Archived: Monday, December 7, 2020 5:55:01 PM
From: David W Sheaves
Sent: Wed, 25 Nov 2020 12:49:45 +0000ARC
To:
Cc: Brandon Ahrmond Williams Phillips Ivor Bull Matthew Kwiatkowski
Subject: BASF Toda America LLC (P0089) "Amended Initial ROP Application"
Sensitivity: Normal
Attachments:
Amended ROP application 11-24-2020.pdf -001 11-24-2020.pdf 1_70-10B Mark Up.docx

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Attached are the required documents for the submittal of an ROP Application.

Sincerely
David SHEAVES
Expert, Environmental Protection

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Postal Address: BASF Corporation, Global Digital Services, Main Admin, 1609 Biddle Avenue, 48192 Wyandotte, United States

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

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

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

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

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

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

Compliance Statement

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

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

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

The method(s) used to determine compliance for each applicable requirement is/are the method(s) specified in the existing Permits to Install, this application and all other applicable requirements that the source is subject to.

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

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

IVOR BULL COO OF BTA, LLC

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.

IVOR BULL — 11/24/2020

Signature of Responsible Official — **Date**

Michigan Department of Environmental Quality - Air Quality Division

RENEWABLE OPERATING PERMIT INITIAL APPLICATION
SI-001 SECTION 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):

SECTION INFORMATION	
Section Name	
Section Description (Including address if different from Source address identified on the S-001 Form)	
Emission Units Included In This Section	
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-**
EU-	**EU-**
EU-	**EU-**
EU-	**EU-**
EU-	**EU-**

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

Michigan Department of Environmental Quality - Air Quality Division

RENEWABLE OPERATING PERMIT INITIAL APPLICATION
S-001 STATIONARY SOURCE INFORMATION

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

SRN: P0089	Section Number (if applicable):

SOURCE INFORMATION

SIC Code	NAICS Code
	325180

Source Name: BASF Toda America, Inc.

Street Address: 4750 West Dickman Road

City	State	ZIP Code	County
Battle Creek	MI	49037	Calhoun

Section/Town/Range (if street address not available)

Source Description:
BTA manufactures Li-ion cathode powder on two separate manufacturing lines. Both lines are continuous processes with the following process steps:
1. Raw material handling and mixing; 2. Calcination; 3. Pulverization; 4. Blending and Packaging

OWNER INFORMATION

Owner Name: BASF Corporation

Mailing address (☐ check if same as source address)
1609 Biddle Avenue

City	State	ZIP Code	County	Country
Wyandotte	MI	48192	Wayne	United States

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

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			Title	
David Sheaves			Expert, Environmental Protection	
Company Name & Mailing address (☐ check if same as source address)				
BASF Corporation - 1609 Biddle Avenue				
City	State	ZIP Code	County	Country
Wyondotte	MI	48192	Wayne	United States
Phone number		E-mail address		
734-324-6836		david.sheaves@basf.com		

Contact 2 Name (optional)			Title	
Company Name & Mailing address (☐ check if same as source address)				
City	State	ZIP Code	County	Country
Phone number		E-mail address		

RESPONSIBLE OFFICIAL INFORMATION

Responsible Official 1 Name			Title	
Ivor Bull			Chief Operating Officer	
Company Name & Mailing address (☒ check if same as source address)				
City	State	ZIP Code	County	Country
Phone number		E-mail address		
269-441-1801		ivor.a.bull@basf.com		

Responsible Official 2 Name (optional)			Title	
Company Name & Mailing address (☐ check if same as source address)				
City	State	ZIP Code	County	Country
Phone number		E-mail address		

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

RENEWABLE OPERATING PERMIT INITIAL APPLICATION
S-003 SOURCE REQUIREMENT INFORMATION

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

SRN: P0089	Section Number (if applicable):

SOURCE REQUIREMENT INFORMATION

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

1.	Actual emissions and associated data from **all** emission units with applicable requirements are required to be reported in MAERS. Are there any emissions and associated data that have not been reported in MAERS for the most recent emissions reporting year? If Yes, identify the emission unit(s) that was/were not reported in MAERS on an AI-001 Form. Applicable MAERS form(s) for unreported emission units must be included with this application.	☐ Yes ☒ No
2.	Is this source subject to the federal regulations on ozone-depleting substances? (40 CFR Part 82)	☐ Yes ☒ No
3.	a. Is this source subject to the federal Chemical Accident Prevention Provisions? (Section 112(r) of the Clean Air Act Amendments, 40 CFR Part 68) If Yes, a Risk Management Plan (RMP) and periodic updates must be submitted to the USEPA. b. Has an updated RMP been submitted to the USEPA?	☐ Yes ☒ No ☐ Yes ☒ No
4.	Does the source belong to one of the source categories that require quantification of fugitive emissions? If Yes, identify the category on an AI-001 Form and include the fugitive emissions in the PTE calculations for the source. *See ROP Initial Application instructions.*	☐ Yes ☒ No
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_2, CO, lead)? If Yes, include potential emission calculations for each identified pollutant on an AI-001 Form.	☐ Yes ☒ No
6.	Does this stationary source emit any hazardous air pollutants (HAPs) regulated by the federal Clean Air Act, Section 112? If Yes, include potential and actual emission calculations for HAPs, **including fugitive emissions** on an AI-001 Form.	☒ Yes ☐ No
7.	a. Are any emission units subject to Compliance Assurance Monitoring (CAM)? If Yes, identify the specific emission unit(s) and pollutant(s) subject to CAM on an AI-001 Form. b. Is a CAM plan included with this application on an AI-001 Form?	☐ Yes ☒ No ☐ Yes ☒ No
8.	Does the source have any active Consent Orders/Consent Judgments (CO/CJ)? If Yes, attach a copy of each CO/CJ on an AI-001 Form.	☐ Yes ☒ No
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.	☐ Yes ☒ No
10.	a. Are any emission units subject to the federal Acid Rain Program? If Yes, identify the specific emission unit(s) subject to the Federal Acid Rain Program on an AI-001 Form. b. Is an Acid Rain Permit Application included with this application?	☐ Yes ☒ No ☐ Yes ☒ No
11.	Does the source have any required plans such as a malfunction abatement plan, fugitive dust plan, operation/maintenance plan, startup/shutdown plans or any other monitoring plan? If Yes, then the plan(s) must be submitted with this application on an AI-001 Form.	☒ Yes ☐ No
12.	Are there any specific requirements that the source proposes to be identified in the ROP as non-applicable? If Yes, then the requirement and justification must be submitted on an AI-001 Form.	☐ Yes ☒ No
☒	Check if an AI-001 Form is attached to provide more information for S-003. Enter AI-001 Form ID: **AI-HAPs,PLANS**	

