b>(269) 529-1053</b>		E-mail address <b>thomas.stewart@basf.com</b>		

#### RESPONSIBLE OFFICIAL INFORMATION

Responsible Official 1 Name <b>Wirianto Wong</b>		Title <b>Site Manager</b>		
Company Name & Mailing address ( <input checked="" type="checkbox"/> check if same as source address)				
City	State	ZIP Code	County	Country
Phone number <b>269-441-1807</b>		E-mail address <b>wir.wong@basf.com</b>		

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 if an AI-001 Form is attached to provide more information for S-002. Enter AI-001 Form ID: <b>AI-</b>
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## RENEWABLE OPERATING PERMIT INITIAL APPLICATION S-003 SOURCE REQUIREMENT 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. Refer to "Renewable Operating Permit Initial Application Instructions" for additional information to complete the application.*

SRN:	Section Number (if applicable):
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### SOURCE REQUIREMENT INFORMATION

Answer the questions below for specific requirements or programs to which the source may be subject. Refer to the ROP Initial Application Instructions for additional information.

<p>1. Actual emissions and associated data from <b>all</b> emission units with applicable requirements are required to be reported in MAERS. Are there any emissions and associated data that have <u>not</u> 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.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>2. Is this source subject to the federal regulations on ozone-depleting substances? (40 CFR Part 82)</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>3. a. 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. b. Has an updated RMP been submitted to the USEPA?</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>4. Does the source belong to one of the source categories that require quantification of fugitive emissions? If Yes, identify the category on an AI-001 Form and include the fugitive emissions in the PTE calculations for the source. <i>See ROP Initial Application instructions.</i></p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>5. Does this stationary source have the potential to emit (PTE) of 100 tons per year or more of any criteria pollutant (PM-10, PM 2.5, VOC, NOx, SO<sub>2</sub>, CO, lead)? If Yes, include potential emission calculations for each identified pollutant on an AI-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>6. Does this stationary source emit any hazardous air pollutants (HAPs) regulated by the federal Clean Air Act, Section 112? If Yes, include potential and actual emission calculations for HAPs, <b>including fugitive emissions</b> on an AI-001 Form.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>7. a. Are any emission units subject to Compliance Assurance Monitoring (CAM)? If Yes, identify the specific emission unit(s) and pollutant(s) subject to CAM on an AI-001 Form. b. Is a CAM plan included with this application on an AI-001 Form?</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>8. Does the source have any active Consent Orders/Consent Judgments (CO/CJ)? If Yes, attach a copy of each CO/CJ on an AI-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>9. Are any emission units subject to the federal Cross State Air Pollution Rule (CSAPR)? If Yes, identify the specific emission unit(s) subject to CSAPR on an AI-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>10. a. 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. b. Is an Acid Rain Permit Application included with this application?</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>11. Does the source have any required plans such as a malfunction abatement plan, fugitive dust plan, operation/maintenance plan, startup/shutdown plans or any other monitoring plan? If Yes, then the plan(s) must be submitted with this application on an AI-001 Form.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>12. Are there any specific requirements that the source proposes to be identified in the ROP as non-applicable? If Yes, then the requirement and justification must be submitted on an AI-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input checked="" type="checkbox"/> Check if an AI-001 Form is attached to provide more information for S-003. Enter AI-001 Form ID: <b>AI-</b> Plan, PTE	



## RENEWABLE OPERATING PERMIT INITIAL APPLICATION EU-001 PERMIT TO INSTALL (PTI) EXEMPT EMISSION UNITS

*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 "Renewable Operating Permit Initial Application Instructions" for additional information to complete the application.*

SRN: P0089	Section Number (if applicable):
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Review all emission units at the source and answer the question below.

1. Does the source have any emission units that are required to be listed in the ROP application under R 336.1212(4) (Rule 212(4)) of the Michigan Air Pollution Control Rules, not including Rules 281(2)(h), 287(2)(c), and 290?  Yes  No

If Yes, identify the emission units in the table below. If No, go to the EU-002 Form.

*Note: Emission units that are subject to process specific emission limitations or standards, even if identified in Rule 212, must be captured in either an EU-002 or EU-004 Form. Identical emission units may be grouped (e.g. PTI exempt Storage Tanks).*

Emission Unit ID	Emission Unit Description	PTI Exemption Rule Citation <small>[e.g. Rule 282(2)(b)(i)]</small>	Rule 212(4) Citation <small>[e.g. Rule 212(4)(c)]</small>
EU- GEN1	Emergency Generator	Rule 285(2)(g)	Rule 212(4)(e)
EU-			

Comments:

Check if an AI-001 Form is attached to provide more information for EU-001. Enter AI-001 Form ID: AI-NSPS



## RENEWABLE OPERATING PERMIT INITIAL APPLICATION EU-002 EMISSION UNITS MEETING THE CRITERIA OF RULES 281(2)(h), 285(2)(r)(iv), 287(2)(c), OR 290

*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 "Renewable Operating Permit Initial Application Instructions" for additional information to complete the application.*

SRN: P0089	Section Number (if applicable):
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Review all emission units and applicable requirements at the source and provide the following information.

1. Does the source have any emission units which meet the criteria of Rules 281(2)(h), 285(2)(r)(iv), 287(2)(c), or 290.  Yes  No

If Yes, identify the emission units in the table below. If No, go to the EU-003 Form.

*Note: If several emission units were installed under the same rule above, provide a description of each and an installation 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 if an AI-001 Form is attached to provide more information for EU-002. Enter AI-001 Form ID: **AI-**



## RENEWABLE OPERATING PERMIT INITIAL APPLICATION EU-003 EMISSION UNITS WITH PERMITS TO INSTALL

*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 "Renewable Operating Permit Initial Application Instructions" for additional information to complete the application.*

SRN: P0089	Section Number (if applicable):
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Review all emission units at the source and fill in the information in the following table for **all** emission units with Permits to Install (PTI). Any PTI(s) identified below must be attached to the application.

Permit to Install Number	Emission Unit ID	Description ( <i>Include Process Equipment, Control Devices and Monitoring Devices</i> )	Date Emission Unit was Installed/Modified/Reconstructed
PTI 70-10C	EU- Line1	Raw material handling, weighing, mixing, filtering, calcination process, processing, and pack out room used in the manufacturing of lithium-ion battery cathode material for Line 1.	2010
PTI 70-10C	EU- Line2	Raw material handling, weighing, mixing, filtering, calcination process, processing, and pack out room used in the manufacturing of lithium-ion battery cathode material for Line 2.	2014
	EU-		
<p>1. Are you proposing changes to any emission unit names, descriptions or control devices in the PTIs listed above? If Yes, describe the proposed changes on an AI-001 Form. <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span></p> <p>2. Are you proposing additions or clarifications to any permit conditions? If Yes, describe the proposed changes on an AI-001 Form. <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span></p> <p>3. Are you proposing monitoring, testing, recordkeeping and/or reporting necessary to demonstrate compliance with any applicable requirements? If Yes, describe the proposed conditions on an AI-001 Form. <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span></p>			
<p><input checked="" type="checkbox"/> Check if an AI-001 Form is attached to provide more information for EU-003. Enter AI-001 Form ID: <b>AI-</b> PTI 70-10C</p>			



## RENEWABLE OPERATING PERMIT INITIAL APPLICATION EU-004 OTHER EMISSION UNITS

*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 "Renewable Operating Permit Initial Application Instructions" for additional information to complete the application.*

SRN: P0089	Section Number (if applicable):
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Complete an EU-004 Form for **all** emission units with applicable requirements that have **not** been addressed on an EU-001, EU-002 or EU-003 Form. This would include grandfathered emission units or PTI exempt emission units subject to applicable requirements in the AQD Rules, and emission units subject to a MACT, NESHAP, NSPS, or other federal requirement.

1. Does the source have emission units with applicable requirements that have not been addressed on the EU-001, EU-002 and/or EU-003 Forms? <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span>  If Yes, provide the required information below. Complete the AR-001 and/or AR-002 Form(s) to identify all applicable requirements and all monitoring, testing, recordkeeping and/or reporting to demonstrate compliance with the applicable requirements.			
Emission Unit ID <b>EU-</b>	Installation Date (MM/DD/YYYY)	Modification/Reconstruction Date(s) (MM/DD/YYYY)	SIC Code – <i>If different from S-001 Form</i>
Emission Unit Description – <i>Include process equipment, control devices, monitoring devices, and all stacks/vents associated with this emission unit that have applicable requirements. Indicate which forms are used to describe/include the applicable requirements for this emission unit (AR-001 and/or AR-002 Forms).</i>			
Emission Unit ID <b>EU-</b>	Installation Date (MM/DD/YYYY)	Modification/Reconstruction Date(s) (MM/DD/YYYY)	SIC Code – <i>If different from S-001 Form</i>
Emission Unit Description – <i>Include process equipment, control devices, monitoring devices, and all stacks/vents associated with this emission unit that have applicable requirements. Indicate which forms are used to describe/include the applicable requirements for this emission unit (AR-001 and/or AR-002 Forms).</i>			
Emission Unit ID <b>EU-</b>	Installation Date (MM/DD/YYYY)	Modification/Reconstruction Date(s) (MM/DD/YYYY)	SIC Code – <i>If different from S-001 Form</i>
Emission Unit Description – <i>Include process equipment, control devices, monitoring devices, and all stacks/vents associated with this emission unit that have applicable requirements. Indicate which forms are used to describe/include the applicable requirements for this emission unit (AR-001 and/or AR-002 Forms).</i>			
<input type="checkbox"/> Check if an AI-001 Form is attached to provide more information for EU-004. Enter AI-001 Form ID: <b>AI-</b>			



# RENEWABLE OPERATING PERMIT INITIAL APPLICATION

## FG-001: FLEXIBLE GROUPS

*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 "Renewable Operating Permit Initial Application Instructions" for additional information to complete the application.*

SRN: P0089	Section Number (if applicable):
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Complete the FG-001 Form for all Emission Units (EUs) that you want to combine into a Flexible Group (FG). Create a descriptive ID for the FG and description, and list the IDs for the EUs to be included in the FG. See instructions for FG examples.

Flexible Group ID <b>FG- Lines</b>			
Flexible Group Description Production Lines 1 and 2			
<b>Emission Unit IDs</b>			
EU- Line1	EU-	EU-	EU-
EU- Line2	EU-	EU-	EU-
EU-	EU-	EU-	EU-
EU-	EU-	EU-	EU-
EU-	EU-	EU-	EU-
EU-	EU-	EU-	EU-
EU-	EU-	EU-	EU-
Flexible Group ID <b>FG-</b>			
Flexible Group Description			
<b>Emission Unit IDs</b>			
EU-	EU-	EU-	EU-
EU-	EU-	EU-	EU-
EU-	EU-	EU-	EU-
EU-	EU-	EU-	EU-
EU-	EU-	EU-	EU-
EU-	EU-	EU-	EU-
EU-	EU-	EU-	EU-
<input type="checkbox"/> Check if an AI-001 Form is attached to provide more information for FG-001. Enter AI-001 Form ID: <b>AI-</b>			



## RENEWABLE OPERATING PERMIT INITIAL APPLICATION AR-001 APPLICABLE REQUIREMENTS FROM MACT, NESHAP OR NSPS

*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 "Renewable Operating Permit Initial Application Instructions" for additional information to complete the application.*

SRN: P0089	Proposed Section Number (if applicable):
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Answer the question below for emission units subject to a MACT, NESHAP or NSPS regulation and provide either an existing Permit to Install, an existing template table\*, or a newly created table\*\* that contains the applicable requirements for each subject emission unit with the application, including associated monitoring, testing, recordkeeping and reporting necessary to demonstrate compliance.

1. Is any emission unit subject to a Maximum Achievable Control Technology (MACT) standard in 40 CFR Part 63, National Emission Standard for Hazardous Air Pollutants (NESHAP) in 40 CFR Part 61, or New Source Performance Standard (NSPS) in 40 CFR Part 60? <span style="float: right;"><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</span>
If yes, identify the emission units and applicable MACT, NESHAP or NSPS in the table below.

**Note:** If several emission units are subject to the same regulation, list all of the emission unit IDs together. Attach the applicable requirements (PTI, template table or newly created table) in the selected format to the application using an AI-001 Form.

MACT NESHAP or NSPS Subpart and Name	Emission Unit ID – Provide the Emission Unit ID you created on the EU-003 or EU-004 Form	Applicable Requirements Attached in Which Format?
40 CFR 63 Subpart VVVVVV NESHAP for Chemical Manufacturing Area Sources	Line1	<input checked="" type="checkbox"/> PTI No. 70-10C <input type="checkbox"/> Template Table* <input type="checkbox"/> Newly Created Table**
40 CFR 63 Subpart VVVVVV NESHAP for Chemical Manufacturing Area Sources	Line2	<input checked="" type="checkbox"/> PTI No. 70-10C <input type="checkbox"/> Template Table* <input type="checkbox"/> Newly Created Table**
40 CFR 60 Subpart IIII Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	GEN1	<input type="checkbox"/> PTI No. <input type="checkbox"/> Template Table* <input checked="" type="checkbox"/> Newly Created Table**
		<input type="checkbox"/> PTI No. <input type="checkbox"/> Template Table* <input type="checkbox"/> Newly Created Table**
		<input type="checkbox"/> PTI No. <input type="checkbox"/> Template Table* <input type="checkbox"/> Newly Created Table**

<b>STREAMLINED REQUIREMENTS</b> 2. Are you proposing to streamline any requirements? <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span> If yes, identify the streamlined and subsumed requirements and provide the EU ID and a justification for streamlining the applicable requirement on an AI-001 Form.
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\*MACT and NSPS template tables (available at the link below)  
 \*\*Blank EU or FG template tables (available at the link below)  
<http://michigan.gov/air> (select the Permits Tab, "Renewable Operating Permits(ROP)/Title V", then "ROP Forms & Templates")

Check if an AI-001 Form is attached to provide more information for AR-001. Enter AI-001 Form ID: **AI-** PTI 70-10C, NSPS



## RENEWABLE OPERATING PERMIT INITIAL APPLICATION AR-002 OTHER APPLICABLE REQUIREMENTS

*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 "Renewable Operating Permit Initial Application Instructions" for additional information to complete the application.*

SRN: P0089	Section Number (if applicable):
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### APPLICABLE REQUIREMENTS NOT INCLUDED IN A PTI, MACT, NESHAPS, NSPS, OR PERMIT EXEMPTION

Answer the questions below and create an EU table to identify terms and conditions for each emission unit identified on an EU-004 Form (other than MACT, NESHAP, or NSPS requirements). This would include emission units that are grandfathered or exempt from PTI requirements but subject to state rules, federal rules or consent orders/consent judgments. Blank EU template tables are available on the EGLE Internet at: <http://michigan.gov/air> (select the Permits Tab, "Renewable Operating Permits (ROP)/Title V", then "ROP Forms & Templates")

1. Is there an emission unit identified on an EU-004 Form that is subject to <b>emission limit(s)</b> ? If Yes, fill out an EU table to identify the emission limit(s), and provide the EU ID and the source of the applicable requirement below. Do not include requirements identified on an AR-001 Form.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2. Is there an emission unit identified on an EU-004 Form that is subject to <b>material limit(s)</b> ? If Yes, fill out an EU table to identify the material limit(s), and provide the EU ID and the source of the applicable requirement below. Do not include requirements identified on an AR-001 Form.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3. Is there an emission unit identified on an EU-004 Form that is subject to <b>process/operational restriction(s)</b> ? If Yes, fill out an EU table to identify the process/operational restriction(s), and provide the EU ID and the source of the applicable requirement below. Do not include requirements identified on an AR-001 Form.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
4. Is there an emission unit identified on an EU-004 Form that is subject to <b>design/equipment parameter(s)</b> ? If Yes, fill out an EU table to identify the design/equipment parameter(s), and provide the EU ID and the source of the applicable requirement below. Do not include requirements identified on an AR-001 Form.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

<p>5. Is there an emission unit identified on an EU-004 Form that is subject to <b>testing/sampling requirement(s)</b>? If Yes, fill out an EU table to identify the testing/sampling requirement(s), and provide the EU ID and the source of the applicable requirement below. Do not include requirements identified on an AR-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>6. Is there an emission unit identified on an EU-004 Form that is subject to <b>monitoring/recordkeeping requirement(s)</b>? If Yes, fill out an EU table to identify the monitoring/recordkeeping requirement(s), and provide the EU ID and the source of the applicable requirement below. Do not include requirements identified on an AR-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>7. Is there an emission unit identified on an EU-004 Form that is subject to <b>reporting requirement(s)</b>? If Yes, fill out an EU table to identify reporting requirement(s), and provide the EU ID and the source of the applicable requirement below. Do not include requirements identified on an AR-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>8. Is there an emission unit identified on an EU-004 Form that is subject to <b>stack/vent restriction(s)</b>? If Yes, fill out an EU table to identify stack/vent restriction(s), and provide the EU ID and the source of the applicable requirement below. Do not include requirements identified on an AR-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>9. Are there any other requirements that you would like to <b>add</b> for an emission unit identified on an EU-004 Form? If Yes, fill out an EU table to identify the requirements, and provide the EU ID and a justification for the applicable requirement below. Do not include requirements identified on an AR-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>10. Are you proposing to streamline any requirements? If Yes, identify the streamlined and subsumed requirements and the EU ID, and provide a justification for streamlining the applicable requirement below. Do not include requirements identified on an AR-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input type="checkbox"/> Check if an AI-001 Form is attached to provide more information for AR-002. Enter AI-001 Form ID: <b>AI-</b>	



## RENEWABLE OPERATING PERMIT INITIAL APPLICATION

### AR-003 SOURCE-WIDE APPLICABLE REQUIREMENTS

*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 "Renewable Operating Permit Initial Application Instructions" for additional information to complete the application.*

SRN: P0089	Section Number (if applicable):
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Complete a Source-wide table for any conditions that apply to the entire source. A blank Source-wide template table is available on the EGLE Internet at:

<http://michigan.gov/air> (select the Permits Tab, "Renewable Operating Permits (ROP)/Title V", then "ROP Forms & Templates")

1. Are there any applicable requirements that apply to the entire source?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If Yes, identify the conditions by utilizing a Source-wide template table and include all of the appropriate applicable requirements, including associated monitoring, testing, recordkeeping and reporting necessary to demonstrate compliance. Provide information regarding the applicable requirements in the comment field below.	

Comments	Previous FG Group limit for nickel from PTI 70-10B has been removed.
----------	--

<input type="checkbox"/>	Check if an AI-001 Form is attached to provide more information for AR-003. Enter AI-001 Form ID: <b>AI-</b>
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## RENEWABLE OPERATING PERMIT APPLICATION AI-001: ADDITIONAL INFORMATION

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

SRN: P0089	Section Number (if applicable):
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1. Additional Information ID AI- Plan
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### Additional Information

2. Is This Information Confidential?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Plan - Control Device Monitoring Plan for NESHAP 6V (CMAS) Requirements

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 <b>BASF</b> We create chemistry	EHS-Procedure	Control Device Monitoring Plan		
	Document ID	EHSP-00011	Department	EHS
<b>BASF Toda America LLC</b>	Revision #	3	Author	B. Phillips
<b>Battle Creek</b>	Revision Date	10/23/2020	Page	1 of 3

## Background

The BTA facility located at 4750 Dickman Road Battle Creek, MI is subject to the requirement to develop and implement a control device monitoring plan under 40CFR63.11496(f)(3)(i)(A-E). The Battle Creek facility manufactures cathode materials for use in rechargeable batteries. The cathode material contains the following metal HAP: cobalt, nickel and manganese. The Battle Creek facility currently employs both baghouses and cartridge style dust collectors to control metal Hazardous Air Pollutants (HAP) emissions from the manufacturing process.

The facility is comprised of two Chemical Manufacturing Process Units (CMPUs). Line #1 and Line #2 are the CMPU designations. Each line is supported by baghouses and cartridge dust collectors for the control of metal HAP emissions from the process. Baghouses are employed exclusively for control of metal HAP emissions from the blending and product pack out unit operations. Cartridge style dust collectors are employed for control of HAP emissions from the RHK Kilns.

