



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): |
|---|-------------------|---------------------------------|

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**

\_\_\_\_\_  
**Date**





## 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): |
|-------------------|---------------------------------|

|   |                    |                          |                          |          |                             |
|---|--------------------|--------------------------|--------------------------|----------|-----------------------------|
| <b>SOURCE INFORMATION</b>   |                    |                          |                          | SIC Code | NAICS Code<br><b>325180</b> |
| Source Name<br><b>BASF Toda America, Inc.</b>   |                    |                          |                          |          |                             |
| Street Address<br><b>4750 West Dickman Road</b>   |                    |                          |                          |          |                             |
| City<br><b>Battle Creek</b>   | State<br><b>MI</b> | ZIP Code<br><b>49037</b> | County<br><b>Calhoun</b> |          |                             |
| Section/Town/Range (if street address not available)  |                    |                          |                          |          |                             |
| Source Description<br><br>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.<br><br>This renewal is being submitted to incorporate NSPS IIII and NESHAP 6V requirements from PTI 70-10C into the ROP. |                    |                          |                          |          |                             |

### OWNER INFORMATION

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



## 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): |
|------------|---------------------------------|

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

|   |       |  |        |         |
|---|-------|--|--------|---------|
| Contact 2 Name (optional)<br><b>TJ Stewart</b>  |       | Title<br><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<br><b>(269) 529-1053</b>   |       | E-mail address<br><b>thomas.stewart@basf.com</b> |        |         |

#### RESPONSIBLE OFFICIAL INFORMATION

|   |       |  |        |         |
|---|-------|--|--------|---------|
| Responsible Official 1 Name<br><b>Wirianto Wong</b>   |       | Title<br><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<br><b>269-441-1807</b>   |       | E-mail address<br><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> |
|--|





## 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): |
|------|---------------------------------|

### 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)<br/>If Yes, a Risk Management Plan (RMP) and periodic updates must be submitted to the USEPA.<br/>b. Has an updated RMP been submitted to the USEPA?</p>  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br><br><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?<br/>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)?<br/>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?<br/>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)?<br/>If Yes, identify the specific emission unit(s) and pollutant(s) subject to CAM on an AI-001 Form.<br/>b. Is a CAM plan included with this application on an AI-001 Form?</p>   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br><br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| <p>8. Does the source have any active Consent Orders/Consent Judgments (CO/CJ)?<br/>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.<br/>b. Is an Acid Rain Permit Application included with this application?</p>  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br><br><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?<br/>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?<br/>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): |
|------------|---------------------------------|

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<br><small>[e.g. Rule 282(2)(b)(i)]</small> | Rule 212(4) Citation<br><small>[e.g. Rule 212(4)(c)]</small> |
|------------------|---------------------------|--|--|
| EU- GEN1         | Emergency Generator       | Rule 285(2)(g)   | Rule 212(4)(e)   |
| EU-              |                           |  |  |
| EU-              |                           |  |  |
| EU-              |                           |  |  |
| EU-              |                           |  |  |
| EU-              |                           |  |  |
| EU-              |                           |  |  |
| EU-              |                           |  |  |
| 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): |
|------------|---------------------------------|

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): |
|------------|---------------------------------|

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-              |  |   |
|  | EU-              |  |   |
|  | EU-              |  |   |
|  | EU-              |  |   |
|  | EU-              |  |   |
|  | EU-              |  |   |
|  | 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): |
|------------|---------------------------------|

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><br><br>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<br><b>EU-</b>  | Installation Date<br>(MM/DD/YYYY) | Modification/Reconstruction Date(s)<br>(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<br><b>EU-</b>  | Installation Date<br>(MM/DD/YYYY) | Modification/Reconstruction Date(s)<br>(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<br><b>EU-</b>  | Installation Date<br>(MM/DD/YYYY) | Modification/Reconstruction Date(s)<br>(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): |
|------------|---------------------------------|

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<br><b>FG- Lines</b>   |     |     |     |
| Flexible Group Description<br>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<br><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): |
|------------|--|

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<br><input type="checkbox"/> Template Table*<br><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<br><input type="checkbox"/> Template Table*<br><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.<br><input type="checkbox"/> Template Table*<br><input checked="" type="checkbox"/> Newly Created Table**        |
|   |  | <input type="checkbox"/> PTI No.<br><input type="checkbox"/> Template Table*<br><input type="checkbox"/> Newly Created Table**                   |
|   |  | <input type="checkbox"/> PTI No.<br><input type="checkbox"/> Template Table*<br><input type="checkbox"/> Newly Created Table**                   |

|   |
|---|
| <b>STREAMLINED REQUIREMENTS</b><br>2. Are you proposing to streamline any requirements? <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span><br>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. |
|---|

\*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): |
|------------|---------------------------------|

### 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<br><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<br><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<br><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<br><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<br><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<br><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<br><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<br><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<br><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<br><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): |
|------------|---------------------------------|

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<br><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> |
|--------------------------|--|



## 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<br>AI- Plan |
|--|

### Additional Information

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

Plan - Control Device Monitoring Plan for NESHAP 6V (CMAS) Requirements

|  |               |                                |            |             |
|--|---------------|--------------------------------|------------|-------------|
| <br><b>BASF</b><br>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                 |

|   |               |                                |            |             |
|---|---------------|--------------------------------|------------|-------------|
| <br>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.

|  |               |                                |            |             |
|--|---------------|--------------------------------|------------|-------------|
| <br><b>BASF</b><br>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<br>AI- PTI, Plan, PTE, NSPS |
|--|

### Additional Information

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

PTE Calcs

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         | 6.94        |
| Co    | 58.3      | 0.386092715 | Ni         | 58.7        |
| (OH)2 | 34        | 0.225165563 | Co         | 58.3        |
|       | 151       |             | Al         | 26.9        |
|       |           |             | 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

*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<br>AI- NSPS |
|--|

### Additional Information

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

NSPS Table of Requirements for Subpart IIII for GEN1

|      |    |
|------|----|
| Page | of |
|------|----|



## **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 IIII, 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): |
|------------|---------------------------------|

|   |
|---|
| 1. Additional Information ID<br>AI- PTI |
|---|

### Additional Information

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

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:<br><b>December 8, 2022</b> |            |
| DATE PERMIT TO INSTALL APPROVED:<br><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<br/>(Including Process Equipment &amp; Control<br/>Device(s))</b>   | <b>Installation<br/>Date /<br/>Modification<br/>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                                |

| Pollutant | Limit       | Time Period / Operating Scenario | Equipment   | Monitoring / Testing Method | Underlying Applicable Requirements |
|-----------|-------------|----------------------------------|---|-----------------------------|------------------------------------|
| 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,<br>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<br>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).