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** [e.g. Rule 282(2)(b)(i)]	**Rule 212(4) Citation** [e.g. Rule 212(4)(c)]
EU-	Space Heating Equipment	282(2)(b)(i)	212(4)(c)
EU-BF330	Line 2 Lithium Handling Equipment	290	212(4)(h)
EU-GEN1	Emergency Generator	285(2)(g)	212(4)(e)
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-**

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 – *Provide Emission Unit ID and a description of Process Equipment, Control Devices and Monitoring Devices***	**Date Emission Unit was Installed/ Modified/ Reconstructed**
☐ Rule 281(2)(h) or 285(2)(r)(iv) cleaning operation		
☐ Rule 287(2)(c) surface coating line		
☒ Rule 290 process with limited emissions	EU-BF330 - Line 2 Lithium Handling Equipment controlled by BF-330.	2012

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 (*Include Process Equipment, Control Devices and Monitoring Devices*)	Date Emission Unit was Installed/ Modified/ Reconstructed
70-10B	**EU-**Line 1	All equipment on line one	2010
70-10B	**EU-**Line 2	All equipment on line two	2012
	EU-		
	EU-		
	EU-		
	EU-		
	EU-		
	EU-		
	EU-		

1.	Are you proposing changes to any emission unit names, descriptions or control devices in the PTIs listed above? If Yes, describe the proposed changes on an AI-001 Form.	☒ Yes ☐ No
2.	Are you proposing additions or clarifications to any permit conditions? If Yes, describe the proposed changes on an AI-001 Form.	☒ Yes ☐ No
3.	Are you proposing monitoring, testing, recordkeeping and/or reporting necessary to demonstrate compliance with any applicable requirements? If Yes, describe the proposed conditions on an AI-001 Form.	☐ Yes ☒ No

☒ Check if an AI-001 Form is attached to provide more information for EU-003. Enter AI-001 Form ID: **AI-**PTIs

DEQ

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? ☐ Yes ☒ No

   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 EU-	Installation Date (MM/DD/YYYY)	Modification/Reconstruction Date(s) (MM/DD/YYYY)	SIC Code – *If different from S-001 Form*
Emission Unit Description – *Include process equipment, control devices, monitoring devices, and all stacks/vents associated with this emission unit that have applicable requirements. Indicate which forms are used to describe/include the applicable requirements for this emission unit (AR-001 and/or AR-002 Forms).*			

Emission Unit ID EU-	Installation Date (MM/DD/YYYY)	Modification/Reconstruction Date(s) (MM/DD/YYYY)	SIC Code – *If different from S-001 Form*
Emission Unit Description – *Include process equipment, control devices, monitoring devices, and all stacks/vents associated with this emission unit that have applicable requirements. Indicate which forms are used to describe/include the applicable requirements for this emission unit (AR-001 and/or AR-002 Forms).*			

Emission Unit ID EU-	Installation Date (MM/DD/YYYY)	Modification/Reconstruction Date(s) (MM/DD/YYYY)	SIC Code – *If different from S-001 Form*
Emission Unit Description – *Include process equipment, control devices, monitoring devices, and all stacks/vents associated with this emission unit that have applicable requirements. Indicate which forms are used to describe/include the applicable requirements for this emission unit (AR-001 and/or AR-002 Forms).*			

☐ Check if an AI-001 Form is attached to provide more information for EU-004. Enter AI-001 Form ID: **AI-**

Michigan Department Of Environmental Quality - Air Quality Division

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 **FG-**CMAS			
Flexible Group Description Production Lines 1 & 2			
Emission Unit IDs			
EU-Line 1	**EU-**	**EU-**	**EU-**
EU-Line 2	**EU-**	**EU-**	**EU-**
EU-	**EU-**	**EU-**	**EU-**
EU-	**EU-**	**EU-**	**EU-**
EU-	**EU-**	**EU-**	**EU-**
EU-	**EU-**	**EU-**	**EU-**
EU-	**EU-**	**EU-**	**EU-**
Flexible Group ID **FG-**			
Flexible Group Description			
Emission Unit IDs			
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-**
☐ Check if an AI-001 Form is attached to provide more information for FG-001. Enter AI-001 Form ID: **AI-**			

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? ☒ Yes ☐ No

   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	EU LINE 1	☐ PTI No. ☐ Template Table* ☒ Newly Created Table**
40 CFR 63 subpart VVVVVV NESHAP for Chemical Manufacturing Area Sources	EU LINE 2	☐ PTI No. ☐ Template Table* ☒ Newly Created Table**
40 CFR 60, Subpart IIII Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	EU-GEN1	☐ PTI No. ☐ Template Table* ☒ Newly Created Table**
		☐ PTI No. ☐ Template Table* ☐ Newly Created Table**
		☐ PTI No. ☐ Template Table* ☐ Newly Created Table**

STREAMLINED REQUIREMENTS

2. Are you proposing to streamline any requirements? ☐ Yes ☒ No

   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-NEW ARs**

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

1. Is there an emission unit identified on an EU-004 Form that is subject to **emission limit(s)**? 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.	☐ Yes ☒ No
2. Is there an emission unit identified on an EU-004 Form that is subject to **material limit(s)**? 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.	☐ Yes ☒ No
3. Is there an emission unit identified on an EU-004 Form that is subject to **process/operational restriction(s)**? 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.	☐ Yes ☒ No
4. Is there an emission unit identified on an EU-004 Form that is subject to **design/equipment parameter(s)**? 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.	☐ Yes ☒ No