## Description of Control Devices

**Table 1**

Device Designation	CMPU #	Manufacturer	Model Number	Filter Type	Model Number Filter Cloth
A1-BF-010	A1	Hosakawa Micron	SP-36-8	GORETEX	GORETEX#4427
A1-BF-020	A1	Hosakawa Micron	SP-36-8	GORETEX	GORETEX#4427
A1-BF-030	A1	Hosakawa Micron	SP-12-8	GORETEX	GORETEX#4427
A1-BF-210	A1	Hosakawa Micron	SP-36-8	GORETEX	GORETEX#4427
A1-BF-720	A1	Hosakawa Micron	SP-6-4(K)	POLYESTER	QP825
A2-BF-010	A2	Hosakawa Micron	SP-36-8	GORETEX	GORETEX#4427
A2-BF-020	A2	Hosakawa Micron	SP-36-8	GORETEX	GORETEX#4427
A2-BF-030	A2	Hosakawa Micron	SP-12-8	GORETEX	GORETEX#4427
A2-BF-015	A2	Hosakawa Micron	SP-36-8	GORETEX	GORETEX#4427
A2-BF-720	A2	Hosakawa Micron	SP-6-4(K)	POLYESTER	QP825
DC-961	A1	Donaldson Torit	DFE 4-16	Thermo-Web	Thermo-Web
DC-962	A1	Donaldson Torit	DFE 2-8	Ultra-Web	Ultra-Web
DC-963	A2	Donaldson Torit	DFE 3-24	Thermo-Web	Thermo-Web
DC-964	A2	Donaldson Torit	DFE 3-12	Ultra-Web	Ultra-Web
DC-965	A2	Donaldson Torit	DFE 3-24	Thermo-Web	Thermo-Web
DC-966	A2	Donaldson Torit	DFE 3-12	Ultra-Web	Ultra-Web

 We create chemistry	EHS-Procedure	Control Device Monitoring Plan		
	Document ID	EHSP-00011	Department	EHS
<b>BASF Toda America LLC</b>	Revision #	3	Author	B. Phillips
<b>Battle Creek</b>	Revision Date	10/23/2020	Page	2 of 3

## Engineering and or Performance Testing Evaluation of the Devices

The Baghouses require Performance Testing per 40CFR63.11496(f) through the requirements specified in 40CFR63.11410(g). This testing has been completed for the primary dust collectors supporting the process equipment. Records and test reports associated with this testing is maintained within the facility record.

## Operation and Maintenance Plan

The Battle Creek facility will follow the manufacturer's recommendations and operating manuals for the operation and maintenance of the baghouses. The operating manuals are maintained updated by the Facility Supervisor.

The Preventive Maintenance Plan is also managed by the Facility Supervisor through the utilization of BASF's SAP based maintenance planning tool. Manufacturer's recommendations for preventative maintenance have been assessed by the Facility Supervisor, Operations Manager and Environmental Specialist. The assessment was the basis for the development and implementation of the preventive maintenance schedule for the equipment. Through that schedule, equipment specific PM's were developed, assigned and entered the SAP planning tool.

The equipment specific PM's are assigned to maintenance staff and are expected to be completed as assigned. The completed PM's are then filed in the system with hard copies maintained as a back-up for the facility record. All assigned and completed PM's must be maintained on site for a minimum of five (5) years.

The devices have installed a Continuous Monitoring System (CMS) for the purposes of collecting data for pressure drop readings for the baghouses and cartridge dust collectors. This system records a pressure drop reading every 15 seconds of operation of the equipment. Data from the accumulated pressure drop readings are then evaluated on a 15-minute block average. The 15-minute block average is used to determine compliance with the pressure drop ranges established by the manufacturer and referenced in this plan. In addition, the baghouses and cartridge dust collectors have Bag Leak Detection Systems (BLDS) for determining the breakthrough of the filter media. The BLDS have a manufacturer's certified particle sensitivity of 0.00044 grains per actual cubic foot. The system will alarm at the HMI panel associated with the facility PLC control system.

Should the system indicate excessive loading or a leak the plant staff will be alerted via the panel alarm. Staff will inspect the device and determine corrective measures. Should the corrective measures require longer than three (3) hours to correct equipment will be shut down in a safe and orderly fashion to facilitate investigation and repair. A more detailed discussion of responses to BLDS alarms is contained in the BLDS Monitoring Plan.

The CMS for the dust collectors and cartridge dust collectors for the purposes of monitoring pressure drop will also employ an alarm system designed to alert staff when the pressure drop approaches a low and/or high-level set point alarm See Table #2. Staff will use a similar process as described for the BLDS for the investigation and resolution of an alarm for the control devices.

 <b>BASF</b> We create chemistry	EHS-Procedure	Control Device Monitoring Plan		
	Document ID	EHSP-00011	Department	EHS
<b>BASF Toda America LLC</b>	Revision #	3	Author	B. Phillips
<b>Battle Creek</b>	Revision Date	10/23/2020	Page	3 of 3

**Table #2 - Operating/Monitoring Parameters for Baghouses and Scrubber Systems**

Device Designation	CMPU #	Manufacturer's Recommend Pressure Drop Range or Minimum
A1-BF-010	A1	0.1-8-inch h20
A1-BF-020	A1	0.1-8-inch h20
A1-BF-030	A1	0.1-8-inch h20
A1-BF-210	A1	0.1-8-inch h20
A1-BF-720	A1	0.1-8-inch h20
A2-BF-010	A2	0.1-8-inch h20
A2-BF-020	A2	0.1-8-inch h20
A2-BF-030	A2	0.1-8-inch h20
A2-BF-015	A2	0.1-8-inch h20
A2-BF-720	A2	0.1-8-inch h20
DC-961	A1	0.1 to 7.0 inch WC
DC-962	A1	0.1 to 7.0 inch WC
DC-963	A2	0.1 to 7.0 inch WC
DC-964	A2	0.1 to 7.0 inch WC
DC-965	A2	0.1 to 7.0 inch WC
DC-966	A2	0.1 to 7.0 inch WC



## 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: P0089

Section Number (if applicable):

1. Additional Information ID  
AI- PTI, Plan, PTE, NSPS

### Additional Information

2. Is This Information Confidential?

Yes  No

PTE Calcs

Page of

LINE 1

Process / Operation	Equipment Controlled	Control Equipment ID	Exhaust Flow Rate (m3/min)	Maximum Concentration of Material Precontrols (mg/m3)	NiCo(OH)2		Ni Emissions (lb/Hr)			LiNiCoAlO2			Sum Ni Emissions (lb/hr)	Annual Ni Emission (lb/yr)	Annual Co Emission (ton/yr)		
					Total Emissions (lb/hr)	% Nickel	Ni (lb/hr) Pre control	%Co	Co (lb/hr) Pre control	Emissions Rate (lb/hr)	% Nickel	Ni (lb/hr) Pre control				%Co	Co (lb/hr) Pre control
Pre-Calcination	Raw Material Handling & Mixing	LIQH Jet Mill, Magnetic Separators, Raw Material Mixer	45	50	14.88375	0.3887	5.79E+00	3.86E-01	5.75E+00	0.124	0.3210	0.03981	0.31886	0.03954	5.83E+00	5.10E+04	3.46E+02
	Calcination	Calcination Mixer	45	20	5.9535	0.3887	2.31E+00	3.86E-01	2.30E+00	2.9762	0.3210	0.95550	0.31886	0.94899	3.27E+00	2.86E+04	8.31E+03
After Calcination	Raw Material Handling & Mixing	LIQH, NiCo(OH)2, Al Hoppers and Raw Material Mixer	45	20	5.9535	0.3887	2.31E+00	3.86E-01	2.30E+00	0	0.3210	0.00000	0.31886	0.00000	2.31E+00	2.03E+04	0.00E+00
	Raw Material Handling & Mixing	LIQH Jet Mill	6	50	1.9845	0.3887	7.71E-01	3.86E-01	7.66E-01	0	0.3210	0.00000	0.31886	0.00000	7.71E-01	6.76E+03	0.00E+00
	Pulverization	Pulverizer	1	150	0.99225	0.3887	3.86E-01	3.86E-01	3.83E-01	0.99205	0.3210	0.31849	0.31886	0.31632	7.04E-01	6.17E+03	2.77E+03
	Pulverization	Pulverization Mixer	10	100	6.615	0.3887	2.57E+00	3.86E-01	2.55E+00	6.61375	0.3210	2.12332	0.31886	2.10885	4.69E+00	4.11E+04	1.85E+04
	Calcination	Calcinator	A1-SCR-960-1	100	0.19	0.125685	0.3887	4.89E-02	3.86E-01	4.85E-02	0.05405	0.3210	0.01735	0.31886	0.01723	6.62E-02	5.80E+02
Calcination	Calcinator	A1-SCR-960-2	100	0.19	0.125685	0.3887	4.89E-02	3.86E-01	4.85E-02	0.05405	0.3210	0.01735	0.31886	0.01723	6.62E-02	5.80E+02	1.51E+02
														155165.30	30205.90		

Total HAP as Particulate 92.69 Ton/yr.

	NiCo(OH)2		LiNiCoAlO2
Ni	58.7	0.388741722	Li
Co	58.3	0.386092715	Ni
(OH)2	34	0.225165563	Co
	151		Al
			O2
			32
			0.175016408
			182.84

Line #2 HAP PTE

LINE 2

Process / Operation	Equipment Controlled	Control Equipment ID	Exhaust Flow Rate (m3/min)	Maximum Concentration of Material Precontrols (mg/m3)	Total Emissions (lb/hr)	NiCoMn(OH)2	NiCoMn(OH)2	NiCoMn(OH)2	NiCoMn(OH)2	NiCoMn(OH)3	NiCoMn(OH)4	LiNiCoMnO2	LiNiCoMnO2	LiNiCoMnO2	LiNiCoMnO2	LiNiCoMnO2	LiNiCoMnO2	LiNiCoMnO2	Sum HAP Emissions (lb/yr)	HAP PTE Ton/yr.
						% Nickel	Ni (lb/hr)	% Manganese	Mn (lb/hr)	%Co	Co (lb/hr) Pre control	Emissions Rate (lb/hr)	% Nickel	Ni (lb/hr)	% Manganese	Mn (lb/hr)	%Co	Co (lb/hr) Pre control		
Raw Material Handling & Mixing	Magnetic Separators, Raw Material Mixer	A2-BF-010	45	50	14.88375	28.51%	4.24321	26.66%	3.96852	0.28315	4.21429	0.124	27.84%	0.03452	26.04%	0.03229	0.27651	0.03429	109737.5197	54.87
Calcination	Calcination Mixer	A2-BF-020	45	20	5.9535	28.51%	1.69728	26.66%	1.58741	0.28315	1.68572	2.9762	27.84%	0.82860	26.04%	0.77496	0.27651	0.82296	64797.12823	32.40
Material Packaging	Packaging Line	A2-BF-030	45	50	14.88375	28.51%	4.24321	26.66%	3.96852	0.28315	4.21429	0.124	27.84%	0.03452	26.04%	0.03229	0.27651	0.03429	109737.5197	54.87
	Li2CO3, NiCoMn(OH)2 Hoppers and Raw Material																			
Raw Material Handling & Mixing	Mixer	A2-BF-015	45	20	5.9535	28.51%	1.69728	26.66%	1.58741	0.28315	1.68572	5.9535	27.84%	1.65751	26.04%	1.55021	0.27651	1.64622	86061.3539	43.03
Pulverization	Pulverizer	A2-BF-650	1	150	0.99225	28.51%	0.28288	26.66%	0.26457	0.28315	0.28095	0.99205	27.84%	0.27620	26.04%	0.25832	0.27651	0.27431	14342.13056	7.17
Pulverization	Mixer	A2-BF-720	10	100	6.615	28.51%	1.88587	26.66%	1.76379	0.28315	1.87302	6.61375	27.84%	1.84134	26.04%	1.72213	0.27651	1.82879	95614.79891	47.81
Calcination	Calcinator	A2-SCR-960-1A	100	0.19	0.125685	28.51%	0.03583	26.66%	0.03351	0.28315	0.03559	0.06285	27.84%	0.01750	26.04%	0.01637	0.27651	0.01738	1368.075868	0.68
Calcination	Calcinator	A2-SCR-960-2A	100	0.19	0.125685	28.51%	0.03583	26.66%	0.03351	0.28315	0.03559	0.06285	27.84%	0.01750	26.04%	0.01637	0.27651	0.01738	1368.075868	0.68
Calcination	Calcinator	A2-SCR-960-1 B	100	0.19	0.125685	28.51%	0.03583	26.66%	0.03351	0.28315	0.03559	0.06285	27.84%	0.01750	26.04%	0.01637	0.27651	0.01738	1368.075868	0.68
Calcination	Calcinator	A2-SCR-960-2B	100	0.19	0.125685	28.51%	0.03583	26.66%	0.03351	0.28315	0.03559	0.06285	27.84%	0.01750	26.04%	0.01637	0.27651	0.01738	1368.075868	0.68

242.88

	NiCoMn(OH)2	LiNiCoMnO2		
Ni	58.7	0.285089849	Li	6.94
Mn	54.9	0.266634288	Ni	58.7
Co	58.3	0.283147159	Co	58.3
(OH)2	34	0.165128703	Mn	54.9
	206		O2	32
				0.151773857
				210.84



## RENEWABLE OPERATING PERMIT APPLICATION AI-001: ADDITIONAL INFORMATION

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SRN: P0089	Section Number (if applicable):
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1. Additional Information ID AI- NSPS
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### Additional Information

2. Is This Information Confidential?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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NSPS Table of Requirements for Subpart IIII for GEN1



## **DESCRIPTION**

40 CFR 60, Subpart IIII requirements for Emergency Compression Ignition Internal Combustion Engines <30 l/cyl constructed (ordered) after July 11, 2005 and manufactured after April 1, 2006

**Emission Units:** EU-GEN1

## **POLLUTION CONTROL EQUIPMENT**

NA

### **I. EMISSION LIMIT(S)**

1. For pre-2007 model year emergency stationary compression ignition internal combustion engines with a displacement of less than 10 l/cyl. that are not fire pump engines, the permittee must comply with the emission standards in Table 1 of 40 CFR 60 Subpart IIII. For pre-2007 model year emergency stationary CI ICE with a displacement of greater than or equal to 10 l/cyl. and less than 30 l/cyl that are not fire pump engines, the permittee must comply with the emission standards in 40 CFR 94.8(a)(1). The permittee may comply with the emission standards by purchasing an engine certified according to 40 CFR Part 89 or 40 CFR Part 94, as applicable for the same model year and maximum engine power. **(40 CFR 60.4205(a), 40 CFR 60.4211(b))**
2. For 2007 model year and later emergency stationary compression ignition internal combustion engines with a displacement of less than 30 l/cyl. that are not fire pump engines, the permittee must comply with the emission standards for new nonroad CI engines in 40 CFR 60.4202, for all pollutants, for the same model year and maximum engine power. The permittee may comply with the emission standards by purchasing an engine certified to the emission standards in 40 CFR 60.4205(b). **(40 CFR 60.4205(b), 40 CFR 60.4211(c))**
3. The engines must be installed and configured according to the manufacturer's emission related specifications. **(40 CFR 60.4211(b) and (c))**

### **II. MATERIAL LIMIT(S)**

1. The permittee shall burn only diesel fuel with a maximum sulfur content of 15 ppm (0.0015 percent) by weight. **(40 CFR 60.4207(b), 40 CFR 80.510(b))**

### **III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The permittee must operate and maintain emergency engines and control device, if installed, according to the manufacturer's emission related written instructions. **(40 CFR 60.4211(a)(1))**
2. The permittee may change only emission related settings that are permitted by the manufacturer. **(40 CFR 60.4211(a)(2))**
3. The permittee must meet applicable requirements specified in 40 CFR 89, 94, and/or 1068 as they apply. **(40 CFR 60.4211(a)(3))**
4. If the emergency engines do not operate in a certified manner as required by 40 CFR 60, Subpart IIII, the permittee must demonstrate compliance as follows:
  - a. The permittee shall keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions.
  - b. The permittee shall conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year after operating an uncertified engine or operating in a way that is not permitted by the manufacturer pursuant to 40 CFR 60.4212. The permittee shall conduct subsequent performance testing on emergency compression ignition engine engines > 500 HP, every 8,760 hours of engine operation or 3 years, whichever comes first. **(40 CFR 60.4211(g))**

5. After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines. **(40 CFR 60.4208(b))**
6. The permittee shall not operate emergency engines for more than 500 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month. **(R 336.2803, R 336.2804, R336.1213(3))**
7. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR 60.4211(f)(1) through (3), is prohibited. If the permittee does not operate the engine according to the requirements in paragraphs (f)(1) through (3), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines:
  - a. The permittee may operate the emergency stationary RICE for any combination of purposes specified in 40 CFR 63.4211(f)(2)(i) through (iii) for a maximum of 100 hours per calendar year for maintenance checks and readiness testing and emergency demand response. Any operation for non-emergency situations as allowed in SC III.6(b) counts as part of the 100 hours.
  - b. Emergency stationary RICE may be operated for up to 50 hours per calendar year in non-emergency situations. These 50 hours of operation are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response. Except as provided in paragraph 40 CFR 63.4211(f)(3)(i), the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. **(40 CFR 63.4211(f))**

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The permittee shall equip and maintain emergency engines with a non-resettable hours meter to track operating hours. **(40 CFR 60.4209(a))**

#### **V. TESTING/SAMPLING**

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

NA

#### **VI. MONITORING/RECORDKEEPING**

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

1. The permittee shall keep fuel supplier certification records or fuel sample test data for diesel fuel used. **(40 CFR 80.510(b), R 336.1212(3))**
2. The permittee shall keep manufacturer's certification documentation indicating that emergency engines meet the applicable emission limitations contained in 40 CFR 60.4205(b). **(40 CFR 60.4211)**
3. Starting with the model years in table 5 to Subpart III, Part 60, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the permittee must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time. **(40 CFR 60.4214(b))**
4. If the permittee is an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. The permittee must keep records of any corrective action taken after the backpressure monitor has indicated that the high backpressure limit of the engine is approached. **(40 CFR 60.4209(b), 40 CFR 60.4214(c))**
5. The permittee shall monitor and record the hours of operation of the emergency generators based on a 12-month rolling time period. **(R 336.1213(3))**

## **VII. REPORTING**

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

See Appendix 8

## **VIII. STACK/VENT RESTRICTION(S)**

NA

## **IX. OTHER REQUIREMENT(S)**

1. The permittee shall comply with the applicable provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR 60 Subpart A and Subpart IIII. **(40 CFR 60 Subparts A and IIII)**
2. The permittee shall comply with the applicable provisions of the National Emission Standards for Hazardous Air Pollutants, 40 CFR 63, Subpart A and Subpart ZZZZ, by the dates specified in 40 CFR 63.6595. **(40 CFR 63 Subparts A and ZZZZ)**

### **Footnotes:**

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

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



## 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: P0089	Section Number (if applicable):
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1. Additional Information ID AI- PTI
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### Additional Information

2. Is This Information Confidential?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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PTI - Current PTI 70-10C

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

December 16, 2022

**PERMIT TO INSTALL  
70-10C**

**ISSUED TO  
BASF Toda America, Inc.**

**LOCATED AT  
4750 West Dickman Road  
Battle Creek, Michigan 49037**

**IN THE COUNTY OF  
Calhoun**

**STATE REGISTRATION NUMBER  
P0089**

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environment, Great Lakes, and Energy. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: <b>December 8, 2022</b>	
DATE PERMIT TO INSTALL APPROVED: <b>December 16, 2022</b>	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

**PERMIT TO INSTALL**

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## COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department/EGLE	Michigan Department of Environment, Great Lakes, and Energy
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

\*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

### POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO <sub>2</sub> e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H <sub>2</sub> S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO <sub>x</sub>	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO <sub>2</sub>	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

## GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal condition or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
  - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
  - b) A visible emission limit specified by an applicable federal new source performance standard.
  - c) A visible emission limit specified as a condition of this Permit to Install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

## EMISSION UNIT SPECIAL CONDITIONS

### EMISSION UNIT SUMMARY TABLE

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

<b>Emission Unit ID</b>	<b>Emission Unit Description (Including Process Equipment &amp; Control Device(s))</b>	<b>Installation Date / Modification Date</b>	<b>Flexible Group ID</b>
EULINE1	Raw material handling, weighing, mixing, filtering, calcination process, processing, and pack out room used in the manufacturing of lithium-ion battery cathode material for Line 1.	December 6, 2010, TBD	FGLINES
EULINE2	Raw material handling, weighing, mixing, filtering, calcination process, processing, and pack out room used in the manufacturing of lithium-ion battery cathode material for Line 2.	September 29, 2014, TBD	FGLINES

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1291.

**EULINE1  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

Raw material handling, weighing, mixing, filtering, calcination process, processing, and pack out room used in the manufacturing of lithium-ion battery cathode material for Line 1.

