ZFS Ithaca, LLC

February 9, 2021

Michigan Department of Environment, Great Lakes, and Energy
Air Quality Division
AQD District Supervisor
Constitution Hall, 525 W. Allegan St., 1 South
Lansing, MI 48909-7760

Re: Application for Renewable Operating Permit
ZFS Ithaca, LLC, Ithaca, MI

Dear AQD District Supervisor:

ZFS Ithaca, LLC (ZFS Ithaca) respectfully submits the following Renewable Operating Permit Initial Application. If you have any questions, please call or email me (616-879-1711 or bridgetter@zfsinc.com).

Sincerely,

Bridgette L. Rillema

Bridgette L. Rillema, P.E.
Environmental Manager

Enclosed: Renewable Operating Permit Application

1212 E. Center St., Ithaca, Michigan USA 48847
P: 989.449.6100 • F: 989.449.4001

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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: ZFS Ithaca, LLC	SRN: P0788	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)

Bridgette Rillema, Environmental Manager

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

Bridgette L. Rillema — **Signature of Responsible Official**

2/9/21 — **Date**

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RENEWABLE OPERATING PERMIT INITIAL APPLICATION
S-001 STATIONARY SOURCE INFORMATION

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

SRN: P0788	Section Number (if applicable):

SOURCE INFORMATION

SIC Code	NAICS Code
2075	311224

Source Name
ZFS Ithaca, LLC

Street Address
1266 E. Washington Rd

City	State	ZIP Code	County
Ithaca	MI	48847	Gratiot

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

Source Description
ZFS Ithaca, LLC is a grain elevator and soybean processing facility

OWNER INFORMATION

Owner Name
ZFS Ithaca, LLC

Mailing address (☒ check if same as source address)

City	State	ZIP Code	County	Country

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

☐

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RENEWABLE OPERATING PERMIT INITIAL APPLICATION FORM
S-002 CONTACT AND RESPONSIBLE OFFICIAL INFORMATION

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

SRN: P0788	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	
Bridgette Rillema			Environmental Manager	
Company Name & Mailing address (☐ check if same as source address)				
ZFS Solutions, LLC				
City	State	ZIP Code	County	Country
Zeeland	MI	49464	Ottawa	USA
Phone number		E-mail address		
616-879-1711		BridgetteR@zfsinc.com		

Contact 2 Name (optional)			Title	
Brandon LaRosa			Environmental Engineer	
Company Name & Mailing address (☐ check if same as source address)				
ZFS Solutions, LLC				
City	State	ZIP Code	County	Country
Zeeland	MI	49464	Ottawa	USA
Phone number		E-mail address		
616-879-1715		BrandonL@zfsinc.com		

RESPONSIBLE OFFICIAL INFORMATION

Responsible Official 1 Name			Title	
Bridgette Rillema			Environmental Manager	
Company Name & Mailing address (☐ check if same as source address)				
ZFS Solutions, LLC				
City	State	ZIP Code	County	Country
Zeeland	MI	49464	Ottawa	USA
Phone number		E-mail address		
616-879-1711		BridgetteR@zfsinc.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-**

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RENEWABLE OPERATING PERMIT INITIAL APPLICATION
S-003 SOURCE REQUIREMENT INFORMATION

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

SRN: P0788	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-**02,03,04,05

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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: P0788	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-			
EU-			
EU-			
EU-			
EU-			
EU-			
EU-			
EU-			
EU-			

Comments:

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

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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: P0788	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		

Comments:

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

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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: P0788	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
See AI-001 Form	**EU-**		
	EU-		
	EU-		
	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-**06,07

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

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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: P0788	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-**

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Michigan Department of Environment, Great Lakes, and Energy - 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: P0788	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- HANDLING

Flexible Group Description

Grain shipping and receiving operations, grain handling, and grain storage. Loading and unloading operations and grain handling are subject to NSPS DD for Grain Elevators. Emissions from loadout and receiving are controlled by a baghouse. Fugitive particulate emissions are minimized by an oil spray on the grain.