5. Is there an emission unit identified on an EU-004 Form that is subject to **testing/sampling requirement(s)**? 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.	☐ Yes ☒ No
6. Is there an emission unit identified on an EU-004 Form that is subject to **monitoring/recordkeeping requirement(s)**? 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.	☐ Yes ☒ No
7. Is there an emission unit identified on an EU-004 Form that is subject to **reporting requirement(s)**? 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.	☐ Yes ☒ No
8. Is there an emission unit identified on an EU-004 Form that is subject to **stack/vent restriction(s)**? 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.	☐ Yes ☒ No
9. Are there any other requirements that you would like to **add** 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.	☐ Yes ☒ No
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.	☐ Yes ☒ No
☐ Check if an AI-001 Form is attached to provide more information for AR-002. Enter AI-001 Form ID: **AI-**	

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

1. Are there any applicable requirements that apply to the entire source? 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.	☒ Yes ☐ No
Comments PTI No.70-10B contains an emissions limit for Nickel under FG-LINES. All the appropriate applicable requirements are found in the PTI.	
☐ Check if an AI-001 Form is attached to provide more information for AR-003. Enter AI-001 Form ID: **AI-**	

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

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

SRN: P0089	Section Number (if applicable):

1. Additional Information ID
AI-HAPs

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Attached please find the uncontrolled potential HAP emissions for the facility.

LINE 1

	Process / Operation	Equipment Controlled	Control Equipment ID	Exhaust Flow Rate (m3/min)	Maximum Concentration of Material Precontrols (mg/m3)	Total Emissions (lb/hr)	NiCo(OH)2 % Nickel	Ni Emissions (lb/Hr) Ni (lb/hr) Pre control	NiCo(OH)2 %Co	Co (lb/hr) Pre control	LiNiCoAlO2 Emissions Rate (lb/hr)	LiNiCoAlO2 % Nickel	Ni (lb/hr) Pre control	LiNiCoAlO2 %Co	Co (lb/hr) Pre control	Sum Ni Emissions (lb/hr)	Annual Ni Emission (lb/yr)	Annual Co Emission (ton/yr)
	Raw Material Handling & Mixing	LiOH Jet Mill, Magnetic Separators, Raw Material Mixer	A1-BF-010	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
Pre-Calcination	Calcination	Calcination Mixer	A1-BF-020	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
	Raw Material Handling & Mixing	LiOH, NiCo(OH)2, Al Hoppers and Raw Material Mixer	A1-BF-210	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	LiOH Jet Mill	A1-BF-330	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	A1-BF-650	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
After Calcination	Pulverization	Pulverization Mixer	A1-BF-720	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	1.65E+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	1.51E+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	0.037956683
Co	58.3	0.386092715	Ni	58.7	0.321045723
(OH)2	34	0.225165563	Co	58.3	0.318858018
	151		Al	26.9	0.147123168
			O2	32	0.175016408
				182.84	

LINE 2

Line #2 HAP PTE

						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		
Process / Operation	Equipment Controlled	Control Equipment ID	Exhaust Flow Rate (m3/min)	Maximum Concentration of Material Precontrols (mg/m3)	Total Emissions (lb/hr)	% Nickel	Ni (lb/hr)	% Manganese	Mn (lb/hr)	%Co	Co (lb/hr) Pre control	Emissions Rate (lb/hr)	% Nickel	Ni (lb/hr)	% Manganese	Mn (lb/hr)	%Co	Co (lb/hr) Pre control	Sum HAP Emissions (lb/yr)	HAP PTE Ton/yr.
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
Raw Material Handling & Mixing	Li2CO3, NiCoMn(OH)2 Hoppers and Raw Material 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	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	0.032915955
Mn	54.9	0.266634288	Ni	58.7	0.278410169
Co	58.3	0.283147159	Co	58.3	0.276512996
(OH)2	34	0.165128703	Mn	54.9	0.260387023
	206		O2	32	0.151773857
				210.84	

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

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	SRN: P008	Section Number (if applicable):

1. Additional Information ID
AI-PLANS

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Attached please find the plans associated wtih 40 CFR 63 subpart 6V.

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

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.

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	1.0 to 7.0 inch WC
DC-962	A1	1.0 to 7.0 inch WC
DC-963	A2	1.0 to 7.0 inch WC
DC-964	A2	1.0 to 7.0 inch WC
DC-965	A2	1.0 to 7.0 inch WC
DC-966	A2	1.0 to 7.0 inch WC

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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
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DC-965	A2	0.1 to 7.0 inch WC
DC-966	A2	0.1 to 7.0 inch WC

DEQ

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

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SRN: P008	Section Number (if applicable):

1. Additional Information ID
AI-PTIs

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Attached please find copies of the applicable PTI for the facility. We have updated the PTI with the control equipment changes implemented under R 336.1285(d) and R 336.1285(f). We have also attached a listing of the control equipment associated with each production line.

PERMIT TO INSTALL

Table of Contents

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_2e	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_2S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO_x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO_2	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**

2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**

3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**

4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**

5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**

6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**

7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**

8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.

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

10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
    1. A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
    2. A visible emission limit specified by an applicable federal new source performance standard.
    3. A visible emission limit specified as a condition of this Permit to Install.

12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
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	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	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-1601A/B, FLT-961, FLT-962)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1 controlled by A1BF010 and associated HEPA filter	SC V.2, SC VI.1, SC VI.3	R 336.1331
2. PM10	0.0004 pph	Hourly	The portion of EULINE1 controlled by A1BF010 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
3. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1 controlled by A1BF020 and associated HEPA filter	SC V.2, SC VI.1, SC VI.3	R 336.1331
4. PM10	0.0007 pph	Hourly	The portion of EULINE1 controlled by A1BF020 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
5. PM	0.002 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1 controlled by A1BF210 and associated HEPA filter	SC V.2, SC VI.1, SC VI.3	R 336.1331
6. PM10	0.01 pph	Hourly	The portion of EULINE1 controlled by A1BF210 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
7. PM	0.01 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1 controlled by A1BF330 and associated HEPA filter	SC V.2, SC VI.1, SC VI.3	R 336.1331