**Flexible Group ID:** FGLINES

**POLLUTION CONTROL EQUIPMENT**

Fabric filters (A1BF010, A1BF020, A1BF030, A1BF210, A1BF330, A1BF720, DC-961, DC-962), HEPA filters (F-1600-A/B, F-1601-A/B, FLT-961, FLT-962)

**I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. PM	0.003 lbs per 1,000 lbs of exhaust	Hourly	The portion of EULINE1 controlled by A1BF330	SC V.1, SC VI.1, SC VI.2	R 336.1331
2. PM10	2.98E-3 pph	Hourly	The portion of EULINE1 controlled by A1BF330	SC V.1,	R 336.1225, 40 CFR 52.21(c) & (d)
3. PM2.5	2.98E-3 pph	Hourly	The portion of EULINE1 controlled by A1BF330	SC V.1,	R 336.1225, 40 CFR 52.21(c) & (d)
4. PM	3.59E-9 lbs per 1,000 lbs of exhaust	Hourly	The portion of EULINE1 controlled by FLT-961 and associated HEPA filter	SC V.1, SC VI.1, SC VI.2	R 336.1331
5. PM10	5.66E-8 pph	Hourly	The portion of EULINE1 controlled by FLT-961 and associated HEPA filter	SC V.1,	R 336.1225, 40 CFR 52.21(c) & (d)
6. PM2.5	5.66E-8 pph	Hourly	The portion of EULINE1 controlled by FLT-961 and associated HEPA filter	SC V.1,	R 336.1225, 40 CFR 52.21(c) & (d)
7. PM	2.37E-9 lbs per 1,000 lbs of exhaust	Hourly	The portion of EULINE1 controlled by FLT-962 and associated HEPA filter	SC V.1, SC VI.1, SC VI.2	R 336.1331

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
8. PM10	5.66E-8 pph	Hourly	The portion of EULINE1 controlled by FLT-962 and associated HEPA filter	SC V.1,	R 336.1225, 40 CFR 52.21(c) & (d)
9. PM2.5	5.66E-8 pph	Hourly	The portion of EULINE1 controlled by FLT-962 and associated HEPA filter	SC V.1,	R 336.1225, 40 CFR 52.21(c) & (d)

11. There shall be no visible emissions from any stack in EULINE1. **(R 336.1225, R 336.1301, R 336.1303, 40 CFR 52.21(c) & (d))**

**II. MATERIAL LIMIT(S)**

NA

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

NA

**IV. DESIGN/EQUIPMENT PARAMETER(S)**

- The permittee shall not operate EULINE1 dry material operations unless the A1BF010, A1BF020, A1BF030 , A1BF210, A1BF720, DC-961, and DC-962 fabric filters with the associated HEPA filter in series are installed, maintained, and operated in a satisfactory manner. The permittee shall not operate EULINE 1 dry material operations unless the A1BF330 fabric filter is installed, maintained and operated in a satisfactory manner. Satisfactory operation includes, but is not limited to, maintaining a pressure drop range across each fabric filter according to manufacturer’s specifications. For the purposes of demonstrating compliance with manufacturer’s recommendations for pressure drop, the permittee shall assess compliance with established drop ranges based on a one-hour block average. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d) 40CFR60.2 and 40CFR60.13(h))**
- The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the pressure drop for each fabric filter for EULINE1 (A1BF010, A1BF020, A1BF030, A1BF210, A1BF330, A1BF720, DC-961, and DC-962) on a continuous basis. Monitoring of data “on a continuous basis” is defined as an instantaneous data point measured at least once every 15 minutes for at least 90 percent of the operating time during an operating calendar day. The permittee is not required to monitor operational parameter data during periods of non-operation of the device resulting in cessation of the emissions to which the monitoring applies. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

- The permittee shall, upon request by the Department, verify PM, PM10 and PM2.5 emission rates from the portion of EULINE1 controlled by DC-961, DC-962, and associated HEPA filters, and A1BF330 by testing at the owner’s expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60 Appendix A and Part 10 of the Michigan Air Pollution Control Rules for PM and 40 CFR Part 51 Appendix M for PM10 and PM2.5. An alternate method, or a modification

to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1331, R 336.2001, R 336.2003, R 336.2004)**

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall record the pressure drop for each fabric filter for EULINE1 (A1BF010, A1BF020, A1BF030, A1BF210, A1BF330, A1BF720, DC-961 and DC-962) in accordance with SC IV.2 on a calendar day basis, while EULINE1 is in operation. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**
2. For any baghouse that is not using a bag leak detection system, the permittee shall monitor the fabric filter emission points to verify the filters are operating properly, by taking visible emission readings for EULINE1 a minimum of once per calendar month. Either a certified or non-certified reader shall take each visible emission reading during routine operating conditions. Such readings do not have to be conducted per the requirements of Method 9. Multiple stacks may be observed simultaneously. If any visible emissions (other than uncombined water vapor) are observed, the permittee shall immediately inspect the filters and perform any required maintenance. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**
3. The permittee shall keep, in a satisfactory manner, records of all visible emission readings for EULINE1. At a minimum, records shall include the date, time, name of observer/reader, whether the reader is certified, and status of visible emissions. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1301, R 336.1303, R 336.1910)**

**VII. REPORTING**

1. Within 30 days after completion of the rerouting of emissions authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than 30 days after the issuance of the permit to install. **(R 336.1201(7)(a))**

**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:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVF1600	24	37	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVF1601	16	37	R 336.1225, 40 CFR 52.21(c) & (d)
3. SVDC961	18	36	R 336.1225, 40 CFR 52.21(c) and (d)
4. SVDC962	16	36	R 336.1225, 40 CFR 52.21(c) & (d)

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
5. SVA1BF330*	4	48	R 336.1225, 40 CFR 52.21(c) & (d)

\*These stacks are vented in a goose-neck down orientation.

**IX. OTHER REQUIREMENT(S)**

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart VVVVVV. **(40 CFR Part 63 Subpart VVVVVV)**

**Footnotes:**

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

**EULINE2  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

Raw material handling, weighing, mixing, filtering, calcination process, processing, and pack out room used in the manufacturing of lithium-ion battery cathode material for Line 2.

**Flexible Group ID:** FGLINES

**POLLUTION CONTROL EQUIPMENT**

Fabric filters (A2BF010, A2BF015, A2BF020, A2BF030, A2BF330, A2BF720, DC-963, DC-964, DC-965, DC-966), HEPA filters (F-1600-A/B, F-1601-A/B, FLT-963, FLT-964, FLT-965, FLT-966)

**I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. PM	1.676E-9 lbs per 1,000 lbs of exhaust	Hourly	The portion of EULINE2 controlled by DC-963 and associated HEPA filter	SC V.1, SC VI.1, SC VI.2	R 336.1331
2. PM10	5.66E-8 pph	Hourly	The portion of EULINE2 controlled by DC-963 and associated HEPA filter	SC V.1,	R 336.1225, 40 CFR 52.21(c) & (d)
3. PM2.5	5.66E-8 pph	Hourly	The portion of EULINE2 controlled by DC-963 and associated HEPA filter	SC V.1,	R 336.1225, 40 CFR 52.21(c) & (d)
4. PM	3.065E-9 lbs per 1,000 lbs of exhaust	Hourly	The portion of EULINE2 controlled by DC-964 and associated HEPA filter	SC V.1, SC VI.1, SC VI.2	R 336.1331
5. PM10	5.66E-8 pph	Hourly	The portion of EULINE2 controlled by DC-964 and associated HEPA filter	SC V.1,	R 336.1225, 40 CFR 52.21(c) & (d)
6. PM2.5	5.66E-8 pph	Hourly	The portion of EULINE2 controlled by DC-964 and associated HEPA filter	SC V.1,	R 336.1225, 40 CFR 52.21(c) & (d)
7. PM	1.676E-9 lbs per 1,000 lbs of exhaust	Hourly	The portion of EULINE2 controlled by DC-965 and associated HEPA filter	SC V.1, SC VI.1, SC VI.2	R 336.1331

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
8. PM10	5.66E-8 pph	Hourly	The portion of EULINE2 controlled by DC-965 and associated HEPA filter	SC V.1,	R 336.1225, 40 CFR 52.21(c) & (d)
9. PM2.5	5.66E-8 pph	Hourly	The portion of EULINE2 controlled by DC-965 and associated HEPA filter	SC V.1,	R 336.1225, 40 CFR 52.21(c) & (d)
10. PM	3.065E-9 lbs per 1,000 lbs of exhaust	Hourly	The portion of EULINE2 controlled by DC-966 and associated HEPA filter	SC V.1, SC VI.1, SC VI.2	R 336.1331
11. PM10	5.66E-8 pph	Hourly	The portion of EULINE2 controlled by DC-966 and associated HEPA filter	SC V.1,	R 336.1225, 40 CFR 52.21(c) & (d)
12. PM2.5	5.66E-8 pph	Hourly	The portion of EULINE2 controlled by DC-966 and associated HEPA filter	SC V.1,	R 336.1225, 40 CFR 52.21(c) & (d)
13. 1. PM	0.003 lbs per 1,000 lbs of exhaust	Hourly	The portion of EULINE2 controlled by A2BF330	SC V.1, SC VI.1, SC VI.2,	R 336.1331
14. 2. PM10	2.98E-3 pph	Hourly	The portion of EULINE2 controlled by A2BF330	SC V.1,	R 336.1225, 40 CFR 52.21(c) & (d)
15. 2. PM2.5	2.98E-3 pph	Hourly	The portion of EULINE2 controlled by A2BF330	SC V.1,	R 336.1225, 40 CFR 52.21(c) & (d)

16. There shall be no visible emissions from any stack in EULINE2. (R 336.1225, R 336.1301, R 336.1303, 40 CFR 52.21(c) & (d))

**II. MATERIAL LIMIT(S)**

NA

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

NA

**IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The permittee shall not operate EULINE2 dry material operations unless the A2BF010, A2BF020, A2BF015, A2BF030, A2BF720, DC-963, DC-964, DC-965 and DC-966 fabric filters and associated HEPA filters are installed, maintained, and operated in a satisfactory manner. The permittee shall not operate EULINE2 dry material operations unless the A2BF330 fabric filter is installed, maintained and operated in a satisfactory manner. Satisfactory operation includes, but is not limited to, maintaining a pressure drop range across each fabric filter according to manufacturer's specifications. For the purposes of demonstrating compliance with manufacturer's recommendations for pressure drop, the permittee shall assess compliance with established

drop ranges based on a one-hour block average. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d), 40CFR60.2 and 40CFR60.13(h))**

2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the pressure drop for each fabric filter for EULINE2 (A2BF010, A2BF020, A2BF015, A2BF030, A2BF330, A2BF720, DC-963, DC-964, DC-965, and DC-966) and associated HEPA filters on a continuous basis. Monitoring of data "on a continuous basis" is defined as an instantaneous data point measured at least once every 15 minutes for at least 90 percent of the operating time during an operating calendar day. The permittee is not required to monitor operational parameter data during periods of non-operation of the device resulting in cessation of the emissions to which the monitoring applies. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

## **V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall, upon request by the Department, verify PM, PM10 and PM2.5 emission rates from the portion of EULINE2 controlled by DC-963, DC-964, DC-965, DC-966 and associated HEPA filters, A2BF330 by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60 Appendix A and Part 10 of the Michigan Air Pollution Control Rules for PM and 40 CFR Part 51 Appendix M for PM10 and PM2.5. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1331, R 336.2001, R 336.2003, R 336.2004)**

## **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall record the pressure drop for each fabric filter for EULINE2 (A2BF010, A2BF020, A2BF015, A2BF030, A2BF330, A2BF720, DC-963, DC-964, DC-965, DC-966) and associated HEPA filters in accordance with SC IV.2 on a calendar day basis, while EULINE2 is in operation. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**
2. For any baghouse that is not using a bag leak detection system, the permittee shall monitor the fabric filter emission points to verify the filters are operating properly, by taking visible emission readings for EULINE2 a minimum of once per calendar month. Either a certified or non-certified reader shall take each visible emission reading during routine operating conditions. Such readings do not have to be conducted per the requirements of Method 9. Multiple stacks may be observed simultaneously. If any visible emissions (other than uncombined water vapor) are observed, the permittee shall immediately inspect the filters and perform any required maintenance. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**
3. The permittee shall keep, in a satisfactory manner, records of all visible emission readings for EULINE2. At a minimum, records shall include the date, time, name of observer/reader, whether the reader is certified, and status of visible emissions. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1301, R 336.1303, R 336.1910)**

## **VII. REPORTING**

1. Within 30 days after completion of the rerouting of emissions authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or

modification is considered to occur not later than 30 days after the issuance of the permit to install. .  
**(R 336.1201(7)(a))**

**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:

<b>Stack ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVF1600	24	37	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVF1601	16	37	R 336.1225, 40 CFR 52.21(c) & (d)
3. SVDC963	22	37	R 336.1225, 40 CFR 52.21(c) & (d)
4. SVDC964	16	36	R 336.1225, 40 CFR 52.21(c) & (d)
5. SVDC965	22	37	R 336.1225, 40 CFR 52.21(c) & (d)
6. SVDC966	16	36	R 336.1225, 40 CFR 52.21(c) & (d)
7. 5. SVA2BF330*	6	42	R 336.1225, 40 CFR 52.21(c) & (d)
*These stacks are vented in a goose-neck down orientation.			

**IX. OTHER REQUIREMENT(S)**

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart VVVVVV. **(40 CFR Part 63 Subpart VVVVVV)**

**Footnotes:**

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

## FLEXIBLE GROUP SPECIAL CONDITIONS

### FLEXIBLE GROUP SUMMARY TABLE

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

<b>Flexible Group ID</b>	<b>Flexible Group Description</b>	<b>Associated Emission Unit IDs</b>
FGLINES	All processing lines and associated equipment at the facility.	EULINE1 EULINE2

**FGLINES  
 FLEXIBLE GROUP CONDITIONS**

**DESCRIPTION**

All processing lines and associated equipment at the facility.

**Emission Unit:** EULINE1, EULINE2

**POLLUTION CONTROL EQUIPMENT**

NA

**I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
2. PM	9.987 E-8 lbs/1000lbs of exhaust	Hourly	The portion of FGLINES controlled by HEPA filter F-1600-A/B and vented through West Stack	SC. V.1	R 336.1331
3. PM10	4.28E-6 pph	Hourly	The portion of FGLINES controlled by HEPA filter F-1600-A/B and vented through West Stack	SC V.1	R 336.1225, 40 CFR 52.21(c) & (d)
4. PM2.5	4.28E-6 pph	Hourly	The portion of FGLINES controlled by HEPA filter F-1600-A/B and vented through West Stack	SC V.1	R 336.1225, 40 CFR 52.21(c) & (d)
5. PM	4.745E-8 lbs/1000 lbs of exhaust	Hourly	The portion of FGLINES controlled by HEPA filter F-1601-A/B and vented through East Stack	SC. V.2	R 336.1331
6. PM10	9.57E-7 pph	Hourly	The portion of FGLINES controlled by HEPA filter F-1601-A/B and vented through East Stack	SC V.2	R 336.1225, 40 CFR 52.21(c) & (d)
7. PM2.5	9.57E-7 pph	Hourly	The portion of FGLINES controlled by HEPA filter F-1601-A/B and vented through East Stack	SC V.2	R 336.1225, 40 CFR 52.21(c) & (d)

**II. MATERIAL LIMIT(S)**

NA

### **III. PROCESS/OPERATIONAL RESTRICTION(S)**

NA

### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. For new sources using a baghouse as a control device, the permittee must install, operate, and maintain a bag leak detection system on all baghouses used to comply with the HAP metal emissions limit in Table 4 of 40 CFR Part 63 Subpart VVVVVV. Bag leak detection systems must comply with requirements outlined in 40 CFR 63.11410(g)(1), including, but not limited to the following: **(40 CFR 63.11496(f)(4))**
  - a) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 0.00044 grains per actual cubic foot or less. **(40 CFR 63.11410(g)(1)(i))**
  - b) The bag leak detection system sensor must provide output of relative PM loadings. The permittee shall continuously record the output from the bag leak detection system using electronic or other means (e.g., using a strip chart recorder or a data logger). **(40 CFR 63.11410(g)(1)(ii))**
  - c) The bag leak detection system must be equipped with an alarm system that will sound when the system detects an increase in relative particulate loading over the alarm set point established according to 40 CFR 63.11410(g)(1)(iv), and the alarm must be located such that it can be heard by the appropriate plant personnel. **(40 CFR 63.11410(g)(1)(iii))**
  - d) In the initial adjustment of the bag leak detection system, the permittee must establish, at a minimum, the baseline output by adjusting the sensitivity (range) and the averaging period of the device, the alarm set points, and the alarm delay time. **(40 CFR 63.11410(g)(1)(iv))**
  - e) Following initial adjustment, the permittee shall not adjust the averaging period, alarm set point, or alarm delay time without approval from the Administrator or delegated authority except as provided in 40 CFR 63.11410(g)(1)(vi). **(40 CFR 63.11410(g)(1)(v))**
  - f) Once per quarter, the permittee may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan required by 40 CFR 63.11410(g)(2). **(40 CFR 63.11410(g)(1)(vi))**
  - g) The permittee must install the bag leak detection sensor downstream of the baghouse and upstream of any wet scrubber. **(40 CFR 63.11410(g)(1)(vii))**
  - h) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors. **(40 CFR 63.11410(g)(1)(viii))**

### **V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall, upon request by the Department, verify PM, PM10 and PM2.5 emission rates from West Stack by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60 Appendix A and Part 10 of the Michigan Air Pollution Control Rules for PM and 40 CFR Part 51 Appendix M for PM10 and PM2.5. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1331, R 336.2001, R 336.2003, R 336.2004)**
2. The permittee shall, upon request by the Department, verify PM, PM10 and PM2.5 emission rates from East Stack by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60 Appendix A and Part 10 of the Michigan Air Pollution Control Rules for PM and 40 CFR Part 51 Appendix M for PM10 and PM2.5. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD

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

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTION(S)**

NA

**IX. OTHER REQUIREMENT(S)**

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart VVVVVV. **(40 CFR Part 63 Subpart VVVVVV)**

**Footnotes:**

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



We create chemistry

**CERTIFIED MAIL – RETURN RECEIPT REQUESTED**  
**MDEQ Kalamazoo District Office:7014 1820 0002 3902 8702**

April 26, 2019



Mr. Rex Lane  
Michigan Department of Environmental Quality  
Air Quality Division  
7953 Adobe Road  
Kalamazoo, MI 49009-5025

**Re: Renewable Operating Permit Application**  
**BASF Toda America LLC (BTA), Battle Creek, MI**

Dear Mr. Lane;

Provided for review is the application for a Renewable Operating Permit pursuant to the requirements identified in 40CFR63.11494(e), Chemical Manufacturing Area Source Rule.

Should you have any questions or comments please do hesitate to contact me directly either by email at [david.sheaves@basf.com](mailto:david.sheaves@basf.com) or via phone at 734-476-7608.

Sincerely,

David W. Sheaves  
Expert, Environmental Protection

BASF Corporation  
Process Catalyst  
1729 East Avenue  
BTA, PA 16503  
Tel: (814)-870-3900



## RENEWABLE OPERATING PERMIT INITIAL APPLICATION S-001 STATIONARY SOURCE 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. Refer to "Renewable Operating Permit Initial Application Instructions" for additional information to complete the application.*

SRN: P0089

Section Number (if applicable):

<b>SOURCE INFORMATION</b>		SIC Code	NAICS Code 325188
Source Name BASF Toda America, Inc.			
Street Address 4750 West Dickman Road			
City Battle Creek	State MI	ZIP Code	County Calhoun
Section/Town/Range (if street address not available)			
Source Description BTA manufactures Li-ion cathode powder on two separate manufacturing lines. Both lines are continuous processes with the following process steps: 1. Raw material handling and mixing; 2. Calcination; 3. Pulverization; 4. Blending and Packaging			

### OWNER INFORMATION

Owner Name BASF Corporation				
Mailing address ( <input type="checkbox"/> check if same as source address) 100 Park Avenue				
City Florham Park	State NJ	ZIP Code 07932	County Morris	Country United States

<input type="checkbox"/>	Check if an AI-001 Form is attached to provide more information for S-001. Enter AI-001 Form ID: AI-
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## RENEWABLE OPERATING PERMIT INITIAL APPLICATION FORM S-002 CONTACT AND RESPONSIBLE OFFICIAL 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. Refer to "Renewable Operating Permit Initial Application Instructions" for additional information to complete the application.*

SRN: P0089	Section Number (if applicable):
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At least one contact and one Responsible Official must be identified. Additional contacts and Responsible Officials may be included if necessary.

### CONTACT INFORMATION

Contact 1 Name David Sheaves			Title Expert, Environmental Protection	
Company Name & Mailing address ( <input type="checkbox"/> check if same as source address) BASF Corporation - 1609 Biddle Avenue				
City Wyandotte	State MI	ZIP Code 48192	County Wayne	Country United States
Phone number 734-324-6836		E-mail address david.sheaves@basf.com		

Contact 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		

### RESPONSIBLE OFFICIAL INFORMATION

Responsible Official 1 Name Ivor Bull			Title Chief Operating Officer	
Company Name & Mailing address ( <input checked="" type="checkbox"/> check if same as source address) BASF Toda America Inc. 4750 Dickman Road				
City Battle Creek	State MI	ZIP Code 49037	County Calhoun	Country United States
Phone number 269-441-1801		E-mail address ivor.a.bull@basf.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		

Check if an AI-001 Form is attached to provide more information for S-002. Enter AI-001 Form ID: AI-



## RENEWABLE OPERATING PERMIT INITIAL APPLICATION ASC-001 APPLICATION SUBMITTAL AND CERTIFICATION

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

Source Name: BASF Toda America, inc.	SRN: P0089	Section Number (if applicable):
--------------------------------------	------------	---------------------------------

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. A Responsible Official must sign and date this form.