Emission Unit IDs

EU-SHIPRECEIVE	**EU-**	**EU-**	**EU-**
EU-HANDLING	**EU-**	**EU-**	**EU-**
EU-BINS	**EU-**	**EU-**	**EU-**
EU-	**EU-**	**EU-**	**EU-**
EU-	**EU-**	**EU-**	**EU-**
EU-	**EU-**	**EU-**	**EU-**
EU-	**EU-**	**EU-**	**EU-**

Flexible Group ID

FG-LOADSTORE

Flexible Group Description

Soybean hull and meal storage and loadout, and ingredient receiving and storage. Each emission unit is controlled by a baghouse.

Emission Unit IDs

EU-HULLSTORAGE	**EU-**	**EU-**	**EU-**
EU-HULLLOADOUT	**EU-**	**EU-**	**EU-**
EU-LOADOUT	**EU-**	**EU-**	**EU-**
EU-INGREDIENTS	**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-**

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Michigan Department of Environment, Great Lakes, and Energy - 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: P0788	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-**EXTRACTION			
Flexible Group Description Processes subject to NESHAP GGGG for Solvent Extraction for Vegetable Oil Production, including soybean oil extraction process and 3 hexane storage tanks controlled by mineral oil adsorption system (MOS), 3 meal dryers and 1 meal cooler each controlled by a cyclone, and storage of crude soybean meal.			
Emission Unit IDs			
EU-EXTRACTION	**EU-**	**EU-**	**EU-**
EU-DC	**EU-**	**EU-**	**EU-**
EU-TANK1	**EU-**	**EU-**	**EU-**
EU-TANK2	**EU-**	**EU-**	**EU-**
EU-TANK3	**EU-**	**EU-**	**EU-**
EU-MEALSTORAGE	**EU-**	**EU-**	**EU-**
EU-	**EU-**	**EU-**	**EU-**

Flexible Group ID **FG-**BOILERS			
Flexible Group Description Two (2) natural gas fired boilers, each with maximum heat input of 95 MMBtu/hr.			
Emission Unit IDs			
EU-BOILER1	**EU-**	**EU-**	**EU-**
EU-BOILER2	**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-**

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Michigan Department of Environment, Great Lakes, and Energy - 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: P0788	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-BOILERMACT

Flexible Group Description

Gas 1 Fuel Subcategory requirements for new Boilers/Process Heaters at major sources of Hazardous Air Pollutants per 40 CFR Part 63, Subpart DDDDD.

Emission Unit IDs

EU-BOILER1	**EU-**	**EU-**	**EU-**
EU-BOILER2	**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-**

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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: P0788	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 Part 60, Subpart DD - Standards of Performance for Grain Elevators	EUSHIPRECEIVE, EUDRYING1, EUHANDLING	☒ PTI No. 20-17B ☐ Template Table* ☐ Newly Created Table**
40 CFR Part 63, Subpart DDDDD - NESHAP for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters	EUBOILER1, EUBOILER2	☒ PTI No. 20-17B ☐ Template Table* ☐ Newly Created Table**
40 CFR Part 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	EUBOILER1, EUBOILER2	☒ PTI No. 20-17B ☐ Template Table* ☐ Newly Created Table**
40 CFR Part 63, Subpart GGGG - National Emission Standards for Hazardous Air Pollutants: Solvent Extraction for Vegetable Oil Production	EUPREP	☒ PTI No. 20-17B ☐ Template Table* ☐ Newly Created Table**
40 CFR Part 63, Subpart GGGG - National Emission Standards for Hazardous Air Pollutants: Solvent Extraction for Vegetable Oil Production	EUEXTRACTION, EUDC, EUTANK1, EUTANK2, EUTANK3, EUMEALSTORAGE	☐ 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-**08,09

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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: P0788	Section Number (if applicable):

APPLICABLE REQUIREMENTS NOT INCLUDED IN A PTI, MACT, NESHAPS, NSPS, OR PERMIT EXEMPTION

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

1. Is there an emission unit identified on an EU-004 Form that is subject to **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-**	