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
8. Lithium hydroxide	0.012 pph	Hourly	The portion of EULINE1 controlled by A1BF330 and associated HEPA filter	SC V.1	R 336.1225
9. PM	0.01 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1utilizing A1BF650	SC V.2, SC VI.1, SC VI.3	R 336.1331
10. PM10	0.002 pph	Hourly	The portion of EULINE1 utilizing A1BF650	SC V.2	R 336.1225, 40 CFR 52.21(c) & (d)
11. PM	0.02 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1 controlled by A1BF720 and associated HEPA filter	SC V.2, SC VI.1, SC VI.3	R 336.1331
12. PM10	0.03 pph	Hourly	The portion of EULINE1 controlled by A1BF720 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
13. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1 controlled by FLT-961 and associated HEPA filter	SC V.2, SC VI.2	R 336.1331
14. PM10	0.003 pph	Hourly	The portion of EULINE1 controlled by FLT-961 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
55. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1 controlled by FLT-962 and associated HEPA filter	SC V.2, SC VI.2	R 336.1331
16. PM10	0.003 pph	Hourly	The portion of EULINE1 controlled by FLT-962 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
17. PM	0.01 lbs per 1000 lbs of gas[a]	Hourly	The portion of EULINE1 controlled by A1BF030 and associated HEPA filter	SC V.2, SC VI.1, SC VI.3	R 336.1331

[a] Calculated on a wet gas basis
* Calculated on a dry gas basis

18. 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)

1. The permittee shall not operate EULINE1 dry material operations unless the A1BF010, A1BF020, A1BF030, A1BF210, A1BF330, A1BF720, DC-961, and DC-962 fabric filters all with associated HEPA filter in series are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes, but is not limited to, maintaining a pressure drop range across each fabric filter according to manufacturer's specifications. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the pressure drop for each fabric filter for 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))**

3.

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 lithium hydroxide emission rates from A1BF330 by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using NIOSH 7300. 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 336.1225, R 336.2001, R 336.2003, R 336.2004)**

2. The permittee shall, upon request by the Department, verify PM and PM10 emission rates from EULINE1 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. 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.

3. 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))**

4. 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 commencement of trial operation of EULINE1. **(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:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
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)
*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:
[1] 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)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by A2BF010 and associated HEPA filter	SC V.2, SC VI.1, SC VI.3	R 336.1331
2. PM10	0.0004 pph	Hourly	The portion of EULINE2 controlled by A2BF010 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
3. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by A2BF020 and associated HEPA filter	SC V.2, SC VI.1, SC VI.3	R 336.1331
4. PM10	0.0006 pph	Hourly	The portion of EULINE2 controlled by A2BF020 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
5. PM	0.002 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by A2BF015 and associated HEPA filter	SC V.2 SC VI.1, SC VI.3	R 336.1331
6. PM10	0.01 pph	Hourly	The portion of EULINE2 controlled by A2BF015 and associated HEPA filter	SC V.2	R 336.1225, 40 CFR 52.21(c) & (d)
7. PM	0.01 lbs per 1,000 lbs of exhaust*	According to method	The portion of EULINE2 associated with A2BF650)	SC V.2 SC VI.1, SC VI.3	R 336.1331

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
8. PM10	0.002 pph	Test Protocol	The portion of EULINE2 associated with A2BF650	SC V.2	R 336.1225, 40 CFR 52.21(c) & (d)
9. Cobalt (weighted emissions from stack)	0.0028 pph	Hourly	The portion of EULINE2 controlled by A2BF720 and associated HEPA filter	SC V.1	R 336.1225
10. PM	0.02 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by A2BF720 and associated HEPA filter	SC V.2, SC VI.1, SC VI.3	R 336.1331
11. PM10	0.03 pph	Hourly	The portion of EULINE2 controlled by A2BF720 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
12. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by DC-963 and associated HEPA filter	SC V.2, SC VI.2	R 336.1331
13. PM10	0.003 pph	Hourly	The portion of EULINE2 controlled by DC-963 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
14. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by DC-964and associated HEPA filter	SC V.2, SC VI.2	R 336.1331
15. PM10	0.003 pph	Hourly	The portion of EULINE2 controlled by DC-964 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
16. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by DC-965 and associated HEPA filter	SC V.2, SC VI.2	R 336.1331
17. PM10	0.003 pph	Hourly	The portion of EULINE2 controlled by DC-965 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
18. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by DC-966 and associated HEPA filter	SC V.2, SC VI.2	R 336.1331

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
19. PM10	0.003 pph	Hourly	The portion of EULINE2 controlled by DC-966 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
20. PM	0.01 lbs per 1000 lbs of gas[a]	Hourly	The portion of EULINE2 controlled by A2BF030 and associated HEPA filter	SC V.2, SC VI.1, SC VI.3	R 336.1331
[a] Calculated on a wet gas basis * Calculated on a dry gas basis					

21. 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, A2BF015, A2BF020, A2BF030, A2BF330, 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. Satisfactory operation includes, but is not limited to, maintaining a pressure drop range across each fabric filter according to manufacturer's specifications. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the pressure drop for each fabric filter for EULINE2 (A2BF010, A2BF015, A2BF020, 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 cobalt emission rates from A2BF720 by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60, Appendix A. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. 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 336.1225, R 336.2001, R 336.2003, R 336.2004)**

2. The permittee shall, upon request by the Department, verify PM and PM10 emission rates from EULINE2 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. 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 (A A2BF010, A2BF015, A2BF020, A2BF030, A2BF330, A2BF720, DC-963, DC-964, DC-965, and 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.

3. 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))**

4. 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 commencement of trial operation of EULINE2. **(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:

Stack ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
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)

Stack ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
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)
*These stacks are vented in a goose-neck down orientation.			

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

IX. OTHER REQUIREMENT(S)

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

Footnotes:
[1] 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.

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

FGLINES
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

All processing lines and associated equipment at the facility.