**Listing of ROP Application Contents. See the initial application instructions for guidance regarding which forms and attachments are required for your source. Check the box for the items included with your application.**

<input checked="" type="checkbox"/> Completed ROP Initial Application Forms (required)	<input type="checkbox"/> Copies of all Consent Orders/Consent Judgments
<input type="checkbox"/> MAERS Forms (to report emissions not previously submitted)	<input checked="" type="checkbox"/> Compliance Plan/Schedule of Compliance
<input type="checkbox"/> HAP/Criteria Pollutant Potential to Emit Calculations	<input type="checkbox"/> Acid Rain Initial Permit Application
<input type="checkbox"/> Stack information	<input type="checkbox"/> Cross-State Air Pollution Rule (CSAPR) Information
<input checked="" type="checkbox"/> Copies of all active Permit(s) to Install (required)	<input checked="" type="checkbox"/> Additional Information (AI-001) Forms
<input type="checkbox"/> Compliance Assurance Monitoring (CAM) Plan	<input type="checkbox"/> Paper copy of all documentation provided (required)
<input type="checkbox"/> Other Plans (e.g., Malfunction Abatement, Fugitive Dust, Operation and Maintenance, etc.)	<input type="checkbox"/> Electronic documents provided (optional)
<input type="checkbox"/> Confidential Information	<input type="checkbox"/> Other, explain:

**Compliance Statement**

This source is in compliance with **all** of its applicable requirements, including those contained in Permits to Install, this application and other applicable requirements that the source is subject to.  Yes  No

This source will continue to be in compliance with all of its applicable requirements, including those contained in Permits to Install, this application and other applicable requirements that the source is subject to.  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 Permits to Install, this application and all other applicable requirements that the source is subject to.

If any of the above are checked No, identify the emission unit(s) or flexible group(s) affected and the applicable requirement for which the source is or will be out of compliance at the time of issuance of the ROP 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)**

Ivor Bull Chief Operating Officer

***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

4/24/2019

Date





## RENEWABLE OPERATING PERMIT INITIAL APPLICATION S-003 SOURCE REQUIREMENT 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. Refer to "Renewable Operating Permit Initial Application Instructions" for additional information to complete the application.*

SRN: P0089

Section Number (if applicable):

### SOURCE REQUIREMENT INFORMATION

Answer the questions below for specific requirements or programs to which the source may be subject. Refer to the ROP Initial Application Instructions for additional information.

<p>1. Actual emissions and associated data from <b>all</b> emission units with applicable requirements are required to be reported in MAERS. Are there any emissions and associated data that have <b>not</b> 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.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>2. Is this source subject to the federal regulations on ozone-depleting substances? (40 CFR Part 82)</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>3. a. 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. b. Has an updated RMP been submitted to the USEPA?</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>4. Does the source belong to one of the source categories that require quantification of fugitive emissions? If Yes, identify the category on an AI-001 Form and include the fugitive emissions in the PTE calculations for the source. <i>See ROP Initial Application instructions.</i></p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>5. Does this stationary source have the potential to emit (PTE) of 100 tons per year or more of any criteria pollutant (PM-10, PM 2.5, VOC, NOx, SO<sub>2</sub>, CO, lead)? If Yes, include potential emission calculations for each identified pollutant on an AI-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>6. Does this stationary source emit any hazardous air pollutants (HAPs) regulated by the federal Clean Air Act, Section 112? If Yes, include potential and actual emission calculations for HAPs, <b>including fugitive emissions</b> on an AI-001 Form.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>7. a. Are any emission units subject to Compliance Assurance Monitoring (CAM)? If Yes, identify the specific emission unit(s) and pollutant(s) subject to CAM on an AI-001 Form. b. Is a CAM plan included with this application on an AI-001 Form?</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>8. Does the source have any active Consent Orders/Consent Judgments (CO/CJ)? If Yes, attach a copy of each CO/CJ on an AI-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>9. Are any emission units subject to the federal Cross State Air Pollution Rule (CSAPR)? If Yes, identify the specific emission unit(s) subject to CSAPR on an AI-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>10. a. 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. b. Is an Acid Rain Permit Application included with this application?</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>11. Does the source have any required plans such as a malfunction abatement plan, fugitive dust plan, operation/maintenance plan, startup/shutdown plans or any other monitoring plan? If Yes, then the plan(s) must be submitted with this application on an AI-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>12. Are there any specific requirements that the source proposes to be identified in the ROP as non-applicable? If Yes, then the requirement and justification must be submitted on an AI-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p><input checked="" type="checkbox"/> Check if an AI-001 Form is attached to provide more information for S-003. Enter AI-001 Form ID: <b>AI-HAPs</b></p>	



## RENEWABLE OPERATING PERMIT INITIAL APPLICATION EU-001 PERMIT TO INSTALL (PTI) EXEMPT EMISSION UNITS

*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 "Renewable Operating Permit Initial Application Instructions" for additional information to complete the application.*

SRN: P0089	Section Number (if applicable):
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Review all emission units at the source and answer the question below.

1. Does the source have any emission units that are required to be listed in the ROP application under R 336.1212(4) (Rule 212(4)) of the Michigan Air Pollution Control Rules, not including Rules 281(2)(h), 287(2)(c), and 290?  Yes  No

If Yes, identify the emission units in the table below. If No, go to the EU-002 Form.

*Note: Emission units that are subject to process specific emission limitations or standards, even if identified in Rule 212, must be captured in either an EU-002 or EU-004 Form. Identical emission units may be grouped (e.g. PTI exempt Storage Tanks).*

Emission Unit ID	Emission Unit Description	PTI Exemption Rule Citation <small>[e.g. Rule 282(2)(b)(i)]</small>	Rule 212(4) Citation <small>[e.g. Rule 212(4)(c)]</small>
EU-	Space Heating Equipment	282(2)(b)(i)	212(4)(c)
EU-			

Comments:

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



## RENEWABLE OPERATING PERMIT INITIAL APPLICATION EU-002 EMISSION UNITS MEETING THE CRITERIA OF RULES 281(2)(h), 285(2)(r)(iv), 287(2)(c), OR 290

*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 "Renewable Operating Permit Initial Application Instructions" for additional information to complete the application.*

SRN: P0089	Section Number (if applicable):
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Review all emission units and applicable requirements at the source and provide the following information.

1. Does the source have any emission units which meet the criteria of Rules 281(2)(h), 285(2)(r)(iv), 287(2)(c), or 290.  Yes  No

If Yes, identify the emission units in the table below. If No, go to the EU-003 Form.

*Note: If several emission units were installed under the same rule above, provide a description of each and an installation date for each.*

Origin of Applicable Requirements	Emission Unit Description – Provide Emission Unit ID and a description of Process Equipment, Control Devices and Monitoring Devices	Date Emission Unit was Installed/ Modified/ Reconstructed
<input type="checkbox"/> Rule 281(2)(h) or 285(2)(r)(iv) cleaning operation		
<input type="checkbox"/> Rule 287(2)(c) surface coating line		
<input checked="" type="checkbox"/> Rule 290 process with limited emissions	EU-Lithium Handling Lithium compound handling equipment. Process is controlled by A2-BF330 for Line #2. Continuous monitoring of pressure drop for evaluation of A2-BF330 operation.	9/29/2014

Comments:

Check if an AI-001 Form is attached to provide more information for EU-002. Enter AI-001 Form ID: AI-



## RENEWABLE OPERATING PERMIT INITIAL APPLICATION EU-003 EMISSION UNITS WITH PERMITS TO INSTALL

*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 "Renewable Operating Permit Initial Application Instructions" for additional information to complete the application.*

SRN: P0089	Section Number (if applicable):
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Review all emission units at the source and fill in the information in the following table for **all** emission units with Permits to Install (PTI). Any PTI(s) identified below must be attached to the application.

Permit to Install Number	Emission Unit ID	Description (Include Process Equipment, Control Devices and Monitoring Devices)	Date Emission Unit was Installed/Modified/Reconstructed
70-10B	EU-Line 1	All equipment on line one	2010
70-10B	EU-Line 2	All equipment on line two	2012
10-19	EU-PACK1	Packout Room controlled with a baghouse	2010
10-19	EU-PACK2	Packout Room controlled with a baghouse	2012
	EU-		

1. Are you proposing changes to any emission unit names, descriptions or control devices in the PTIs listed above? If Yes, describe the proposed changes on an AI-001 Form.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2. Are you proposing additions or clarifications to any permit conditions? If Yes, describe the proposed changes on an AI-001 Form.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3. Are you proposing monitoring, testing, recordkeeping and/or reporting necessary to demonstrate compliance with any applicable requirements? If Yes, describe the proposed conditions on an AI-001 Form.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input checked="" type="checkbox"/> Check if an AI-001 Form is attached to provide more information for EU-003. Enter AI-001 Form ID: <b>AI-PTIs</b>	



## RENEWABLE OPERATING PERMIT INITIAL APPLICATION EU-004 OTHER EMISSION UNITS

*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 "Renewable Operating Permit Initial Application Instructions" for additional information to complete the application.*

SRN: P0089	Section Number (if applicable):
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Complete an EU-004 Form for **all** emission units with applicable requirements that have **not** been addressed on an EU-001, EU-002 or EU-003 Form. This would include grandfathered emission units or PTI exempt emission units subject to applicable requirements in the AQD Rules, and emission units subject to a MACT, NESHAP, NSPS, or other federal requirement.

1. Does the source have emission units with applicable requirements that have not been addressed on the EU-001, EU-002 and/or EU-003 Forms? <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span>  If Yes, provide the required information below. Complete the AR-001 and/or AR-002 Form(s) to identify all applicable requirements and all monitoring, testing, recordkeeping and/or reporting to demonstrate compliance with the applicable requirements.			
<b>Emission Unit ID</b> EU-	<b>Installation Date</b> (MM/DD/YYYY)	<b>Modification/Reconstruction Date(s)</b> (MM/DD/YYYY)	<b>SIC Code – If different from S-001 Form</b>
<i>Emission Unit Description – Include process equipment, control devices, monitoring devices, and all stacks/vents associated with this emission unit that have applicable requirements. Indicate which forms are used to describe/include the applicable requirements for this emission unit (AR-001 and/or AR-002 Forms).</i>			
<b>Emission Unit ID</b> EU-	<b>Installation Date</b> (MM/DD/YYYY)	<b>Modification/Reconstruction Date(s)</b> (MM/DD/YYYY)	<b>SIC Code – If different from S-001 Form</b>
<i>Emission Unit Description – Include process equipment, control devices, monitoring devices, and all stacks/vents associated with this emission unit that have applicable requirements. Indicate which forms are used to describe/include the applicable requirements for this emission unit (AR-001 and/or AR-002 Forms).</i>			
<b>Emission Unit ID</b> EU-	<b>Installation Date</b> (MM/DD/YYYY)	<b>Modification/Reconstruction Date(s)</b> (MM/DD/YYYY)	<b>SIC Code – If different from S-001 Form</b>
<i>Emission Unit Description – Include process equipment, control devices, monitoring devices, and all stacks/vents associated with this emission unit that have applicable requirements. Indicate which forms are used to describe/include the applicable requirements for this emission unit (AR-001 and/or AR-002 Forms).</i>			
<input type="checkbox"/> Check if an AI-001 Form is attached to provide more information for EU-004. Enter AI-001 Form ID: <b>AI-</b>			



# RENEWABLE OPERATING PERMIT INITIAL APPLICATION

## FG-001: FLEXIBLE GROUPS

*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 "Renewable Operating Permit Initial Application Instructions" for additional information to complete the application.*

SRN: P0089	Section Number (if applicable):
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Complete the FG-001 Form for all Emission Units (EUs) that you want to combine into a Flexible Group (FG). Create a descriptive ID for the FG and description, and list the IDs for the EUs to be included in the FG. See instructions for FG examples.

Flexible Group ID <b>FG-CMAS</b>			
Flexible Group Description Production Lines 1 & 2			
<b>Emission Unit IDs</b>			
EU-Line 1	EU-	EU-	EU-
EU-Line 2	EU-	EU-	EU-
EU-	EU-	EU-	EU-
EU-	EU-	EU-	EU-
EU-	EU-	EU-	EU-
EU-	EU-	EU-	EU-
EU-	EU-	EU-	EU-
Flexible Group ID <b>FG-</b>			
Flexible Group Description			
<b>Emission Unit IDs</b>			
EU-	EU-	EU-	EU-
EU-	EU-	EU-	EU-
EU-	EU-	EU-	EU-
EU-	EU-	EU-	EU-
EU-	EU-	EU-	EU-
EU-	EU-	EU-	EU-
EU-	EU-	EU-	EU-
<input type="checkbox"/> Check if an AI-001 Form is attached to provide more information for FG-001. Enter AI-001 Form ID: <b>AI-</b>			



## RENEWABLE OPERATING PERMIT INITIAL APPLICATION AR-001 APPLICABLE REQUIREMENTS FROM MACT, NESHAP OR NSPS

*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 "Renewable Operating Permit Initial Application Instructions" for additional information to complete the application.*

SRN: P0089	Proposed Section Number (if applicable):
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Answer the question below for emission units subject to a MACT, NESHAP or NSPS regulation and provide either an existing Permit to Install, an existing template table\*, or a newly created table\*\* that contains the applicable requirements for each subject emission unit with the application, including associated monitoring, testing, recordkeeping and reporting necessary to demonstrate compliance.

<p>1. Is any emission unit subject to a Maximum Achievable Control Technology (MACT) standard in 40 CFR Part 63, National Emission Standard for Hazardous Air Pollutants (NESHAP) in 40 CFR Part 61, or New Source Performance Standard (NSPS) in 40 CFR Part 60? <span style="float: right;"><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</span></p> <p>If yes, identify the emission units and applicable MACT, NESHAP or NSPS in the table below.</p> <p><b>Note:</b> If several emission units are subject to the same regulation, list all of the emission unit IDs together. Attach the applicable requirements (PTI, template table or newly created table) in the selected format to the application using an AI-001 Form.</p>
---

MACT NESHAP or NSPS Subpart and Name	Emission Unit ID – Provide the Emission Unit ID you created on the EU-003 or EU-004 Form	Applicable Requirements Attached in Which Format?
40 CFR 63 subpart VVVVVV NESHAP for Chemical Manufacturing Area Sources	EU LINE 1	<input type="checkbox"/> PTI No. <input type="checkbox"/> Template Table* <input checked="" type="checkbox"/> Newly Created Table**
40 CFR 63 subpart VVVVVV NESHAP for Chemical Manufacturing Area Sources	EU LINE 2	<input type="checkbox"/> PTI No. <input type="checkbox"/> Template Table* <input checked="" type="checkbox"/> Newly Created Table**
		<input type="checkbox"/> PTI No. <input type="checkbox"/> Template Table* <input type="checkbox"/> Newly Created Table**
		<input type="checkbox"/> PTI No. <input type="checkbox"/> Template Table* <input type="checkbox"/> Newly Created Table**
		<input type="checkbox"/> PTI No. <input type="checkbox"/> Template Table* <input type="checkbox"/> Newly Created Table**

<p><b>STREAMLINED REQUIREMENTS</b></p> <p>2. Are you proposing to streamline any requirements? <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span></p> <p>If yes, identify the streamlined and subsumed requirements and provide the EU ID and a justification for streamlining the applicable requirement on an AI-001 Form.</p>
--

\*MACT and NSPS template tables (available at the link below)  
 \*\*Blank EU or FG template tables (available at the link below)  
<http://michigan.gov/air> (select the Permits Tab, "Renewable Operating Permits(ROP)/Title V", then "ROP Forms & Templates")

Check if an AI-001 Form is attached to provide more information for AR-001. Enter AI-001 Form ID: **AI-CMAS**



## RENEWABLE OPERATING PERMIT INITIAL APPLICATION AR-002 OTHER APPLICABLE REQUIREMENTS

*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 "Renewable Operating Permit Initial Application Instructions" for additional information to complete the application.*

SRN: P0089	Section Number (if applicable):
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### APPLICABLE REQUIREMENTS NOT INCLUDED IN A PTI, MACT, NESHAPS, NSPS, OR PERMIT EXEMPTION

Answer the questions below and create an EU table to identify terms and conditions for each emission unit identified on an EU-004 Form (other than MACT, NESHAP, or NSPS requirements). This would include emission units that are grandfathered or exempt from PTI requirements but subject to state rules, federal rules or consent orders/consent judgments. Blank EU template tables are available on the DEQ Internet at: <http://michigan.gov/air> (select the Permits Tab, "Renewable Operating Permits (ROP)/Title V", then "ROP Forms & Templates")

1. Is there an emission unit identified on an EU-004 Form that is subject to <b>emission limit(s)</b> ? If Yes, fill out an EU table to identify the emission limit(s), and provide the EU ID and the source of the applicable requirement below. Do not include requirements identified on an AR-001 Form.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2. Is there an emission unit identified on an EU-004 Form that is subject to <b>material limit(s)</b> ? If Yes, fill out an EU table to identify the material limit(s), and provide the EU ID and the source of the applicable requirement below. Do not include requirements identified on an AR-001 Form.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3. Is there an emission unit identified on an EU-004 Form that is subject to <b>process/operational restriction(s)</b> ? If Yes, fill out an EU table to identify the process/operational restriction(s), and provide the EU ID and the source of the applicable requirement below. Do not include requirements identified on an AR-001 Form.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
4. Is there an emission unit identified on an EU-004 Form that is subject to <b>design/equipment parameter(s)</b> ? If Yes, fill out an EU table to identify the design/equipment parameter(s), and provide the EU ID and the source of the applicable requirement below. Do not include requirements identified on an AR-001 Form.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

<p>5. Is there an emission unit identified on an EU-004 Form that is subject to <b>testing/sampling requirement(s)</b>? If Yes, fill out an EU table to identify the testing/sampling requirement(s), and provide the EU ID and the source of the applicable requirement below. Do not include requirements identified on an AR-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>6. Is there an emission unit identified on an EU-004 Form that is subject to <b>monitoring/recordkeeping requirement(s)</b>? If Yes, fill out an EU table to identify the monitoring/recordkeeping requirement(s), and provide the EU ID and the source of the applicable requirement below. Do not include requirements identified on an AR-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>7. Is there an emission unit identified on an EU-004 Form that is subject to <b>reporting requirement(s)</b>? If Yes, fill out an EU table to identify reporting requirement(s), and provide the EU ID and the source of the applicable requirement below. Do not include requirements identified on an AR-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>8. Is there an emission unit identified on an EU-004 Form that is subject to <b>stack/vent restriction(s)</b>? If Yes, fill out an EU table to identify stack/vent restriction(s), and provide the EU ID and the source of the applicable requirement below. Do not include requirements identified on an AR-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>9. Are there any other requirements that you would like to <b>add</b> for an emission unit identified on an EU-004 Form? If Yes, fill out an EU table to identify the requirements, and provide the EU ID and a justification for the applicable requirement below. Do not include requirements identified on an AR-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>10. Are you proposing to streamline any requirements? If Yes, identify the streamlined and subsumed requirements and the EU ID, and provide a justification for streamlining the applicable requirement below. Do not include requirements identified on an AR-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input type="checkbox"/> Check if an AI-001 Form is attached to provide more information for AR-002. Enter AI-001 Form ID: <b>AI-</b>	



## RENEWABLE OPERATING PERMIT INITIAL APPLICATION AR-003 SOURCE-WIDE APPLICABLE REQUIREMENTS

*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 "Renewable Operating Permit Initial Application Instructions" for additional information to complete the application.*

SRN: P0089	Section Number (if applicable):
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Complete a Source-wide table for any conditions that apply to the entire source. A blank Source-wide template table is available on the DEQ Internet at:

<http://michigan.gov/air> (select the Permits Tab, "Renewable Operating Permits (ROP)/Title V", then "ROP Forms & Templates")

1. Are there any applicable requirements that apply to the entire source?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If Yes, identify the conditions by utilizing a Source-wide template table and include all of the appropriate applicable requirements, including associated monitoring, testing, recordkeeping and reporting necessary to demonstrate compliance. Provide information regarding the applicable requirements in the comment field below.	

Comments  Pollutant Limit Time Period / Operating Scenario Equipment Testing / Monitoring Method Underlying Applicable Requirements 1. Nickel 145 lb/yr 12-month rolling FG FACILITY SC VI.1 R 336.1225 (weighted emissions from various compounds) time period as determined at the end of each calendar month II. MATERIAL LIMITS  NA  III. PROCESS/OPERATIONAL RESTRICTIONS  NA  IV. DESIGN/EQUIPMENT PARAMETERS  NA  V. TESTING/SAMPLING Records shall be maintained on file for a period of five years. (R 336.1201(3))  NA  VI. MONITORING/RECORDKEEPING Records shall be maintained on file for a period of five years. (R 336.1201(3))  1. The permittee shall calculate the nickel emission rate from FG FACILITY monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1225)
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# RENEWABLE OPERATING PERMIT APPLICATION

## AI-001: ADDITIONAL INFORMATION

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

SRN: P0089	Section Number (if applicable):
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1. Additional Information ID <b>AI-HAPs</b>
--

### Additional Information

2. Is This Information Confidential?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Attached please find the potential HAP emissions for the facility.

Check if an AI-001 Form is attached to provide more information for AR-003. 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: P0089	Section Number (if applicable):
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1. Additional Information ID AI-HAPs
---

### Additional Information

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

Attached please find the potential HAP emissions for the facility.