Emission Unit: EULINE1, EULINE2

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

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

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))**

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall keep in a satisfactory manner, monthly and 12-month rolling time period emission calculations for nickel. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1225)**

VII. REPORTING

NA

VIII. STACK/VENT 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:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

LINE 1 Control Equipment Listing

Process Equipment	Product Recovery Device	Control Systems	Secondary Control HEPA System
Separator (MG-220)	None	A1BF-010*	F-1600 A/B
Buffer Tank (BT-010)	None	A1BF-010*	F-1600 A/B
Separator (MG-120)	None	A1BF-010*	F-1600 A/B
Jet Mill (JM-320	None	BF-330	NA
Mixer (HMX-420)	BF-420	A1BF-010*	F-1600 A/B
Mixed Material Hopper (T-430)	BF-430	A1BF-010*	F-1600 A/B
Screw Conveyor (SCO-440)	None	A1BF-010*	F-1600 A/B
Material Collector (BF-650)	BF-650	NA	F-1601 A/B
Material Feed System (AF-510)	None	A1BF-010*	F-1600 A/B
Separator (MG-730)	None	A1BF-010*	F-1600 A/B
Scale Hopper (T-250)	BF-240	A1BF-020*	F-1600 A/B
Scale Hopper (T-050)	BF-050	A1BF-020*	F-1600 A/B
Scale Hopper (T-150)	BF-150	A1BF-020*	F-1600 A/B
Scale Hopper (T-051)	BF-051	A1BF-020*	F-1600 A/B
Mixer Hopper (T-410)	BF-410	A1BF-020*	F-1600 A/B
Mixer (HMX-420)	BF-420	A1BF-020*	F-1600 A/B
Kiln Dump	None	A1BF-020*	F-1600 A/B
Pneumatic conveyor (PP-620)	None	A1BF-020*	F-1600 A/B
Lithium (T-210)	None	A1BF-210*	F-1600 A/B
Small Adds	None	A1BF-210*	F-1600 A/B
Precursor (T-110)	None	A1BF-210*	F-1600 A/B
Small Adds	None	A1BF-210*	F-1600 A/B
Raw Material Hopper (T-240)	BF-240	A1BF-210*	F-1600 A/B
Material Collector (BF-330)	None	A1BF-330	NA
Material Collector (T-630)	BF-630	A1BF-720*	F-1601 A/B
Material Hopper (T-680)	BF-680	A1BF-720*	F-1601 A/B
Mixer (MX-710)	BF-710	A1BF-720*	F-1601 A/B
RHK-520 Kiln	None	DC-961, DC-962	FLT-961, FLT-962
Roll Crusher (CR-610-1)	None	BF-210*	F-1600 A/B
Roll Crusher (CR-610-1)	None	BF-210*	F-1600 A/B
Line 1 Packout Room	None	BF-030*	F-1601 A/B

* Associated with Compliance

LINE 2 Control Equipment Listing

Process Equipment	Product Recovery Device	Control Systems	Secondary Control HEPA System
Buffer Tank (BT-010)	None	A2-BF-010*	F-1600 A/B
Material Hopper (T-051)	BF-051	A2-BF-010*	F-1600 A/B
Material Hopper (T-150)	BF-150	A2-BF-010*	F-1600 A/B
Material Hopper (T-050)	BF-050	A2-BF-010*	F-1600 A/B
Material Hopper (T-250)	BF-250	A2-BF-010*	F-1600 A/B
Mixing Hopper (T-410)	BF-410	A2-BF-010*	F-1600 A/B
Mixer (HMX-420)	BF-420	A2-BF-010*	F-1600 A/B
Separator (MG-320)	None	A2-BF-015*	F-1600 A/B
Jet Mill (JM-320)	None	A2-BF-015*	F-1600 A/B
Hopper (HF-040)	BF-040	A2-BF-015*	F-1600 A/B
Hopper (T-110)	None	A2-BF-015*	F-1600 A/B
Magnetic Separator (MG-120)	None	A2-BF-015*	F-1600 A/B
Raw Material Hopper (T-240)	BF-240	A2-BF-015*	F-1600 A/B
Mixer (HMX-420)	BF-420	A2-BF-015*	F-1600 A/B
Mixed Material Hopper (T-430)	BF-430	A2-BF-015*	F-1600 A/B
Screw Conveyor (SCC-440)	None	A2-BF-015*	F-1600 A/B
Separator (MG-635)	None	A2-BF-015*	F-1600 A/B
Material Collector (BF-650)	BF-650	A2-BF-015*	F-1600 A/B
Magnetic Separator (MG-670)	None	A2-BF-015*	F-1600 A/B
Material Hopper (T-675)	None	A2-BF-015*	F-1600 A/B
Raw Material Hopper (T-210)	None	A2-BF-015*	F-1600 A/B
Roll Crusher (CR-610-1)	None	A2-BF-020*	F-1600 A/B
Roll Crusher (CR-610-2)	None	A2-BF-020*	F-1600 A/B
Pneumatic Conveyor (PP-620)	None	A2-BF-020*	F-1600 A/B
Material Hopper (T-630)	BF-630	A2-BF-720*	F-1601 A/B
Material Hopper (T-680)	BF-680	A2-BF-720*	F-1601 A/B
Mixer (MX-710)	BF-710	A2-BF-720*	F-1601 A/B
Kilns (RHK-520A and RHK-520B)	None	DC-963, DC-964, DC-965, DC-966	FLT-963, 964, 965, 966
Material Feed system (AF-510)	None	A2-BF-020*	F-1600 A/B
Kiln Dump	None	A2-BF-020*	F-1600 A/B
Material Collector (BF-330)	None	A2-BF-330	NA
Line 2 Packout Room	None	A2-BF-030*	F-1601 A/B

* Associated with Compliance Demonstration for CMAS

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: P008	Section Number (if applicable):

1. Additional Information ID
AI-NEW ARs

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Attached please find the newly created tables for the applicable requirements associated with:
1. 40 CFR 63 subpart 6V
2. 40 CFR 60 subpart IIII

D. FLEXIBLE GROUP CONDITIONS

Part D outlines terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

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

FLEXIBLE GROUP SUMMARY TABLE

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

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG – 6V NESHAP	Everything included in Lines One and Two at the facility.	EU-LINE1 EU-LINE2

FG- 6V NESHAP – NESHAP FOR CHEMICAL MANUFACTURING AREA SOURCES
FLEXIBLE GROUP 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 EULINE1 and EULINE2. Each line represents a new chemical manufacturing process unit (CMPU) as defined in 40 CFR Part 63, Subpart VVVVVV.