LINE 2

Line 2: HAP PTE

Process / Operation	Equipment Controlled	Control Equipment ID	Exhaust Flow Rate (m3/min)	Maximum Concentration of Total Emissions (mg/m3)	Total Emissions (lb/hr)	% Nickel	Ni (lb/hr)	% Manganese	Mn (lb/hr)	% Co	Co (lb/hr) Pre control	Emissions Rate (lb/hr)	% Nickel	Ni (lb/hr)	% Manganese	Mn (lb/hr)	% Co	Co (lb/hr) Pre control	Sum HAP Emissions (lb/yr)	HAP PTE Tonn/yr
Raw Material Handling & Mixing	Magnetic Separators, Raw Material Mixer	A2-9F-010	45	50	14.88375	28.51%	4.24321	28.66%	3.98952	0.29315	4.21428	0.124	27.84%	0.09452	26.54%	0.02229	0.27651	0.04429	109727.5197	54.87
Calculation	Calculation Mixer	A2-9F-C20	45	20	5.9535	28.51%	1.69728	28.66%	1.58741	0.29315	1.68572	2.9792	27.84%	0.89960	26.54%	0.77498	0.27651	0.82256	64797.19823	32.40
Material Packaging	PACKING LINE	A2-9F-C30	45	50	14.88375	28.51%	4.24321	28.66%	3.98952	0.29315	4.21429	0.124	27.84%	0.09452	26.54%	0.02229	0.27651	0.04429	109731.5197	54.87
Raw Material Handling & Mixing	Raw Material Mixer	A2-9F-015	45	20	5.9535	28.51%	1.69728	28.66%	1.58741	0.29315	1.68572	2.9835	27.84%	0.89960	26.54%	0.77498	0.27651	0.82257	65001.5329	43.03
Pulverization	Pulverizer	A2-9F-500	1	150	0.99229	28.51%	0.28289	28.66%	0.28457	0.29315	0.28093	0.99539	27.84%	0.27930	0.25892	0.25932	0.27651	0.24451	16241.5628	7.17
Calculation	Mixer	A2-9F-720	100	100	6.615	28.51%	1.86887	28.66%	1.76379	0.29315	1.87302	6.61375	27.84%	1.84134	26.54%	1.72213	0.27651	1.82979	96514.78991	47.81
Calculation	Calculation	A2-SCF-9607A	100	100	0.12935	28.51%	0.03583	28.66%	0.03551	0.29315	0.03559	0.03285	0.03285	0.01750	0.01637	0.01637	0.27651	0.01728	1368.075668	0.68
Calculation	Calculation	A2-SCF-9607A	100	100	0.12935	28.51%	0.03583	28.66%	0.03551	0.29315	0.03559	0.03285	0.03285	0.01750	0.01637	0.01637	0.27651	0.01728	1368.075668	0.68
Calculation	Calculation	A2-SCF-9607A	100	100	0.12935	28.51%	0.03583	28.66%	0.03551	0.29315	0.03559	0.03285	0.03285	0.01750	0.01637	0.01637	0.27651	0.01728	1368.075668	0.68
Calculation	Calculation	A2-SCF-9607A	100	100	0.12935	28.51%	0.03583	28.66%	0.03551	0.29315	0.03559	0.03285	0.03285	0.01750	0.01637	0.01637	0.27651	0.01728	1368.075668	0.68

NI 69.7  
 Mn 54.9  
 Co 54.9  
 [OH]2 34 206  
 0.288539849 L  
 0.288534288 M  
 0.288534288 M  
 0.155120703 Mh  
 C2

6.94  
 68.7  
 54.9  
 0.02915955  
 0.276811058  
 0.276811058  
 0.280087023  
 0.151777857  
 32  
 210.64

LINE 1

Process / Operation	Equipment Controlled	Control Equipment ID	Exhaust Flow Rate (m3/min)	Maximum Concentration of Material Precontrols (mg/m3)	Ni Emissions (lb/hr)		Co Emissions (lb/hr)		Ni Emissions (lb/hr)		Co Emissions (lb/hr)		Sum Ni Emissions (lb/hr)	Annual Ni Emission (lb/yr)	Annual Co Emission (lb/yr)		
					Total Emissions (lb/hr)	% Nickel	Total Emissions (lb/hr)	% Co	Pre control	% Nickel	Pre control	% Co					
Raw Material Handling & Mixing	Magnetic Separators, Raw Material Mixer	A1-9F-010	45	50	14.88375	0.3887	5.79E+00	3.88E-01	5.78E+00	0.124	0.3210	0.03981	0.31888	0.03954	5.88E+00	5.10E+04	3.48E+02
Pre-calcination	LIQH Jet Mill, Magnetic Separators, Raw Material Mixer	A1-9F-020	45	20	5.9535	0.3887	2.31E+00	3.88E-01	2.30E+00	2.9762	0.3210	0.95550	0.31888	0.94899	3.27E+00	2.88E+04	8.31E+03
Raw Material Handling & Mixing	LIQH, NiCO(OH)2, AI Hoppers and Raw Material Mixer	A1-9F-210	45	20	5.9535	0.3887	2.31E+00	3.88E-01	2.30E+00	0	0.3210	0.00000	0.31888	0.00000	2.31E+00	2.05E+04	0.08E+00
Raw Material Handling & Mixing	LIQH Jet Mill	A1-9F-330	6	50	1.9845	0.3887	7.71E-01	3.88E-01	7.88E-01	0	0.3210	0.00000	0.31888	0.00000	7.71E-01	8.70E+03	0.09E+00
Pulverization	Pulverizer	A1-9F-650	1	150	0.99225	0.3887	3.88E-01	3.88E-01	3.83E-01	0.99205	0.3210	0.31849	0.31888	0.31832	7.84E-01	8.17E+03	2.77E+03
Pulverization	Pulverization Mixer	A1-9F-720	10	100	6.515	0.3887	2.87E+00	3.88E-01	2.89E+00	6.61378	0.3210	2.12352	0.31888	2.10955	4.89E+00	4.11E+04	1.88E+04
Calcination	Calcinator	A1-9CR-980-1	100	0.19	0.128695	0.3887	4.89E-02	3.88E-01	4.89E-02	0.05409	0.3210	0.01739	0.31888	0.01723	8.62E-02	2.80E+02	1.31E+02
Calcination	Calcinator	A1-9CR-980-2	100	0.19	0.128695	0.3887	4.89E-02	3.88E-01	4.89E-02	0.05409	0.3210	0.01739	0.31888	0.01723	8.62E-02	2.80E+02	1.31E+02

Total HAP as Particulate 92.69

NiCO(OH)2		LiNiCO(OH)2	
Ni	58.7	6.94	0.027965683
Co	58.9	58.7	0.321048722
(OH)2	34	151	0.318658018
		O2	0.147123188
			182.84
			0.175016408

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

February 14, 2019

**PERMIT TO INSTALL**  
10-19

**ISSUED TO**  
BASF Toda America, LLC

**LOCATED AT**  
4750 West Dickman Road  
Battle Creek, Michigan

**IN THE COUNTY OF**  
Calhoun

**STATE REGISTRATION NUMBER**  
P0089

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: <b>January 30, 2019</b>	
DATE PERMIT TO INSTALL APPROVED: <b>February 14, 2019</b>	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

**PERMIT TO INSTALL**

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### COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department	Michigan Department of Environmental Quality
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MDEQ	Michigan Department of Environmental Quality
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

\*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig

### POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO <sub>2</sub> e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H <sub>2</sub> S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO <sub>x</sub>	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO <sub>2</sub>	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

### GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
  - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
  - b) A visible emission limit specified by an applicable federal new source performance standard.
  - c) A visible emission limit specified as a condition of this Permit to Install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

**EMISSION UNIT SPECIAL CONDITIONS**

**EMISSION UNIT SUMMARY TABLE**

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

<b>Emission Unit ID</b>	<b>Emission Unit Description (Including Process Equipment &amp; Control Device(s))</b>	<b>Flexible Group ID</b>
EUPACK1	An existing pack out room where the final product is packaged. Exhaust is controlled by a baghouse and vented inside of the building.	NA
EUPACK2	An existing pack out room where the final product is packaged. Exhaust is controlled by a baghouse and vented outdoors.	NA

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1291.

**EUPACK1  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

An existing pack out room where the final product is packaged. Exhaust is controlled by a baghouse and vented inside of the building.

Flexible Group ID: NA

**POLLUTION CONTROL EQUIPMENT**

Controlled by a baghouse.

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	0.01 lbs per 1000 lbs of gas <sup>a</sup>	Test Protocol*	EUPACK1	V.1	R 336.1331
<sup>a</sup> Calculated on a wet gas basis * Test protocol shall specify averaging time					

2. There shall be no visible emissions from EUPACK1. (R 336.1301, R 336.1303, 40 CFR 52.21(c) & (d))

**II. MATERIAL LIMIT(S)**

NA

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

NA

**IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The permittee shall not operate EUPACK1 unless the baghouse is installed, maintained, and operated in a satisfactory manner. (R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1901, R 336.1910, 40 CFR 52.21(c) and (d))

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall, upon request by the Department, verify and quantify PM emission rates from EUPACK1, by testing at owner's expense, in accordance with Department requirements. Not less than 60 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. (R 336.1331, R 336.2001, R 336.2003, R 336.2004)

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTION(S)**

1. The exhaust gases from SVPACK1 shall not be discharged to the outside air. **(R 336.1225, 40 CFR 52.21(c) and (d))**

**IX. OTHER REQUIREMENT(S)**

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart VVVVVV. **(40 CFR Part 63 Subpart VVVVVV)**

**Footnotes:**

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

<b>EUPACK2 EMISSION UNIT CONDITIONS</b>
---

**DESCRIPTION**

An existing pack out room where the final product is packaged. Exhaust is controlled by a baghouse and vented outdoors.

Flexible Group ID: NA

**POLLUTION CONTROL EQUIPMENT**

Controlled by a baghouse.

**I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. PM	0.01 lbs per 1000 lbs of gas <sup>a</sup>	Test Protocol*	EUPACK2	V.1	R 336.1331
<sup>a</sup> Calculated on a wet gas basis * Test protocol shall specify averaging time					

2. There shall be no visible emissions from EUPACK2. (R 336.1301, R 336.1303, 40 CFR 52.21(c) & (d))

**II. MATERIAL LIMIT(S)**

NA

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

NA

**IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The permittee shall not operate EUPACK2 unless the baghouse is installed, maintained, and operated in a satisfactory manner. (R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1901, R 336.1910, 40 CFR 52.21(c) and (d))

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall, upon request by the Department, verify and quantify PM emission rates from EUPACK2, by testing at owner's expense, in accordance with Department requirements. Not less than 60 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. (R 336.1331, R 336.2001, R 336.2003, R 336.2004)

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTION(S)**

1. The exhaust gases from SVPACK2 shall be discharged unobstructed to the outside air. (**R 336.1225, 40 CFR 52.21(c) and (d)**)

**IX. OTHER REQUIREMENT(S)**

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart VVVVVV. (**40 CFR Part 63 Subpart VVVVVV**)

**Footnotes:**

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

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION

September 29, 2014

**PERMIT TO INSTALL**  
70-10A

**ISSUED TO**  
Toda America Inc.

**LOCATED AT**  
4750 West Dickman Road  
Battle Creek, Michigan

**IN THE COUNTY OF**  
Calhoun

**STATE REGISTRATION NUMBER**  
P0089

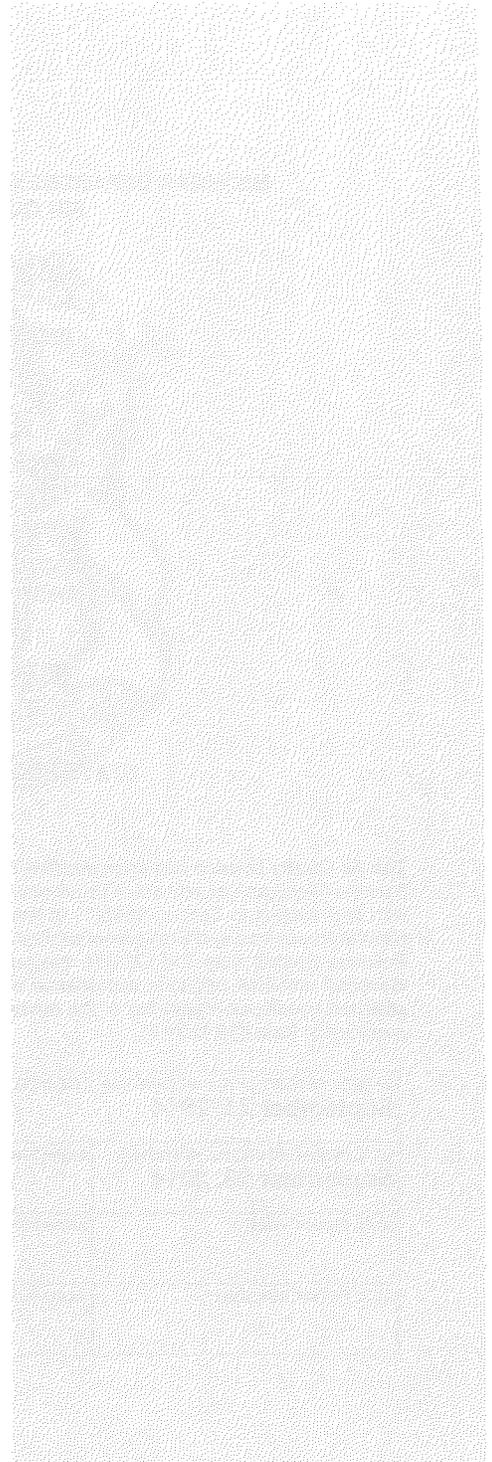
The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: <b>September 25, 2014</b>	
DATE PERMIT TO INSTALL APPROVED: <b>September 29, 2014</b>	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

**PERMIT TO INSTALL**

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**Common Abbreviations / Acronyms**

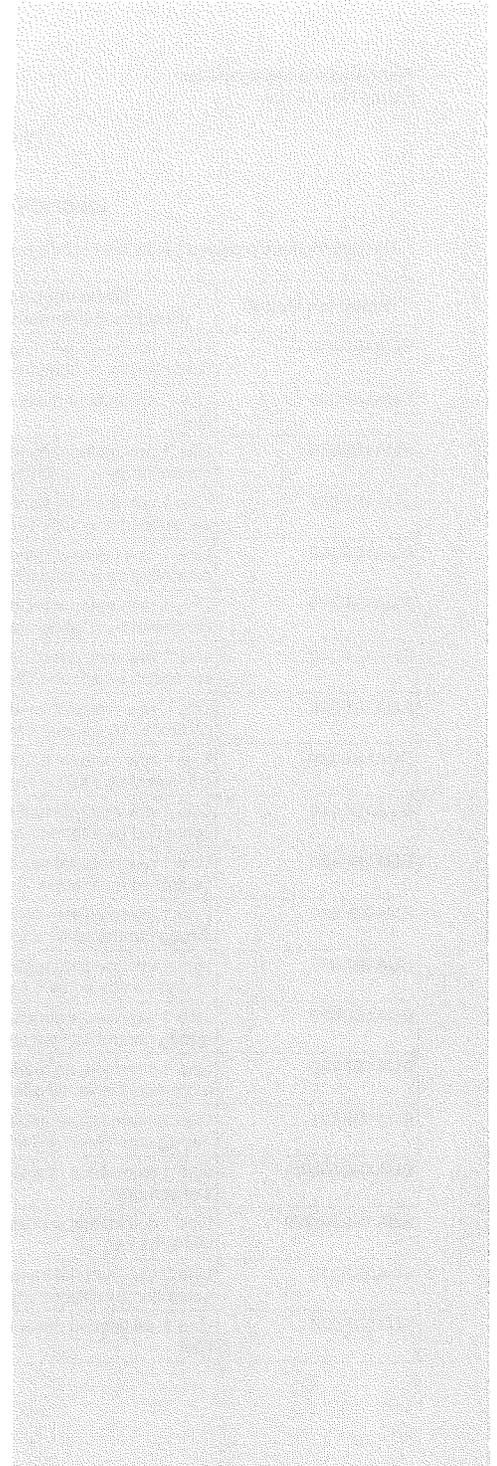
Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	BTU	British Thermal Unit
BACT	Best Available Control Technology	°C	Degrees Celsius
CAA	Clean Air Act	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
CO <sub>2</sub> e	Carbon Dioxide Equivalent	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H <sub>2</sub> S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
GHGs	Greenhouse Gases	kW	Kilowatt
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfunction Abatement Plan	NO <sub>x</sub>	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality (Department)	PM	Particulate Matter
MSDS	Material Safety Data Sheet	PM10	PM with aerodynamic diameter ≤10 microns
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	PM with aerodynamic diameter ≤ 2.5 microns
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonably Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO <sub>2</sub>	Sulfur Dioxide
SCR	Selective Catalytic Reduction	THC	Total Hydrocarbons
SRN	State Registration Number	tpy	Tons per year
TAC	Toxic Air Contaminant	µg	Microgram
TEQ	Toxicity Equivalence Quotient	VOC	Volatile Organic Compound
VE	Visible Emissions	yr	Year

\* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

#### GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R 336.1303. **(R 336.1301)**
  - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
  - b) A visible emission limit specified by an applicable federal new source performance standard.
  - c) A visible emission limit specified as a condition of this Permit to Install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R 336.1370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**



**SPECIAL CONDITIONS**

**EMISSION UNIT SUMMARY TABLE**

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

<b>Emission Unit ID</b>	<b>Emission Unit Description (Process Equipment &amp; Control Devices)</b>	<b>Flexible Group ID</b>
EUA1BF040	Line 1 raw material handling and mixing controlled by a fabric filter	FGLINE1 FGFACILITY
EUA1BF020	Line 1 calcination mixer controlled by a fabric filter	FGLINE1 FGFACILITY
EUA1BF050	Line 1 raw material handling and mixing controlled by a fabric filter	FGLINE1 FGFACILITY
EUA1BF051	Line 1 raw material handling and mixing controlled by a fabric filter	FGLINE1 FGFACILITY
EUA1BF150	Line 1 raw material handling and mixing controlled by a fabric filter	FGLINE1 FGFACILITY
EUA1BF240	Line 1 raw material handling and mixing controlled by a fabric filter	FGLINE1 FGFACILITY
EUA1BF240	Line 1 raw material handling and mixing controlled by a fabric filter	FGLINE1 FGFACILITY
EUA1BF250	Line 1 raw material handling and mixing controlled by a fabric filter	FGLINE1 FGFACILITY
EUA1BF330	Line 1 raw material handling and mixing controlled by a fabric filter	FGLINE1 FGFACILITY
EUA1BF440	Line 1 raw material handling and mixing controlled by a fabric filter	FGLINE1 FGFACILITY
EUA1BF430	Line 1 raw material handling and mixing controlled by a fabric filter	FGLINE1 FGFACILITY
EUA1BF630	Line 1 intermediate material handling and mixing controlled by a fabric filter	FGLINE1 FGFACILITY
EUA1BF650	Line 1 intermediate material handling and mixing controlled by a fabric filter	FGLINE1 FGFACILITY
EUA1BF680	Line 1 intermediate material handling and mixing controlled by a fabric filter	FGLINE1 FGFACILITY
EUA1BF720	Line 1 intermediate material handling and mixing controlled by a fabric filter	FGLINE1 FGFACILITY
EUA1BF721	Line 1 intermediate material handling and mixing controlled by a fabric filter	FGLINE1 FGFACILITY
EUA1SCR9604	Line 1 calcination process (kiln) controlled by a wet scrubber	FGLINE1 FGFACILITY
EUA1SCR9602	Line 1 calcination process (kiln) controlled by a wet scrubber	FGLINE1 FGFACILITY
EUA2BF040	Line 2 raw material handling and mixing controlled by a fabric filter	FGLINE2 FGFACILITY
EUA2BF020	Line 2 calcination mixer controlled by a fabric filter	FGLINE2 FGFACILITY

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EUA2BF150	Line 2 raw material handling and mixing controlled by a fabric filter	FGLINE2 FGFACILITY
EUA2BF210	Line 2 raw material handling and mixing controlled by a fabric filter	FGLINE2 FGFACILITY
EUA2BF250	Line 2 raw material handling and mixing controlled by a fabric filter	FGLINE2 FGFACILITY
EUA2BF410	Line 2 raw material handling and mixing controlled by a fabric filter	FGLINE2 FGFACILITY
EUA2BF430	Line 2 raw material handling and mixing controlled by a fabric filter	FGLINE2 FGFACILITY
EUA2BF630	Line 2 intermediate material handling and mixing controlled by a fabric filter	FGLINE2 FGFACILITY
EUA2BF650	Line 2 intermediate material handling and mixing controlled by a fabric filter	FGLINE2 FGFACILITY
EUA2BF680	Line 2 intermediate material handling and mixing controlled by a fabric filter	FGLINE2 FGFACILITY
EUA2BF720	Line 2 intermediate material handling and mixing controlled by a fabric filter	FGLINE2 FGFACILITY
EUA2BF721	Line 2 intermediate material handling and mixing controlled by a fabric filter	FGLINE2 FGFACILITY
EUA2SCR9601	Line 2 calcination process (kiln) controlled by two (2) wet scrubbers	FGLINE2 FGFACILITY
EUA2SCR9602	Line 2 calcination process (kiln) controlled by two (2) wet scrubbers	FGLINE2 FGFACILITY
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.		

Emission Unit	Process Equipment	Control Technology	Flexible Group	
EULINE1	Lithium (T-210)	BF-210	FGFACILITY	
	Jet Mill Feeder (FE-310)	N/A		
	Magnetic Separator (MG-220)	BF-010		
	Jet Mill (JM-320)	N/A		
	Material Collector (BF-330)	BF-330		
	Milled Lithium Hopper (T-240)	BF-210		
	Buffer Tank (BT-010)	BF-010		
	Scale Hopper (T-250)	BF-020		
	Small Adds	BF-210		
	Scale Hopper (T-050)	BF-020		
	Precursor (T-110)	BF-210		
	Magnetic Separator (MG-120)	BF-010		
	Scale Hopper (T-150)	BF-020		
	Small Adds	BF-210		
	Scale Hopper (T-051)	BF-020		
	Jet Mill (JM-320)	BF-010		
	Mixer Hopper (T-410)	BF-020		
	Mixer (HMX-420)	BF-020		
	Mixer (HMX-420) BF-420 Recovery Device	BF-010		
	Mixed Material Hopper (T-430)	BF-010		
	Screw Conveyor (SCO-440)	BF-010		
	Material Feed System (AF-510)	Vented Inside		
	RHK-520 Kiln	SCR-960-1; SCR-960-2		
	Kiln Dump	BF-020		
	Roll Crusher (CR-610-1)	Vented Inside		
	Roll Crusher (CR-610-2)	Vented Inside		
	Pneumatic conveyor (PP-620)	BF-020		
	Material Collector (T-630)	BF-720		
	ACM Pulverizer (ML-640)	N/A		
	Material Collector (BF-650)	BF-650		
	Magnetic Separator (MG-670)	N/A		
	Material Hopper (T-680)	BF-720		
	Pneumatic Conveyor (PP-690)	N/A		
Nauta Mixer (MX-710)	BF-720			
Magnetic Separator (MG-730)	BF-010			
EULINE2	Lithium Hopper (T-210)	BF-015	FGFACILITY	
	Feeder (FE-310)	N/A		
	Magnetic Separator (MG-320)	BF-015		
	Buffer Tank (BT-010)	BF-010		
	Jet Mill (JM-320)	BF-015		
	Material Collector (BF-330)	BF-015		
	Hopper (HF-040)	BF-015		
	Material Hopper (T-051)	BF-010		
Precursor Hopper (T-110)	BF-015			
Magnetic Separator (MG-120)	BF-015			

Commented [A51]: Equipment and Control copied from Visio-PFD Line 1&2.pfds

Material Hopper (T-150)	BF-010
Hopper (HF-040)	BF-015
Material Hopper (T-050)	BF-010
Milled Lithium Hopper (T-240)	BF-015
Material Hopper (T-250)	BF-010
Mixing Hopper (T-410)	BF-010
Mixer (HMX-420)	BF-015
Mixer (HMX-420) BF-420 Recovery Device	BF-010
Mixed Material Hopper (T-430)	BF-015
Screw Conveyor (SCC-440)	BF-015
Material Feed system (AF-510)	Vented Inside
Kilns (RHK-520A and RHK-520B)	SCR-960A1&A2; SCR-960B1&B2
Kiln Dump	Vented Inside
Roll Crusher (CR-610-1)	BF-020
Roll Crusher (CR-610-2)	BF-020
Pneumatic Conveyor (PP-620)	BF-020
Material Hopper (T-630)	BF-720
Magnetic Separator (MG-635)	BF-015
ACM Pulverizer (ML-640)	N/A
Material Collector (BF-650)	BF-650
Ultrasonic Sieve (VS-660)	N/A
Magnetic Separator (MG-670)	BF-015
Material Hopper (T-675)	BF-015
Pneumatic Conveyor (PP-690)	N/A
Material Hopper (T-680)	BF-720
Nauta Mixer (MX-710)	BF-720
Magnetic Separator (MG-730)	N/A
Line #2 Packout Room	BF-030

**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
FGLINE4 FGFACILITY	Line 1 for the manufacture of lithium-ion battery cathode material  Line 2 for the manufacture of lithium-ion battery cathode material  All process equipment source-wide including equipment covered by other permits, grand- fathered equipment and exempt equipment.	EUA1BF010, EUA1BF020, EUA1BF050, EUA1BF051, EUA1BF150, EUA1BF210, EUA1BF240, EUA1BF250, EUA1BF330,

		EUA1BF410, EUA1BF430, EUA1BF630, EUA1BF650, EUA1BF680, EUA1BF720, EUA1BF721, EUA1SCR9601, EUA1SCR9602 EULINE1 EULINE2
FGLINE2		EUA2BF010, EUA2BF020, EUA2BF150, EUA2BF210, EUA2BF250, EUA2BF410, EUA2BF430, EUA2BF630, EUA2BF650, EUA2BF680, EUA2BF720, EUA2BF721, EUA2SCR9601, EUA2SCR9602
FG6VNESHAP		EULINE1 EULINE2

Commented [AS2]: N/A yet for this application?

**The following conditions apply to:  
FGLINE4-EULINE1**

**DESCRIPTION:** Line 1 for the manufacture of lithium-ion battery cathode material

**Emission Units:** EUA1BF010, EUA1BF020, EUA1BF050, EUA1BF051, EUA1BF150, EUA1BF210,  
EUA1BF240, EUA1BF250, EUA1BF330, EUA1BF410, EUA1BF430, EUA1BF630,  
EUA1BF650, EUA1BF680, EUA1BF720, EUA1BF721, EUA1SCR9601, EUA1SCR9602

**POLLUTION CONTROL EQUIPMENT:** Fabric filters (A1BF010, A1BF020, A1BF050, A1BF051, A1BF150,  
A1BF210, A1BF240, A1BF250, A1BF330, A1BF410, A1BF430, A1BF630, A1BF650,  
A1BF680, A1BF720, A1BF721); Wet scrubbers (A1SCR9601, A1SCR9602)  
BF-210, BF-020, BF-330, BF-010, BF-650 BF-720

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.001 lbs per 1,000 lbs of exhaust*	According to method	FGLINE1 (SVA1BF010)	GC 13 SC VI.2, VI.3	R 336.1331
2. PM10	0.0004 pph	Test Protocol	FGLINE1 (SVA1BF010)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
3. PM	0.001 lbs per 1,000 lbs of exhaust*	According to method	FGLINE1 (SVA1BF020)	GC 13 SC VI.2, VI.3	R 336.1331
4. PM10	0.0007 pph	Test Protocol	FGLINE1 (SVA1BF020)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
5. PM	0.001 lbs per 1,000 lbs of exhaust*	According to method	FGLINE1 (SVA1BF050)	GC 13 SC VI.2, VI.3	R 336.1334
6. PM10	0.0004 pph	Test Protocol	FGLINE1 (SVA1BF050)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
7. PM	0.001 lbs per 1,000 lbs of exhaust*	According to method	FGLINE1 (SVA1BF051)	GC 13 SC VI.2, VI.3	R 336.1334
8. PM10	0.0004 pph	Test Protocol	FGLINE1 (SVA1BF051)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
9. PM	0.033 lbs per 1,000 lbs of exhaust*	According to method	FGLINE1 (SVA1BF150)	GC 13 SC VI.2, VI.3	R 336.1334
10. PM10	0.001 pph	Test Protocol	FGLINE1 (SVA1BF150)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
11. PM	0.002 lbs per 1,000 lbs of exhaust*	According to method	FGLINE1 (SVA1BF210)	GC 13 SC VI.2, VI.3	R 336.1331
12. PM10	0.01 pph	Test Protocol	FGLINE1 (SVA1BF210)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
13. PM	0.02 lbs per 1,000 lbs of exhaust*	According to method	FGLINE1 (SVA1BF240)	GC 13 SC VI.2, VI.3	R 336.1334
14. PM10	0.0007 pph	Test Protocol	FGLINE1 (SVA1BF240)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
15. PM	0.02 lbs per 1,000 lbs of exhaust*	According to method	FGLINE1 (SVA1BF250)	GC 13 SC VI.2, VI.3	R 336.1334
16. PM10	0.0007 pph	Test Protocol	FGLINE1 (SVA1BF250)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
17. PM	0.01 lbs per 1,000 lbs of exhaust*	According to method	FGLINE1 (SVA1BF330)	GC 13 SC VI.2, VI.3	R 336.1334
18. Lithium hydroxide	0.012 pph	Test Protocol	FGLINE1 (SVA1BF330)	SC V.4	R 336.1225
19. PM	0.05 lbs per 1,000 lbs of exhaust*	According to method	FGLINE1 (SVA1BF410)	GC 13 SC VI.2, VI.3	R 336.1334

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
20. PM10	0.002 pph	Test Protocol	FGLINE1- (SVA1BF410)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
21. PM	0.05 lbs per 1,000 lbs of exhaust*	According to method	FGLINE1- (SVA1BF430)	GC 13- SC VI.2, VI.3	R 336.1331
22. PM10	0.002 pph	Test Protocol	FGLINE1- (SVA1BF430)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
23. PM	0.03 lbs per 1,000 lbs of exhaust*	According to method	FGLINE1- (SVA1BF630)	GC 13- SC VI.2, VI.3	R 336.1331
24. PM10	0.005 pph	Test Protocol	FGLINE1- (SVA1BF630)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
25. PM	0.01 lbs per 1,000 lbs of exhaust*	According to method	FGLINE1 (SVA1BF650)	GC 13 SC VI.2, VI.3	R 336.1331
26. PM10	0.002 pph	Test Protocol	FGLINE1 (SVA1BF650)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
27. PM	0.03 lbs per 1,000 lbs of exhaust*	According to method	FGLINE1- (SVA1BF680)	GC 13- SC VI.2, VI.3	R 336.1331
28. PM10	0.005 pph	Test Protocol	FGLINE1- (SVA1BF680)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
29. PM	0.02 lbs per 1,000 lbs of exhaust*	According to method	FGLINE1 (SVA1BF720)	GC 13 SC VI.2, VI.3	R 336.1331
30. PM10	0.03 pph	Test Protocol	FGLINE1 (SVA1BF720)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
31. PM	0.033 lbs per 1,000 lbs of exhaust*	According to method	FGLINE1- (SVA1BF724)	GC 13- SC VI.2, VI.3	R 336.1331
32. PM10	0.004 pph	Test Protocol	FGLINE1- (SVA1BF724)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
33. PM	0.001 lbs per 1,000 lbs of exhaust*	According to method	FGLINE1 (SVA1SCR9601)	GC 13 SC VI.2, VI.3	R 336.1331
34. PM10	0.003 pph	Test Protocol	FGLINE1 (SVA1SCR9601)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
35. PM	0.001 lbs per 1,000 lbs of exhaust*	According to method	FGLINE1 (SVA1SCR9602)	GC 13 SC VI.2, VI.3	R 336.1331
36. PM10	0.003 pph	Test Protocol	FGLINE1 (SVA1SCR9602)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)

\* Calculated on a dry gas basis

37. There shall be no visible emissions from any stack in EU FGLINE1. (R 336.1225, R 336.1301, 40 CFR 52.21(c) & (d))

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

#### **IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall not operate FGLINE1 dry material operations unless the BF210, BF3330, BF020, BF010, BF650 and BF720 bag filters are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes, but is not limited to, maintaining a pressure drop range across each fabric filter according to manufacturer's specifications. (R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the pressure drop for each fabric filter for EUFGLINE1 on a continuous basis. Monitoring of data "on a continuous basis" is defined as an instantaneous data point measured at least once every 15 minutes for at least 90 percent of the operating time during an operating calendar day. The permittee is not required to monitor operational parameter data during periods of non-operation of the device resulting in cessation of the emissions to which the monitoring applies. (R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))
3. The permittee shall not operate EUFGLINE1 unless the A1SCR9601 and A1SCR9602 wet scrubbers are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes, but is not limited to, maintaining a minimum scrubber liquid flow rate of 0.22 gallon per minute. (R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1910)
4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the liquid flow rate of the A1SCR9601 and A1SCR9602 wet scrubbers on a continuous basis, while EUFGLINE1 is in operation. Monitoring of data "on a continuous basis" is defined as an instantaneous data point measured at least once every 15 minutes for at least 90 percent of the operating time during an operating calendar day. The permittee is not required to monitor operational parameter data during periods of non-operation of the device resulting in cessation of the emissions to which the monitoring applies. (R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1910)

#### **V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. Within 60 days of achieving the maximum production rate of EUFGLINE1, but not later than 180 days after commencement of initial startup of EUFGLINE1, the permittee shall verify and quantify lithium hydroxide emission rates from stack SVA1BF330 of EUFGLINE1 by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. (R 336.1225, R 336.2001, R 336.2003, R 336.2004)

#### **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall record the pressure drop for each fabric filter for EUFGLINE1 on a calendar day basis, while EUFGLINE1 is in operation. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))
2. The permittee shall record the liquid flow rate of each EUFGLINE1 wet scrubber on a calendar day basis, while EUFGLINE1 is in operation. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1910)

3. The permittee shall monitor the fabric filter emission points to verify the filters are operating properly, by taking visible emission readings for EUFGLINE1 a minimum of once per calendar month. Either a certified or non-certified reader shall take each visible emission reading during routine operating conditions. Such readings do not have to be conducted per the requirements of Method 9. Multiple stacks may be observed simultaneously. If any visible emissions (other than uncombined water vapor) are observed, the permittee shall immediately inspect the filters and perform any required maintenance. (R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))
4. The permittee shall keep, in a satisfactory manner, records of all visible emission readings for EUFGLINE1. At a minimum, records shall include the date, time, name of observer/reader, whether the reader is certified, and status of visible emissions. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1301, R 336.1303, R 336.1910)

**VII. REPORTING**

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUFGLINE1. (R 336.1201(7)(a))

**VIII. STACK/VENT RESTRICTIONS**

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVA1BF010*	10	34	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVA1BF020*	10	34	R 336.1225, 40 CFR 52.21(c) & (d)
3. SVA1BF050*	4.5	34	R 336.1225, 40 CFR 52.21(c) & (d)
4. SVA1BF051*	4.5	34	R 336.1225, 40 CFR 52.21(c) & (d)
5. SVA1BF150*	4.5	37	R 336.1225, 40 CFR 52.21(c) & (d)
6. SVA1BF210*	10	34	R 336.1225, 40 CFR 52.21(c) & (d)
7. SVA1BF240*	4.5	48	R 336.1225, 40 CFR 52.21(c) & (d)
8. SVA1BF250*	4.5	34	R 336.1225, 40 CFR 52.21(c) & (d)
9. SVA1BF330*	4	48	R 336.1225, 40 CFR 52.21(c) & (d)
10. SVA1BF410*	4.5	34	R 336.1225, 40 CFR 52.21(c) & (d)
11. SVA1BF430*	4.5	24	R 336.1225, 40 CFR 52.21(c) & (d)
12. SVA1BF630*	2	27	R 336.1225, 40 CFR 52.21(c) & (d)
13. SVA1BF650*	6	38	R 336.1225, 40 CFR 52.21(c) & (d)
14. SVA1BF680*	2	54	R 336.1225, 40 CFR 52.21(c) & (d)
15. SVA1BF720*	6	38	R 336.1225, 40 CFR 52.21(c) & (d)
16. SVA1BF721*	4.5	38	R 336.1225, 40 CFR 52.21(c) & (d)
17. SVA1SCR9601*	16	18	R 336.1225, 40 CFR 52.21(c) & (d)
18. SVA1SCR9602*	16	18	R 336.1225, 40 CFR 52.21(c) & (d)

\*These stacks are vented in a goose-neck down orientation.

Commented [DWS3]: Matt, give this one some more thought.

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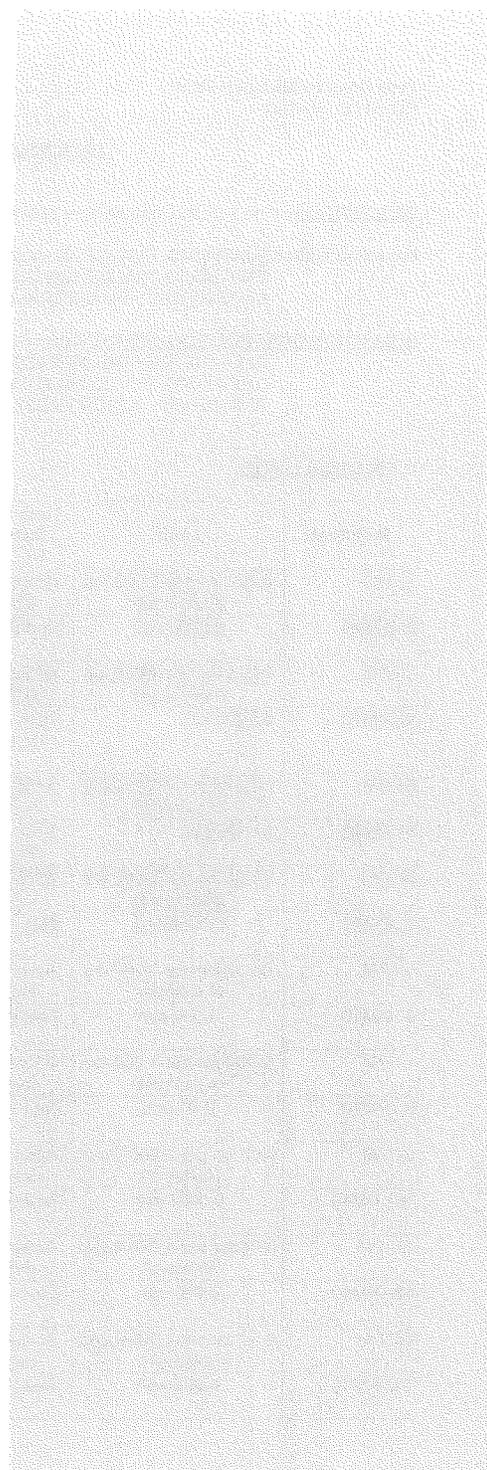
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**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

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



**The following conditions apply to:  
EUFGLINE2**

**DESCRIPTION:** Line 2 for the manufacture of lithium-ion battery cathode material

**Emission Units:** EUA2BF010, EUA2BF020, EUA2BF150, EUA2BF210, EUA2BF250, EUA2BF410, EUA2BF430, EUA2BF630, EUA2BF650, EUA2BF680, EUA2BF720, EUA2BF721, EUA2SCR9601, EUA2SCR9602

**POLLUTION CONTROL EQUIPMENT:** Fabric filters (A2BF010, A2BF020, A2BF150, A2BF210, A2BF250, A2BF410, A2BF430, A2BF630, A2BF650, A2BF680, A2BF720, A2BF721), BF-015, BF-010, BF-330, BF-020, BF-720 Wet scrubbers (A2SCR960A1, A2SCR960A2, A2SCR960B1, A2SCR960B2)

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.001 lbs per 1,000 lbs of exhaust*	According to method	FGLINE2 (SVA2BF010)	GC 13 SC VI.1, VI.3	R 336.1331
2. PM10	0.0004 pph	Test Protocol	FGLINE2 (SVA2BF010)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
3. PM	0.001 lbs per 1,000 lbs of exhaust*	According to method	FGLINE2 (SVA2BF020)	GC 13 SC VI.1, VI.3	R 336.1331
4. PM10	0.0006 pph	Test Protocol	FGLINE2 (SVA2BF020)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
3. PM	0.001 lbs per 1,000 lbs of exhaust*	According to method	FGLINE2 (SVA2BF030)	GC 13 SC VI.1, VI.3	R 336.1331
4. PM10	0.0006 pph	Test Protocol	FGLINE2 (SVA2BF030)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
3. PM	0.001 lbs per 1,000 lbs of exhaust*	According to method	FGLINE2 (SVA2BF015)	GC 13 SC VI.1, VI.3	R 336.1331
4. PM10	0.0006 pph	Test Protocol	FGLINE2 (SVA2BF015)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
5. PM	0.033 lbs per 1,000 lbs of exhaust*	According to method	FGLINE2 (SVA2BF150)	GC 13 SC VI.1, VI.3	R 336.1331
6. PM10	0.001 pph	Test Protocol	FGLINE2 (SVA2BF150)	GC 13	R 336.1225, 40 CFR 52.21(e) & (d)
7. PM	0.002 lbs per 1,000 lbs of exhaust*	According to method	FGLINE2 (SVA2BF210)	GC 13 SC VI.1, VI.3	R 336.1331
8. PM10	0.01 pph	Test Protocol	FGLINE2 (SVA2BF210)	GC 13	R 336.1225, 40 CFR 52.21(e) & (d)
9. PM	0.02 lbs per 1,000 lbs of exhaust*	According to method	FGLINE2 (SVA2BF250)	GC 13 SC VI.1, VI.3	R 336.1331
10. PM10	0.0007 pph	Test Protocol	FGLINE2 (SVA2BF250)	GC 13	R 336.1225, 40 CFR 52.21(e) & (d)
11. PM	0.04 lbs per 1,000 lbs of exhaust*	According to method	FGLINE2 (SVA2BF410)	GC 13 SC VI.1, VI.3	R 336.1331
12. PM10	0.002 pph	Test Protocol	FGLINE2 (SVA2BF410)	GC 13	R 336.1225, 40 CFR 52.21(e) & (d)
13. PM	0.04 lbs per 1,000 lbs of exhaust*	According to method	FGLINE2 (SVA2BF430)	GC 13 SC VI.1, VI.3	R 336.1331
14. PM10	0.002 pph	Test Protocol	FGLINE2 (SVA2BF430)	GC 13	R 336.1225, 40 CFR 52.21(e) & (d)