Emission Units: EU-LINE1, EU-LINE2

POLLUTION CONTROL EQUIPMENT

- **Baghouses** – A1BF010, A1BF020, A1BF030, A1BF210, ~~A1BF650,~~ A1BF720, A2BF010, A2BF015, A2BF020, A2BF030, ~~A2BF650,~~ A2BF720

I. EMISSION LIMIT(S)

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

II. MATERIAL LIMIT(S)

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

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. For metal HAP emissions from each CMPU using Table 1 metal HAP, the permittee shall comply with the applicable requirements as described in 40 CFR 63.11496(f), and Table 4 of this subpart, including but not limited to: **(40 CFR 63.11496(f))**

    a. If the collective uncontrolled metal HAP emissions from all metal HAP process vents from a CMPU are equal to or greater than 400 lb/yr, then permittee must also determine the sum of metal HAP emissions from all metal HAP process vents within any CMPU subject to this subpart. To determine the mass emission rate permittee may use process knowledge, engineering assessment, or test data. Permittee must keep records of the emissions calculations. **(40 CFR 63.11496(f)(1))**

    b. If you have a new source using a control device other than a baghouse to comply with the HAP metals emission limits in Table 4 to this subpart, you must comply with the initial compliance and monitoring requirements including: **(40 CFR 63.11496(f)(5))**

        i. A description of the device; **(40 CFR 63.11496(f)(3)(i)(A))**

        ii. Results of a performance test or engineering assessment conducted in accordance with paragraph (f)(3)(ii) of this section verifying the performance of the device for reducing HAP metals or particulate matter (PM) to the levels required by this subpart; **(40 CFR 63.11496(f)(3)(i)(B))**

        iii. Operation and maintenance plan for the control device (including a preventative maintenance schedule consistent with the manufacturer's instructions for routine and long-

term maintenance) and continuous monitoring system (CMS). **(40 CFR 63.11496(f)(3)(i)(C))**

iv. A list of operating parameters that will be monitored to maintain continuous compliance with the applicable emissions limits; and **(40 CFR 63.11496(f)(3)(i)(D))**

v. Operating parameter limits based on either monitoring data collected during the performance test or established in the engineering assessment. **(40 CFR 63.11496(f)(3)(i)(E))**

2. The permittee shall comply with the applicable Management practices specified in 40 CFR 63.11495(a)(1) through (5), as applicable. These practices include but are not limited to: **(40 CFR 63.11495(a))**

   a. Each process vessel must be equipped with a cover or lid that must be closed at all times when it is in metal HAP service except for manual operations that require access, such as material addition and removal, inspection, sampling and cleaning. **(40 CFR 63.11495(a)(1))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. For new sources using a baghouse as a control device, if the collective uncontrolled metal HAP emissions from all metal HAP process vents from a CMPU are equal to or greater than 400 lb/yr, then permittee must install, operate, and maintain a bag leak detection system on all baghouses used to comply with the HAP metals emissions limit in Table 4 to 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 11410 (g)(1)(i))**

   b. The bag leak detection system sensor must provide output of relative PM loadings. **(40 CFR 11410 (g)(1)(ii))**

   c. The bag leak detection system must be equipped with an alarm system that will sound when the system detects an increase in relative particulate loading over the alarm set point established according to paragraph (g)(1)(iv) of this section, and the alarm must be located such that it can be heard by the appropriate plant personnel. **(40 CFR 11410 (g)(1)(iii))**

   d. In the initial adjustment of the bag leak detection system, permittee must establish, at a minimum, the baseline output by adjusting the sensitivity (range) and the averaging period of the device, the alarm set points, and the alarm delay time. **(40 CFR 11410 (g)(1)(iv))**

   e. Following initial adjustment, you shall not adjust the averaging period, alarm set point, or alarm delay time without approval from the Administrator or delegated authority except as provided in paragraph (g)(1)(vi) of this section. **(40 CFR 11410 (g)(1)(v))**

   f. Once per quarter, permittee may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan required by paragraph (g)(2) of this section. **(40 CFR 11410 (g)(1)(vi))**

   g. Permittee must install the bag leak detection sensor downstream of the baghouse and upstream of any wet scrubber. **(40 CFR 11410 (g)(1)(vii))**

   h. Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors. **(40 CFR 11410 (g)(1)(viii))**

V. TESTING/SAMPLING

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

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

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

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall keep all records required by 40 CFR 63.11501. These records include, but are not limited to, the following:
   a. Each applicable record required by 40 CFR Part 63, Subpart A and Table 9 to subpart VVVVVV. **(40 CFR 63.11501(a)**
   b. Permittee must comply with applicable requirements pertaining to process vents such as inspection reports, calculations, HAP emissions, malfunctions, and control device monitoring plans as specified in paragraphs (c)(1) through (8) of this section. **(63.11501 (c))**

2. If permittee is a new source using a baghouse as a control device, required to maintain bag leak detection systems, and if the collective uncontrolled metal HAP emissions from all metal HAP process vents from a CMPU are equal to or greater than 400 lb/yr, then permittee must comply with monitoring requirements in 40CFR 63.11410(g)(2) including an approved site specific monitoring plan that includes but is not limited to: **(40 CFR 63.11496(f)(4))**

   a. Description of installation of the bag leak detection system **(40 CFR 63.11410 (g)(2)(i))**

   b. Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point will be established **(40 CFR 63.11410 (g)(2)(ii))**

   c. Operation of the bag leak detection system, including quality assurance procedures **(40 CFR 63.11410 (g)(2)(iii))**

   d. How the bag leak detection system will be maintained, including a routine maintenance schedule and spare parts inventory list; **(40 CFR 63.11410 (g)(2)(iv))**

   e. How the bag leak detection system output will be recorded and stored; and **(40 CFR 63.11410 (g)(2)(v))**

   f. Corrective action procedures as specified in paragraph (g)(3) of this section **(40 CFR 63.11410 (g)(2)(vi))**

3. Permittee must conduct inspections of process vessels and equipment for each CMPU in metal HAP service, as specified in paragraphs (a)(3)(i) through (a)(3)(v) of this section, to demonstrate compliance and determine that the process vessels and equipment are sound and free of leaks. Requirements for inspections include but are not limited to: **(40 CFR 63.11495(a)(3))**

   a. Inspections must be conducted at least quarterly. **(40 CFR 63.11495(a)(3)(i))**

   b. For these inspections, detection methods incorporating sight, sound, or smell are acceptable. Indications of a leak identified using such methods constitute a leak unless you demonstrate that the indications of a leak are due to a condition other than loss of HAP. If indications of a leak are determined not to be HAP in one quarterly monitoring period, you must still perform the inspection and demonstration in the next quarterly monitoring period. **(40 CFR 63.11495(a)(3)(ii))**

   c. As an alternative to conducting inspections, as specified in paragraph (a)(3)(ii) of this section, permittee may use Method 21 of 40 CFR part 60, appendix A-7, with a leak definition of 500 ppmv to detect leaks. Permittee may also use Method 21 with a leak definition of 500 ppmv to determine if indications of a leak identified during an inspection conducted in accordance with paragraph (a)(3)(ii) of this section are due to a condition other than loss of HAP. The procedures in this paragraph (a)(3)(iii) may not be used as an alternative to the inspection required by paragraph (a)(3)(ii) of this section for process vessels that contain metal HAP as particulate. **(40 CFR 63.11495(a)(3)(iii))**

   d. Inspections must be conducted while the subject CMPU is operating. **(40 CFR 63.11495(a)(3)(iv))**

e. No inspection is required in a calendar quarter during which the subject CMPU does not operate for the entire calendar quarter and is not in metal HAP service. If the CMPU operates at all during a calendar quarter, an inspection is required. **(40 CFR 63.11495(a)(3)(v))**

4. You must repair any leak within 15 calendar days after detection of the leak, or document the reason for any delay of repair. For the purposes of this paragraph (a)(4), a leak will be considered "repaired" if a condition specified in paragraph (a)(4)(i), (ii), or (iii) of this section is met. **(40 CFR 63.11495(a)(4))**

   a. The visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated, or **(40 CFR 63.11495(a)(4)(i))**

   b. No bubbles are observed at potential leak sites during a leak check using soap solution, or **(40 CFR 63.11495(a)(4)(ii))**

   c. The system will hold a test pressure. **(40 CFR 63.11495(a)(4)(iii))**

   d. You must keep records of the dates and results of each inspection event, the dates of equipment repairs, and, if applicable, the reasons for any delay in repair. **(40 CFR 63.11495(a)(5))**

5. If permittee is a new source using a baghouse as a control device, required to maintain bag leak detection systems, and if the collective uncontrolled metal HAP emissions from all metal HAP process vents from a CMPU are equal to or greater than 400 lb/yr, then permittee must comply with recordkeeping requirements in 40CFR 63.11410(g)(4) including but not limited to: **(40 CFR 63.11496(f)(4))**

   a. Records of the bag leak detection system output; **(40 CFR 63.11410(g)(4)(i))**

   b. Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and **(40 CFR 63.11410(g)(4)(ii))**

   c. The date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and whether the alarm was alleviated within 3 hours of the alarm. **(40 CFR 63.11410(g)(4)(iii))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit all reports required by 40 CFR 63.11501. These reports include, but are not limited to, the following:

   a. Semiannual compliance reports that contain information specified in Subpart VVVVVV, including but not limited to, deviations, delay of leak repair, process change, date for alternative standards, overlapping rule requirements, and/or malfunctions. **(40 CFR 63.11501 (d))**

5. The Permittee shall submit all notifications required by 40 CFR 63.11501. These notifications include, but are not limited to, the following:

a. Notification of Compliance Status (NOCS). The permittee's NOCS required by §63.9(h) must include the additional information as noted in 40 CFR 63.11501(b)(1) through (5) as applicable. **(40 CFR 63.11501 (b))**

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

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

2. The permittee shall comply with the applicable General Provisions in 40 CFR 63.1 through 40 CFR 63.15. **(40 CFR 63.1-15)**

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

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

PERMIT TO INSTALL

Table of Contents

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_2e	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_2S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO_x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO_2	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**

2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**

3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**

4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**

5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**

6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**

7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**

8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.

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

10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
    1. A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
    2. A visible emission limit specified by an applicable federal new source performance standard.
    3. A visible emission limit specified as a condition of this Permit to Install.

12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
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	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	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-1601A/B, FLT-961, FLT-962)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1 controlled by A1BF010 and associated HEPA filter	SC V.2, SC VI.1, SC VI.3	R 336.1331
2. PM10	0.0004 pph	Hourly	The portion of EULINE1 controlled by A1BF010 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
3. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1 controlled by A1BF020 and associated HEPA filter	SC V.2, SC VI.1, SC VI.3	R 336.1331
4. PM10	0.0007 pph	Hourly	The portion of EULINE1 controlled by A1BF020 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
5. PM	0.002 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1 controlled by A1BF210 and associated HEPA filter	SC V.2, SC VI.1, SC VI.3	R 336.1331
6. PM10	0.01 pph	Hourly	The portion of EULINE1 controlled by A1BF210 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
7. PM	0.01 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1 controlled by A1BF330 and associated HEPA filter	SC V.2, SC VI.1, SC VI.3	R 336.1331

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
8. Lithium hydroxide	0.012 pph	Hourly	The portion of EULINE1 controlled by A1BF330 and associated HEPA filter	SC V.1	R 336.1225
9. PM	0.01 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1utilizing A1BF650	SC V.2, SC VI.1, SC VI.3	R 336.1331
10. PM10	0.002 pph	Hourly	The portion of EULINE1 utilizing A1BF650	SC V.2	R 336.1225, 40 CFR 52.21(c) & (d)
11. PM	0.02 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1 controlled by A1BF720 and associated HEPA filter	SC V.2, SC VI.1, SC VI.3	R 336.1331
12. PM10	0.03 pph	Hourly	The portion of EULINE1 controlled by A1BF720 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
13. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1 controlled by FLT-961 and associated HEPA filter	SC V.2, SC VI.2	R 336.1331
14. PM10	0.003 pph	Hourly	The portion of EULINE1 controlled by FLT-961 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
55. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1 controlled by FLT-962 and associated HEPA filter	SC V.2, SC VI.2	R 336.1331
16. PM10	0.003 pph	Hourly	The portion of EULINE1 controlled by FLT-962 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
17. PM	0.01 lbs per 1000 lbs of gas[a]	Hourly	The portion of EULINE1 controlled by A1BF030 and associated HEPA filter	SC V.2, SC VI.1, SC VI.3	R 336.1331

[a] Calculated on a wet gas basis
* Calculated on a dry gas basis

18. 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)

1. The permittee shall not operate EULINE1 dry material operations unless the A1BF010, A1BF020, A1BF030, A1BF210, A1BF330, A1BF720, DC-961, and DC-962 fabric filters all with associated HEPA filter in series are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes, but is not limited to, maintaining a pressure drop range across each fabric filter according to manufacturer's specifications. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the pressure drop for each fabric filter for 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))**

3.