15. PM	0.03 lbs per 1,000 lbs of exhaust*	According to method	FGLINE2 (SVA2BF630)	GC 13-SC VI.1, VI.3	R 336.1331
16. PM10	0.005 pph	Test Protocol	FGLINE2 (SVA2BF630)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
17. Cobalt (weighted emissions from stack)	0.0014 pph	Test Protocol	FGLINE2 (SVA2BF630)	SC V.4	R 336.1225

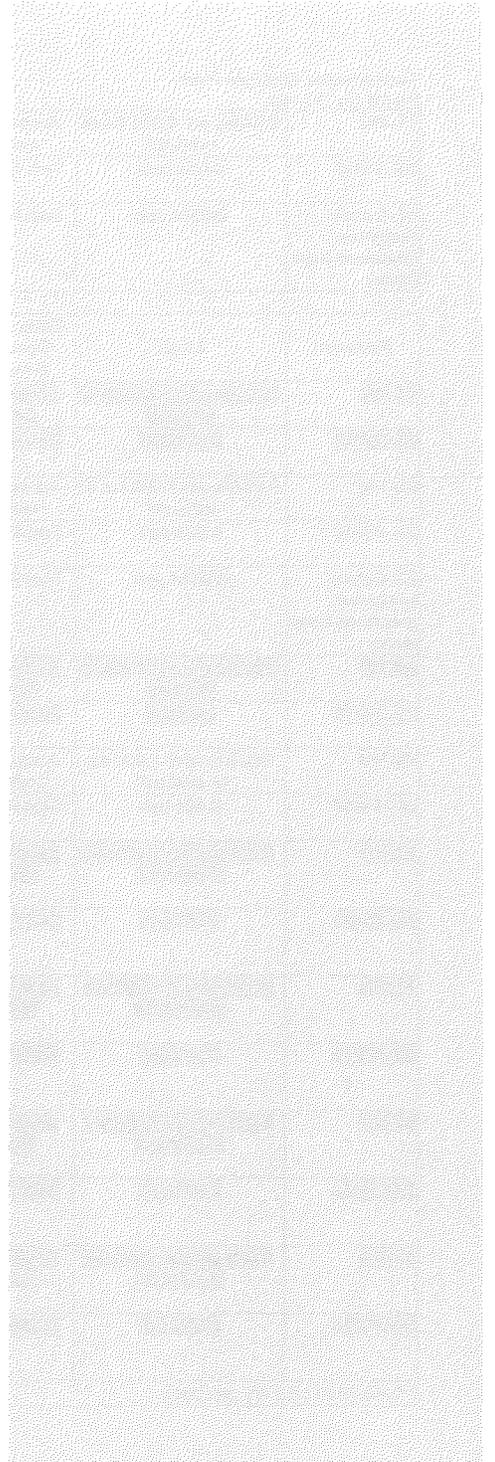
Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
18. PM	0.01 lbs per 1,000 lbs of exhaust*	According to method	FGLINE2 (SVA2BF650)	GC 13 SC VI.1, VI.3	R 336.1331
19. PM10	0.002 pph	Test Protocol	FGLINE2 (SVA2BF650)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
20. PM	0.03 lbs per 1,000 lbs of exhaust*	According to method	FGLINE2 (SVA2BF680)	GC 13-SC VI.1, VI.3	R 336.1331
21. PM10	0.005 pph	Test Protocol	FGLINE2 (SVA2BF680)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
22. Cobalt (weighted emissions from stack)	0.0014 pph	Test Protocol	FGLINE2 (SVA2BF680)	SC V.4	R 336.1225
23. PM	0.02 lbs per 1,000 lbs of exhaust*	According to method	FGLINE2 (SVA2BF720)	GC 13 SC VI.1, VI.3	R 336.1331
24. PM10	0.03 pph	Test Protocol	FGLINE2 (SVA2BF720)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
25. PM	0.033 lbs per 1,000 lbs of exhaust*	According to method	FGLINE2 (SVA2BF721)	GC 13-SC VI.1, VI.3	R 336.1331
26. PM10	0.001 pph	Test Protocol	FGLINE2 (SVA2BF721)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
27. PM	0.001 lbs per 1,000 lbs of exhaust*	According to method	FGLINE2 (SVA2SCR960 A1)	GC 13 SC VI.2	R 336.1331
28. PM10	0.003 pph	Test Protocol	FGLINE2 (SVA2SCR960 A1)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
29. PM	0.001 lbs per 1,000 lbs of exhaust*	According to method	FGLINE2 (SVA2SCR960 B1)	GC 13 SC VI.2	R 336.1331
30. PM10	0.003 pph	Test Protocol	FGLINE2 (SVA2SCR960 B1)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
31. PM	0.001 lbs per 1,000 lbs of exhaust*	According to method	FGLINE2 (SVA2SCR960 A2)	GC 13 SC VI.2	R 336.1331
32. PM10	0.003 pph	Test Protocol	FGLINE2 (SVA2SCR960 A2)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)
33. PM	0.001 lbs per 1,000 lbs of exhaust*	According to method	FGLINE2 (SVA2SCR960 B2)	GC 13 SC VI.2	R 336.1331
34. PM10	0.003 pph	Test Protocol	FGLINE2 (SVA2SCR960 B2)	GC 13	R 336.1225, 40 CFR 52.21(c) & (d)

\* Calculated on a dry gas basis

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35. There shall be no visible emissions from any stack in EUFGLINE2. (R 336.1225, R 336.1301, 40 CFR 52.21(c) & (d))



**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall not operate EUFGLINE2 dry material operations unless the BF015, BF010, BF-030, BF330, BF020, BF650 and BF720 bag filters are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes, but is not limited to, maintaining a pressure drop range across each fabric filter according to manufacturer's specifications. (R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the pressure drop for each fabric filter for EUFGLINE2 on a continuous basis. Monitoring of data "on a continuous basis" is defined as an instantaneous data point measured at least once every 15 minutes for at least 90 percent of the operating time during an operating calendar day. The permittee is not required to monitor operational parameter data during periods of non-operation of the device resulting in cessation of the emissions to which the monitoring applies. (R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))
3. The permittee shall not operate EUFGLINE2 unless the wet scrubbers (A2SCR960A1, A2SCR960A2, A2SCR960B1, A2SCR960B2) are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes, but is not limited to, maintaining a minimum scrubber liquid flow rate of 0.22 gallon per minute. (R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1910)
4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the liquid flow rate of the wet scrubbers (A2SCR960A1, A2SCR960A2, A2SCR960B1, A2SCR960B2) on a continuous basis, while EUFGLINE2 is in operation. Monitoring of data "on a continuous basis" is defined as an instantaneous data point measured at least once every 15 minutes for at least 90 percent of the operating time during an operating calendar day. The permittee is not required to monitor operational parameter data during periods of non-operation of the device resulting in cessation of the emissions to which the monitoring applies. (R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1910)

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. Within 60 days of achieving the maximum production rate of EUFGLINE2, but not later than 180 days after commencement of initial startup of EUFGLINE2, the permittee shall verify and quantify cobalt emission rates from stacks SVA2BF630 and SVA2BF680 of EUFGLINE2 by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. (R 336.1225, R 336.2001, R 336.2003, R 336.2004)

Commented [AS4]: update

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall record the pressure drop for each fabric filter for EUFGLINE2 on a calendar day basis, while FGLINE2 is in operation. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))
2. The permittee shall record the liquid flow rate of each EUFGLINE2 wet scrubber on a calendar day basis, while EUFGLINE2 is in operation. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1910)
3. The permittee shall monitor the fabric filter emission points to verify the filters are operating properly, by taking visible emission readings for EUFGLINE2 a minimum of once per calendar month. Either a certified or non-certified reader shall take each visible emission reading during routine operating conditions. Such readings do not have to be conducted per the requirements of Method 9. Multiple stacks may be observed simultaneously. If any visible emissions (other than uncombined water vapor) are observed, the permittee shall immediately inspect the filters and perform any required maintenance. (R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))
4. The permittee shall keep, in a satisfactory manner, records of all visible emission readings for EUFGLINE2. At a minimum, records shall include the date, time, name of observer/reader, whether the reader is certified, and status of visible emissions. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1301, R 336.1303, R 336.1910)

**VII. REPORTING**

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUFGLINE2. (R 336.1201(7)(a))

**VIII. STACK/VENT RESTRICTIONS**

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVA2BF010*	10	34	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVA2BF015*	10	34	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVA2BF020*	10	34	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVA2BF030*	10	27	R 336.1225, 40 CFR 52.21(c) & (d)
3. SVA2BF150*	1.5	37	R 336.1225, 40 CFR 52.21(e) & (d)
4. SVA2BF240*	40	34	R 336.1225, 40 CFR 52.21(e) & (d)
5. SVA2BF250*	1.5	34	R 336.1225, 40 CFR 52.21(e) & (d)
6. SVA2BF440*	1.5	34	R 336.1225, 40 CFR 52.21(c) & (d)
7. SVA2BF430*	1.5	24	R 336.1225, 40 CFR 52.21(e) & (d)
8. SVA2BF630*	2	27	R 336.1225, 40 CFR 52.21(e) & (d)
9. SVA2BF650*	6	38	R 336.1225, 40 CFR 52.21(c) & (d)
10. SVA2BF680*	2	51	R 336.1225, 40 CFR 52.21(e) & (d)
11. SVA2BF720*	6	38	R 336.1225, 40 CFR 52.21(c) & (d)
12. SVA2BF721*	1.5	38	R 336.1225, 40 CFR 52.21(e) & (d)
13. SVA2SCR960A1	17	25	R 336.1225, 40 CFR 52.21(c) & (d)
14. SVA2SCR960A2	17	25	R 336.1225, 40 CFR 52.21(c) & (d)
15. SVA2SCR960B1	17	25	R 336.1225, 40 CFR 52.21(c) & (d)
16. SVA2SCR960B2	17	25	R 336.1225, 40 CFR 52.21(c) & (d)

\*These stacks are vented in a goose-neck down orientation.

Commented [A55]: Update?  
 Commented [A56R5]: Just keep stacks with controls keeping

**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

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

**The following conditions apply Source-Wide to:**  
FGFACILITY

**DESCRIPTION:** All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Nickel (weighted emissions from various compounds)	145 lb/yr	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.1	R 336.1225

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

NA

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

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

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

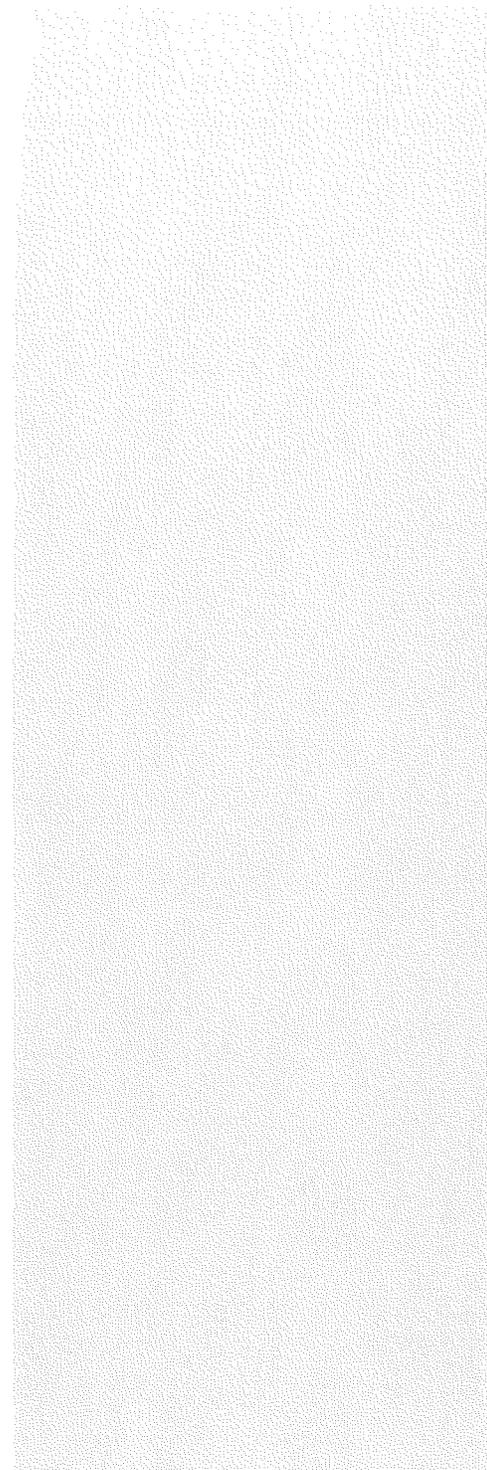
NA

IX. OTHER REQUIREMENTS

NA

Footnotes:

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





### D. FLEXIBLE GROUP CONDITIONS

Part D outlines 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.

<b>Flexible Group ID</b>	<b>Flexible Group Description</b>	<b>Associated Emission Unit IDs</b>
FG – 6V NESHAP	All equipment included in Lines One and Two operating in Metal HAP Service.	EU-LINE1 EU-LINE2

**FG- 6V NESHAP – NESHAP FOR CHEMICAL MANUFACTURING AREA  
SOURCES  
FLEXIBLE GROUP CONDITIONS**

**DESCRIPTION**

Each new and existing affected source operating a chemical manufacturing process unit (CMPU) as defined in 40 CFR Part 63, Subpart VVVVVV, 63.11494(b) that meet the conditions specified in 40 CFR 63.11494 (a)(1) through (2).

**Emission Units: EU-LINE1, EU-LINE2**

**POLLUTION CONTROL EQUIPMENT**

- **Baghouses – Line1:** BF-210, BF-020, BF-010, BF-030, BF-720
- **Wet Scrubbers – Line 1:** A1SCR9601, A1SCR9602
- **Baghouses – Line2:** BF-015, BF-010, BF-020, BF-030, BF-720
- **Wet Scrubbers – Line2:** A2SCR960A1, A2SCR960A2, A2SCR960B1, A2SCR960B2

**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. For metal HAP emissions from each CMPU using Table 1 metal HAP, the permittee shall comply with the applicable requirements as described in 40 CFR 63.11496(f), and Table 4 of this subpart, including but not limited to: **(40 CFR 63.11496(f))**
  - a. If the collective uncontrolled metal HAP emissions from all metal HAP process vents from a CMPU are equal to or greater than 400 lb/yr, then permittee must also determine the sum of metal HAP emissions from all metal HAP process vents within any CMPU subject to this subpart. To determine the mass emission rate permittee may use process knowledge, engineering assessment, or test data. Permittee must keep records of the emissions calculations. **(40 CFR 63.11496(f)(1))**
  - b. The permittee shall reduce the collective uncontrolled emissions of total metal HAPs by >= 95% by weight by routing emissions from a sufficient number of the metal process vents through a closed-vent system to any combination of control devices. **40 CFR 63 subpart VVVVVV, Table 4)**
  - c. If source is a new source using a control device other than a baghouse to comply with the HAP metals emission limits in Table 4 to this subpart, the source must comply with the initial compliance and monitoring requirements including: **(40 CFR 63.11496(f)(5))**
    - i. A description of the device; **(40 CFR 63.11496(f)(3)(i)(A))**
    - ii. Results of a performance test or engineering assessment conducted in accordance with paragraph (f)(3)(ii) of this section verifying the performance of the device for reducing HAP metals or particulate matter (PM) to the levels required by this subpart; **(40 CFR 63.11496(f)(3)(i)(B))**

- iii. Operation and maintenance plan for the control device (including a preventative maintenance schedule consistent with the manufacturer's instructions for routine and long-term maintenance) and continuous monitoring system (CMS).  
**(40 CFR 63.11496(f)(3)(i)(C))**
- iv. A list of operating parameters that will be monitored to maintain continuous compliance with the applicable emissions limits; and **(40 CFR 63.11496(f)(3)(i)(D))**
- v. Operating parameter limits based on either monitoring data collected during the performance test or established in the engineering assessment.  
**(40 CFR 63.11496(f)(3)(i)(E))**

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. Each process vessel must be equipped with a cover or lid that must be closed at all times when it is in metal HAP service except for manual operations that require access, such as material addition and removal, inspection, sampling and cleaning. **(40 CFR 63.11495(a)(1))**
2. For new sources using a baghouse as a control device, the permittee must install, operate, and maintain a bag leak detection system on all baghouses used to comply with the HAP metals emissions limit in III.1.b. Bag leak detection systems must comply with requirements outlined in 40 CFR 63.11410(g)(1), including but not limited to the following: **(40 CFR 63.11496(f)(4))**
  - a. The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 0.00044 grains per actual cubic foot or less.  
**(40 CFR 11410(g)(1)(i))**
  - b. The bag leak detection system sensor must provide output of relative PM loadings. **(40 CFR 11410(g)(1)(ii))**
  - c. The bag leak detection system must be equipped with an alarm system that will sound when the system detects an increase in relative particulate loading over the alarm set point established according to paragraph (g)(1)(iv) of this section, and the alarm must be located such that it can be heard by the appropriate plant personnel. **(40 CFR 11410(g)(1)(iii))**
  - d. In the initial adjustment of the bag leak detection system, permittee must establish, at a minimum, the baseline output by adjusting the sensitivity (range) and the averaging period of the device, the alarm set points, and the alarm delay time. **(40 CFR 11410(g)(1)(iv))**
  - e. Following initial adjustment, permittee shall not adjust the averaging period, alarm set point, or alarm delay time without approval from the Administrator or delegated authority except as provided in paragraph (g)(1)(vi) of this section. **(40 CFR 11410(g)(1)(v))**
  - f. Once per quarter, permittee may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan required by paragraph (g)(2) of this section. **(40 CFR 11410(g)(1)(vi))**
  - g. Permittee must install the bag leak detection sensor downstream of the baghouse and upstream of any wet scrubber. **(40 CFR 11410(g)(1)(vii))**
  - h. Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors. **(40 CFR 11410(g)(1)(viii))**

#### **V. TESTING/SAMPLING**

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

1. If permittee is a new source using a baghouse as a control device, required to maintain bag leak detection systems, and if the collective uncontrolled metal HAP emissions from all metal HAP process vents from a

CMPU are equal to or greater than 400 lb/yr, then permittee must comply with testing requirements in 40CFR 63.11410(i), using method specified in 40 CFR 63.11410(j). **(40 CFR 63.11496(f)(4))**

## **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii), R 63.11501 (c))**

1. The permittee shall keep all records required by 40 CFR 63.11501. These records include, but are not limited to, the following:
  - a. Each applicable record required by 40 CFR Part 63, Subpart A and Table 9 to subpart VVVVVV. **(40 CFR 63.11501(a))**
  - b. Permittee must comply with applicable requirements pertaining to process vents such as inspection reports, calculations, HAP emissions, malfunctions, and control device monitoring plans as specified in paragraphs (c)(1) through (8) of this section. **(63.11501 (c))**
2. If permittee is a new source using a baghouse as a control device, required to maintain bag leak detection systems, and if the collective uncontrolled metal HAP emissions from all metal HAP process vents from a CMPU are equal to or greater than 400 lb/yr, then permittee must comply with monitoring requirements in 40CFR 63.11410(g)(2) including an approved site specific monitoring plan that includes but is not limited to: **(40 CFR 63.11496(f)(4))**
  - a. Description of installation of the bag leak detection system **(40 CFR 63.11410 (g)(2)(i))**
  - b. Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point will be established **(40 CFR 63.11410 (g)(2)(ii))**
  - c. Operation of the bag leak detection system, including quality assurance procedures **(40 CFR 63.11410 (g)(2)(iii))**
  - d. How the bag leak detection system will be maintained, including a routine maintenance schedule and spare parts inventory list; **(40 CFR 63.11410 (g)(2)(iv))**
  - e. How the bag leak detection system output will be recorded and stored; and **(40 CFR 63.11410 (g)(2)(v))**
  - f. Corrective action procedures as specified in paragraph (g)(3) of this section **(40 CFR 63.11410 (g)(2)(vi))**
3. Permittee must conduct inspections of process vessels and equipment for each CMPU in metal HAP service, as specified in paragraphs (a)(3)(i) through (a)(3)(v) of this section, to demonstrate compliance and determine that the process vessels and equipment are sound and free of leaks. Requirements for inspections include but are not limited to: **(40 CFR 63.11495(a)(3))**
  - a. Inspections must be conducted at least quarterly. **(40 CFR 63.11495(a)(3)(i))**
  - b. For these inspections, detection methods incorporating sight, sound, or smell are acceptable. Indications of a leak identified using such methods constitute a leak unless permittee demonstrates that the indications of a leak are due to a condition other than loss of HAP. If indications of a leak are determined not to be HAP in one quarterly monitoring period, permittee must still perform the inspection and demonstration in the next quarterly monitoring period. **(40 CFR 63.11495(a)(3)(ii))**
  - c. Inspections must be conducted while the subject CMPU is operating. **(40 CFR 63.11495(a)(3)(iv))**
  - d. No inspection is required in a calendar quarter during which the subject CMPU does not operate for the entire calendar quarter and is not in metal HAP service. If the CMPU operates at all during a calendar quarter, an inspection is required. **(40 CFR 63.11495(a)(3)(v))**
  - e. You must repair any leak within 15 calendar days after detection of the leak, or document the reason for any delay of repair. **(40 CFR 63.11495(a)(4))**
4. You must keep records of the dates and results of each inspection event, the dates of equipment repairs, and, if applicable, the reasons for any delay in repair. **(40 CFR 63.11495(a)(5))**

5. If permittee is a new source using a baghouse as a control device, required to maintain bag leak detection systems, and if the collective uncontrolled metal HAP emissions from all metal HAP process vents from a CMPU are equal to or greater than 400 lb/yr, then permittee must comply with recordkeeping requirements in 40CFR 63.11410(g)(4) including but not limited to: **(40 CFR 63.11496(f)(4))**
  - a. Records of the bag leak detection system output; **(40 CFR 63.11410(g)(4)(i))**
  - b. Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and **(40 CFR 63.11410(g)(4)(ii))**
  - c. The date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and whether the alarm was alleviated within 3 hours of the alarm. **(40 CFR 63.11410(g)(4)(iii))**

## **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 all reports required by 40 CFR 63.11501. These reports include, but are not limited to, the following:
  - a. Semiannual compliance reports that contain information specified in Subpart VVVVVV, including but not limited to, deviations, delay of leak repair, process change, date for alternative standards, overlapping rule requirements, and/or malfunctions. **(40 CFR 63.11501 (d))**
5. The Permittee shall submit all notifications required by 40 CFR 63.11501. These notifications include, but are not limited to, the following:
  - a. Notification of Compliance Status (NOCS). The permittee's NOCS required by §63.9(h) must include the following additional information as noted in 40 CFR 63.11501(b)(1) through (5) as applicable. **(40 CFR 63.11501 (b))**

## **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:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
<b>SV for FG-LINE 1 (existing)</b>			
1. SVA1BF010*	10	34	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVA1BF020*	10	34	R 336.1225, 40 CFR 52.21(c) & (d)
SVA1BF030			R 336.1225, 40 CFR 52.21(c) & (d)
6. SVA1BF210*	10	34	R 336.1225, 40 CFR 52.21(c) & (d)
13. SVA1BF650*	6	38	R 336.1225, 40 CFR 52.21(c) & (d)

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
<b>SV for FG-LINE 1 (existing)</b>			
15. SVA1BF720*	6	38	R 336.1225, 40 CFR 52.21(c) & (d)
17. SVA1SCR9601*	16	18	R 336.1225, 40 CFR 52.21(c) & (d)
18. SVA1SCR9602*	16	18	R 336.1225, 40 CFR 52.21(c) & (d)
*These stacks are vented in a goose-neck down orientation.			
<b>SV for FG-LINE 2 (existing)</b>			
1. SVA2BF010*	10	34	R 336.1225, 40 CFR 52.21(c) & (d)
SVA2BF015*			R 336.1225, 40 CFR 52.21(c) & (d)
2. SVA2BF020*	10	34	R 336.1225, 40 CFR 52.21(c) & (d)
SVA2BF030			R 336.1225, 40 CFR 52.21(c) & (d)
9. SVA2BF650*	6	38	R 336.1225, 40 CFR 52.21(c) & (d)
11. SVA2BF720*	6	38	R 336.1225, 40 CFR 52.21(c) & (d)
13. SVA2SCR960A1	17	25	R 336.1225, 40 CFR 52.21(c) & (d)
14. SVA2SCR960A2	17	25	R 336.1225, 40 CFR 52.21(c) & (d)
15. SVA2SCR960B1	17	25	R 336.1225, 40 CFR 52.21(c) & (d)
16. SVA2SCR960B2	17	25	R 336.1225, 40 CFR 52.21(c) & (d)
*These stacks are vented in a goose-neck down orientation.			

#### **IX. OTHER REQUIREMENT(S)**

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subparts A and VVVVVV for Chemical Manufacturing Area Sources by the initial compliance date. **(40 CFR Part 63, Subparts A and VVVVVV)**
2. The permittee shall comply with the applicable General Provisions in 40 CFR 63.1 through 40 CFR 63.15. **(40 CFR 63.1-15)**

#### **Footnotes:**

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

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



**40 CFR PART 63, SUBPART ZZZZ  
ALL NEW AREA SOURCE RICE**

**SPECIAL CONDITIONS**

**The following conditions apply to:**  
**FG63-III-AII**

**DESCRIPTION:** 40 CFR Part 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE), located at an area source of HAP emissions, new RICE all sizes. An affected source that meets any of the criteria in paragraphs 40 CFR 63.6590(c)(1) through (7) of this section must meet the requirements of 40 CFR Part 63, Subpart ZZZZ by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines.

**Emission Unit ID:**

**POLLUTION CONTROL EQUIPMENT:**

**I. EMISSION LIMITS**

NA

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

**IV. DESIGN/EQUIPMENT PARAMETERS**

NA

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (40 CFR 63.6660)

1. NA

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (40 CFR 63.6660)

NA

**VII. REPORTING**

NA



**40 CFR PART 63, SUBPART ZZZZ  
ALL NEW AREA SOURCE RICE**

**VIII. STACK/VENT RESTRICTIONS**

NA

**IX. OTHER REQUIREMENTS**

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 60, Subpart IIII, for Stationary Reciprocating Internal Combustion Engines by the initial compliance date. **(40 CFR Part 60, Subpart IIII)**

maces ✓  
internet ✓



We create chemistry

CERTIFIED MAIL – RETURN RECEIPT REQUESTED  
EGLE Kalamazoo District Office: 7014 1820 0002 3902 8795

July 17, 2019

Mr. Cody Yazzie  
Michigan Department of Environment, Great Lakes and Energy  
7953 Adobe Road  
Kalamazoo, MI 49009-5025



**Re: Response to Letter of Violation 11-7-2018  
BASF Toda America LLC (BTA). Battle Creek, MI**

Dear Mr. Yazzie;

Provided for review is an update to the responses to the allegations presented in a Letter of Violation received by BTA LLC on November 7, 2018. BTA LLC will provide below a response to each allegation individually as request by the Michigan Department of Environment, Great Lakes and Energy (EGLE) Air Quality Division (AQD).

On March 7, 2018, BASF Corporation and Toda America Inc.(TAI) entered into a collaboration creating BASF Toda America LLC (BTA). BASF Corporation retains majority ownership of the collaboration and initiated a comprehensive review of the Battle Creek facility's environmental compliance programs. During that review BASF determined TAI had failed to implement the applicable requirements of the Chemical Manufacturing Area Source rule 40CFR63 Subpart VVVVVV (CMAS). This discovery resulted in the submission by BTA of a Notice of Compliance Status Report on July 30, 2018 describing the discovery and deviations revealed by that discovery.<sup>1</sup> At this time, BTA continues to evaluate process equipment and determine corrective actions necessary to bring the facility into compliance with the CMAS NESHAP. Responses to the allegations below will shed light on those activities both completed and planned.

1. *Failure to submit an initial NOCSR within 180 days of startup (facility commenced operations on 12/6/2010) of the affected source. 40CFR 63.11501(b).*

**Response**

<sup>1</sup> On July 30, 2018, prior to submitting the NOCSR, BTA and BASF Corporation submitted a proposed New Owner Voluntary Audit Notice and Agreement to US EPA, Region 5. The New Owner Voluntary Audit Notice and Agreement disclosed the same items contained in the NOCSR.

The Initial Notice Compliance Status Report was required to be submitted on or before June 4, 2011 by TAI. The first Notice of Compliance Status Report was submitted by BTA on July 30, 2018. Since BTA staff do not have access to TAI staff or their consultants, the cause of the failure to submit the required notice is not understood.

#### Corrective Action

BTA will leverage the use of an electronic compliance task management system to ensure critical compliance dates are not missed in the future. Installation of the system is expected to be completed by the end of February 2019.

#### Status

The facility has completed its applicability review and task assignment process for the implementation of our compliance task management system.

- 2. Failure to submit semi-annual compliance reports during periods where any events described in paragraphs (d)(1) through (d)(7) of this section occurred during the reporting period. 40CFR 63.11501(d)(1-7).*

#### Response

The period of non-compliance occurred during TAI's ownership and operation of the facility beginning June 4, 2011 and ending on January 31, 2018. BTA submitted a NOCSR on July 30, 2018 according to the requirements specified in 40CFR 63.11501(d) (1-7).

#### Corrective Action

BTA will leverage the use of an electronic compliance task management system to ensure critical compliance dates are not missed in the future. Installation of the system is expected to be completed by the end of January 2019.

#### Status

The facility has completed its applicability review and task assignment process for the implementation of our compliance task management system.

- 3. Failure to submit a Renewable Operating Permit Application no later than 12/21/2013. Any area source that installed a federally enforceable control device on an affected CPMU is required to obtain a permit under 40 CFR Part 70, if the control device on the affected CPMU is necessary to maintain the source's emissions at area source levels. Based on potential to emit calculations for single and combined Hazardous Air Pollutant (HAP) submitted with the Facility's permit to install application No. 70-10, uncontrolled emissions exceed major source thresholds for both single and combined HAPs. 40CFR63.11494(e).*

## Response

The requirement to develop and submit an administratively complete Renewable Operating Permit (ROP) was TAI's responsibility to complete on or before 12/21/2013.

## Corrective Action

BTA and ERM, BTA's consultant are in the process of developing application package for submittal to EGLE. BTA anticipates this application will be submitted on or before March 31, 2019. BTA is currently implementing process engineering changes necessary to install the Continuous Monitoring System (CMS) and Bag Leak Detection Systems (BLDS). Once the changes are completed the application can be completed and submitted to the agency.

## Status

An ROP application has been submitted to EGLE AQD on April 30, 2019. The application is currently under review and additional requests for information are being evaluated and developed for agency review.

- 4. Failure to conduct quarterly inspections of each CMPU between calendar year 2011 and the first quarter of calendar year 2018. 40CFR63.11495(a)(3).*

## Corrective Action

All non-compliance occurred during TAI's ownership and operation. An inspection process has been implemented. The quarterly inspection conducted in March of 2019 determined that efforts to resolve leaks from the roller crushers and sagger dumping stations were ineffective. This equipment was placed in Delay of Repair (DOR). The DOR status will be reflected in the July 2019 Notice of Compliance Status Report. The roller crushers and sagger dumping systems continue to leak fine particulate despite repeated efforts to correct the sealing surfaces. The facility has implemented routine cleaning of the area by operators as a means of controlling the accumulation of particulate matter released by the equipment in to the work environment.

BTA has identified a means of containing the particulate generated by the roller crushers and sagger dumping stations. Containment structures for the referenced equipment will be connected to the plant process vent system and will control particulate emanating from the equipment sealing surfaces.

- 5. Failure to prepare a monitoring plan containing the information required in paragraphs (f)(3)(i)(A) through (E) of this section, including an operation maintenance plan for the control device and continuous monitoring system. 40CFR63.11496(f)(3)(i) and (f)(5).*

### Response

The monitoring plan as required by the rule should have been put in place by TAI at the time of start-up, 12/6/2010.

### Corrective Action

BTA and ERM are developing a monitoring plan consistent with the requirements specified in 40CFR63.11496(f)(3)(i) and (f)(5). BTA anticipates this plan will be completed and implemented on or before January 31, 2019.

### Status

Completed and implemented.

6. *Failure to conduct a performance test or an engineering assessment for each CMPU subject to a HAP metals emission limit in Table 4 of the Subpart. 40CFR63.11496(f)(3)(ii).*

### Response

TAI was responsible to initiate and complete necessary testing of the baghouse and dust collectors employed to control metal HAP emissions within 180 days of start-up of the affected source, 12/6/2010. BTA completed a review of the baghouses and dust collector systems and determined the testing of the systems was not feasible based on the installation of the equipment. BTA implemented an engineering assessment to identify means and methods to re-route many of the small bin vent dust collectors to the primary dust collector systems. This assessment has been completed and it is expected work will begin on the re-routing of these systems as described in an October 15, 2018 submittal to EGLE Kalamazoo District office.

### Corrective Action

BTA and ERM will schedule testing of the primary baghouse systems once the specified work has been completed on or before January 31, 2019. BTA anticipates it will complete the testing of the 10 baghouses by July 31, 2019.

### Status

Testing of the baghouses is currently underway and the Line #1 sampling has been completed as of June 28, 2019. Testing of the Line #2 sources will commence on July 8, 2019.

7. *Failure to install, operate, and maintain a bag leak detection system on all baghouses used to comply with the HAP metals emission limit in Table 4 of this Subpart. 40CFR63.11496(f)(4).*

## Response

TAI was responsible to install the required BLDS as specified in 40CFR63.11496(f)(4). The design of the vent system as found by BTA on March 7, 2018 would not have supported the installation of BLDS for multiple bin vent discharges.

## Corrective Action

As stated above BTA has implemented an engineering assessment to re-route these small bin vents to the primary baghouses. The BLDS will be installed as part of this project to re-route the vent lines to the primary baghouses. BTA anticipates completion of this project on or before January 31, 2019.

## Status

The BLDS have been installed and are operating as intended. The small bin vent devices have been rerouted to the primary dust collection system.

### *8. Additional Actions:*

BTA has identified the potential for the release of fugitive emissions from the general building ventilation system. Sampling of the air flow entering several accessible discharge vents was undertaken in May of 2019. BTA is also evaluating the design of the general building ventilation system to understand building air flows. These data will be used as a means of estimating the mass of fugitive emissions emanating from the building.

BTA will implement engineering project to replace the current water scrubber systems supporting the Line #1 and #2 kilns with cartridge type dust collectors.

BTA will submit a PTI application for the Line #1 pack out room later in the third quarter of 2019. Emissions from this source are controlled by A1-DF-030 currently, but the filtered air is returned to the work space.

BTA will submit an NSR application to administratively modify PTI 70-10A to reflect current conditions for the process vents located at the facility. This application will memorialize the changes outlined in a Rule 285 determination communicated to the agency in October of 2018.

The attached table provides a summary of the compliance plan described in this letter along with anticipated completion dates. BTA from time to time may request additional time associated with the proposed compliance deadline as some of the actions are engineering projects still in early stages of development.

Sincerely,



Ivor Bull  
COO BASF Toda America LLC & Director BASF Battery Materials North America

Phone: +1 269 441-1801, Mobile: +1 914 215-2912, Email: [ivor.a.bull@basf.com](mailto:ivor.a.bull@basf.com)  
Postal Address: BASF Toda America, , 4750 W Dickman Rd, Battle Creek MI 49037,  
United States

CC: Rex Lane (EGLE)  
Jenine Camilleri (EGLE)  
Jillian Rountree, Esq. (USEPA)



Michigan Department of Environment, Great Lakes, and Energy - Air Quality Division

**RENEWABLE OPERATING PERMIT APPLICATION  
C-001: CERTIFICATION**

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

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

Form Type C-001	SRN P0089
-----------------	-----------

Stationary Source Name BASF Toda America, LLC	
City Battle Creek, MI	County Calhoun

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

<b>CONTACT INFORMATION</b>	
Contact Name David W. Sheaves	Title Expert, Environmental Protection
Phone number 734-324-6836	E-mail address david.sheaves@basf.com

<b>This form must be signed and dated by a Responsible Official.</b>				
Responsible Official Name Ivor Bull			Title Chief Operating Officer	
Mailing address BASF Toda America, LLC, 4750 West Dickman Road				
City Battle Creek, MI	State MI	ZIP Code 49037	County Calhoun	Country USA
<b>As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this submittal are true, accurate and complete.</b>				
 _____ Signature of Responsible Official			<u>7/11/2019</u> _____ Date	



## 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: P-0089	Section Number (if applicable):
-------------	---------------------------------

1. Additional Information ID AI- 001
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### Additional Information

2. Is This Information Confidential?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Revised proposed compliance plan to address deviations discovered during a New Owners Audit.

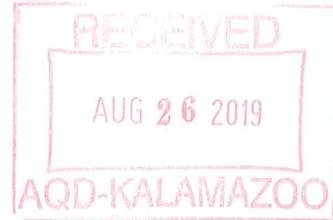
Item #	Compliance Requirement	Start Date	Completion Date	Status
1	Install Continuous Monitoring devices and data recording system for the following devices: Line #1 baghouses 010, 020, 210, 650, 720 and 030. Line #2 baghouses 010, 015, 020, 030, 650, 720.	11/8/2018	1/30/2019	Complete
2	Install Continuous Monitoring devices and data recording system for the following devices: Scrubber system for Line #1 Scrubber system for Line #2	11/8/2018	1/30/2019	Complete
3	Install Bag Leak Detection System and data recording system for the following devices: Line #1 baghouses 010, 020, 210, 650, 720 and 030. Line #2 baghouses 010, 015, 020, 030, 650, 720.	11/8/2018	1/30/2019	Complete
4	Submit Renewable Operating Permit Application	4/30/2019		EGLE is in need of additional information to stamp application Administratively Complete
5	Submit Permit to Install for Line #2 Pack out Room		12/27/2018	PTI Received
6	Submit Permit to Install for Line #1 Pack out Room	6/30/2019	8/15/2019	
7	Conduct performance testing of identified control devices.	6/17/2019	7/22/2019	
8	Develop and submit test report to EGLE.	7/22/2019	9/15/2019	
9	Determine presence and quantify mass of fugitive emissions from the process building.	5/29/2019	9/1/2019	
10	Install secondary containment structures to captures fugitive emissions from Line #1 & 2 roller crushers and sagger dump stations.	6/1/2019	12/15/2019	
11	Replace current scrubber systems servicing the kiln systems with cartridge type dust collectors.	4/1/2019	2/1/2020	Project is in the early engineering design phase.
12	Submit an Administrative NSR PTI for changes in emission sources identified in the ROP application and in the R285 determination submitted in October 2018.	6/30/2019	8/15/2019	



We create chemistry

**CERTIFIED MAIL – RETURN RECEIPT REQUESTED**  
**MDEQ Kalamazoo District Office:7014 1820 0002 3902 8849**

August 22, 2019



Mr. Cody Yazzie  
Michigan Department of Environmental Quality  
Air Quality Division  
7953 Adobe Road  
Kalamazoo, MI 49009-5025

**Re: Renewable Operating Permit Application Follow Up Information**  
**BASF Toda America LLC (BTA). Battle Creek, MI**

Dear Mr. Yazzie;

Provided for review are fugitive emissions estimates and corresponding C-001 Certification form.

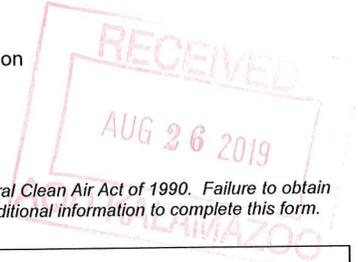
Should you have any questions or comments please do hesitate to contact me directly either by email at [david.sheaves@basf.com](mailto:david.sheaves@basf.com) or via phone at 734-476-7608.

Sincerely,

David W. Sheaves  
Expert, Environmental Protection



**RENEWABLE OPERATING PERMIT APPLICATION  
AI-001: ADDITIONAL INFORMATION**



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SRN: P-0089	Section Number (if applicable):
-------------	---------------------------------

1. Additional Information ID  
**AI-001**

**Additional Information**

2. Is This Information Confidential?  Yes  No

Information provided are fugitive metal HAP and Lithium emissions estimates. These estimates are based on sampling of the accessible discharges from the general building ventilation exhaust ports. The data were combined with the design flow data for the various general building ventilation fans to produce the emission estimates provided below.

Line #1		Line #2	Total Annual Emissions Estimated
Cobalt	22.7 lb/yr.	22.4 lb/yr.	45.1 lb/yr.
Lithium	18.4 lb/yr.	19.8 lb/yr.	37.9 lb/yr.
Manganese	1.0 lb/yr.	7.7 lb/yr.	8.7 lb/yr.
Nickel	116.9 lb/yr.	101.2 lb/yr.	217.9 lb/yr.



## RENEWABLE OPERATING PERMIT APPLICATION C-001: CERTIFICATION

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

Form Type C-001	SRN P0089
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Stationary Source Name <b>BASF Toda America, LLC</b>	
City <b>Battle Creek, MI</b>	County <b>Calhoun</b>

<b>SUBMITTAL CERTIFICATION INFORMATION</b>	
1. Type of Submittal <i>Check only one box.</i>	
<input type="checkbox"/> Initial Application (Rule 210)	<input type="checkbox"/> Notification / Administrative Amendment / Modification (Rules 215/216)
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3. Submittal Media <input checked="" type="checkbox"/> E-mail <input type="checkbox"/> FTP <input type="checkbox"/> Disk <input checked="" type="checkbox"/> Paper	
4. Operator's Additional Information ID - Create an Additional Information (AI) ID that is used to provide supplemental information on AI-001 regarding a submittal. AI -001A, submission of additional data supporting fugitive emissions and amended HAP PTE and Actual	

<b>CONTACT INFORMATION</b>	
Contact Name <b>David W. Sheaves</b>	Title <b>Expert, Environmental Protection</b>
Phone number <b>734-324-6836</b>	E-mail address <b>david.sheaves@basf.com</b>

<b>This form must be signed and dated by a Responsible Official.</b>					
Responsible Official Name <b>Ivor Bull</b>				Title <b>Chief Operating Officer</b>	
Mailing address <b>BASF Toda America, LLC, 4750 West Dickman Road</b>					
City <b>Battle Creek, MI</b>	State <b>MI</b>	ZIP Code <b>49037</b>	County <b>Calhoun</b>	Country <b>USA</b>	
<b>As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this submittal are true, accurate and complete.</b>					
			<u>8/15/2019</u>		
Signature of Responsible Official			Date		