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 lithium hydroxide emission rates from A1BF330 by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using NIOSH 7300. 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 336.1225, R 336.2001, R 336.2003, R 336.2004)**

2. The permittee shall, upon request by the Department, verify PM and PM10 emission rates from EULINE1 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. 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.

3. 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))**

4. 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 commencement of trial operation of EULINE1. **(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:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
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)
*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:
[1] 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)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by A2BF010 and associated HEPA filter	SC V.2, SC VI.1, SC VI.3	R 336.1331
2. PM10	0.0004 pph	Hourly	The portion of EULINE2 controlled by A2BF010 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
3. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by A2BF020 and associated HEPA filter	SC V.2, SC VI.1, SC VI.3	R 336.1331
4. PM10	0.0006 pph	Hourly	The portion of EULINE2 controlled by A2BF020 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
5. PM	0.002 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by A2BF015 and associated HEPA filter	SC V.2 SC VI.1, SC VI.3	R 336.1331
6. PM10	0.01 pph	Hourly	The portion of EULINE2 controlled by A2BF015 and associated HEPA filter	SC V.2	R 336.1225, 40 CFR 52.21(c) & (d)
7. PM	0.01 lbs per 1,000 lbs of exhaust*	According to method	The portion of EULINE2 associated with A2BF650)	SC V.2 SC VI.1, SC VI.3	R 336.1331

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
8. PM10	0.002 pph	Test Protocol	The portion of EULINE2 associated with A2BF650	SC V.2	R 336.1225, 40 CFR 52.21(c) & (d)
9. Cobalt (weighted emissions from stack)	0.0028 pph	Hourly	The portion of EULINE2 controlled by A2BF720 and associated HEPA filter	SC V.1	R 336.1225
10. PM	0.02 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by A2BF720 and associated HEPA filter	SC V.2, SC VI.1, SC VI.3	R 336.1331
11. PM10	0.03 pph	Hourly	The portion of EULINE2 controlled by A2BF720 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
12. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by DC-963 and associated HEPA filter	SC V.2, SC VI.2	R 336.1331
13. PM10	0.003 pph	Hourly	The portion of EULINE2 controlled by DC-963 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
14. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by DC-964and associated HEPA filter	SC V.2, SC VI.2	R 336.1331
15. PM10	0.003 pph	Hourly	The portion of EULINE2 controlled by DC-964 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
16. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by DC-965 and associated HEPA filter	SC V.2, SC VI.2	R 336.1331
17. PM10	0.003 pph	Hourly	The portion of EULINE2 controlled by DC-965 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
18. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by DC-966 and associated HEPA filter	SC V.2, SC VI.2	R 336.1331

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
19. PM10	0.003 pph	Hourly	The portion of EULINE2 controlled by DC-966 and associated HEPA filter	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
20. PM	0.01 lbs per 1000 lbs of gas[a]	Hourly	The portion of EULINE2 controlled by A2BF030 and associated HEPA filter	SC V.2, SC VI.1, SC VI.3	R 336.1331
[a] Calculated on a wet gas basis * Calculated on a dry gas basis					

21. 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, A2BF015, A2BF020, A2BF030, A2BF330, 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. Satisfactory operation includes, but is not limited to, maintaining a pressure drop range across each fabric filter according to manufacturer's specifications. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the pressure drop for each fabric filter for EULINE2 (A2BF010, A2BF015, A2BF020, 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 cobalt emission rates from A2BF720 by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60, Appendix A. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. 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 336.1225, R 336.2001, R 336.2003, R 336.2004)**

2. The permittee shall, upon request by the Department, verify PM and PM10 emission rates from EULINE2 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. 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 (A A2BF010, A2BF015, A2BF020, A2BF030, A2BF330, A2BF720, DC-963, DC-964, DC-965, and 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.

3. 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))**

4. 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 commencement of trial operation of EULINE2. **(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:

Stack ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
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)

Stack ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
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)
*These stacks are vented in a goose-neck down orientation.			

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

IX. OTHER REQUIREMENT(S)

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

Footnotes:
[1] 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.

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

FGLINES
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

All processing lines and associated equipment at the facility.

Emission Unit: EULINE1, EULINE2

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

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

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))**

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall keep in a satisfactory manner, monthly and 12-month rolling time period emission calculations for nickel. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1225)**

VII. REPORTING

NA

VIII. STACK/VENT 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:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

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

RENEWABLE OPERATING PERMIT APPLICATION
C-001: CERTIFICATION

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

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

Form Type **C-001**	SRN P0089

Stationary Source Name BASF Toda America, INC.	
City Battle Creek	County Calhoun

SUBMITTAL CERTIFICATION INFORMATION

1. Type of Submittal *Check only one box.*

☒ Initial Application (Rule 210) ☐ Notification / Administrative Amendment / Modification (Rules 215/216)

☐ Renewal (Rule 210) ☐ Other, describe on AI-001

2. If this ROP has more than one Section, list the Section(s) that this Certification applies to _____

3. Submittal Media ☒ E-mail ☐ FTP ☐ Disk ☒ Paper

4. Operator's Additional Information ID - Create an Additional Information (AI) ID that is used to provide supplemental information on AI-001 regarding a submittal.

AI

CONTACT INFORMATION

Contact Name David W. Sheavesl	Title Expert, Environmental Protection
Phone number 734-476-7608	E-mail address david.sheaves@basf.com

This form must be signed and dated by a Responsible Official.

Responsible Official Name Ivor A. Bull			Title Chief Operating Officer	
Mailing address 4750 W. Dickman Road				
City Battle Creek	State MI	ZIP Code 49037	County Calhoun	Country USA

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

Signature of Responsible Official

11/24/2020
Date