EGLE

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: P0788	Section Number (if applicable):

Complete a Source-wide table for any conditions that apply to the entire source. A blank Source-wide template table is available on the EGLE Internet at:
http://michigan.gov/air (select the Permits Tab, "Renewable Operating Permits (ROP)/Title V", then "ROP Forms & Templates")

1. Are there any applicable requirements that apply to the entire source? 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	

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

EGLE

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: P0788	Section Number (if applicable):

1. Additional Information ID
AI-01

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Compliance Statement Information:

ZFS Ithaca is currently not in compliance with the carbon monoxide emission limit for EUDRYING1. The EGLE issued ZFS Ithaca a Violation Notice on September 22, 2020 for this situation. The applicable permit condition from PTI 20-17B is EUDRYING1 I.6. A stack test was performed on the unit in June 2020, the results of which showed a carbon monoxide emission rate of 5.85 pounds per hour. The permit limit is 5.54 pounds per hour. Subsequent testing in November 2020 showed the unit was not able to meet the 5.54 pound per hour limit for carbon monoxide. Therefore, ZFS Ithaca submitted a Permit to Install Application to the EGLE on January 12, 2021 requesting to increase the carbon monoxide emission limit for EUDRYING1. By raising the permitted limit of carbon monoxide emissions, the unit will be in compliance.

ZFS Ithaca was previously not in compliance with the PM10 and PM2.5 emission limits for EUPELLETIZING. The EGLE issued ZFS Ithaca a Violation Notice on October 26, 2020 for this situation. The applicable permit condition from PTI 20-17B is EUPELLETIZING I.3 & I.4. A stack test was performed on the unit in July 2020, the results of which showed a PM10 and PM2.5 emission rate of 1.03 pounds per hour. The permit limit is 0.8 pounds per hour for both PM10 and PM2.5. On September 24, 2020, staff reviewed air flow piping and ductwork that was installed and routed to the EUPELLETIZING cyclone. It was determined that some equipment that was part of the hull grinding process was being aspirated to the EUPELLETIZING cyclone instead of the EUHULLGRINDING baghouse. Staff corrected this by removing the existing ductwork and installing new ductwork that was routed the EUHULLGRINDING baghouse. The piping which was previously connected to the EUPELLETIZING cyclone has been removed. The unit was tested again on November 10, 2020, the results of which showed a PM10 and PM2.5 emission rate of 0.06 pounds per hour. The stack test report was submitted to the EGLE on January 7, 2021. Given the most recent stack test information, ZFS Ithaca believes EUPELLETIZING is currently in compliance with all permit conditions.

EGLE

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: P0788	Section Number (if applicable):

1. Additional Information ID
AI-02

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Per Form S-003 Question 5: Attached are Potential to Emit (PTE) calculations for pollutants that exceed 100 tons per year. The specific pollutants which exceed 100 tons per year are Carbon Monoxide (CO), Nitrogen Oxide (NO), and Volatile Organic Compounds (VOC).

Potential to Emit for Carbon Monoxide

Pollutant: Carbon Monoxide
Total Site PTE: 119.9 tons per year

Emission Units Contributing to Total

EUDRYING1	51.4	tons per year
EUBOILER1	34.3	tons per year
EUBOILER2	34.3	tons per year

PTE Calculations for EUDRYING1

Exhuast Flow Rate (per stack)	45,000	dscfm
CO Molecular Weight	28.01	lb/lb-mol
CO Concentration[(1)]	12	ppmv

CO Emission Rate per stack[(2)]	2.35	lb/hr
CO Emission Rate per stack[(2)]	10.3	tpy

Final PTE (5 Stacks)[(3)]	**51.4**	**tpy**

1 - Concentration based on June 2020 stack test, internal subsequent analysis completed in November 2020, and professional engineering judgement to assure future emissions compliance
2- CO emissions are derived using the equation below:
lb/hr = ppm x dscfm x [(MW/24.14) x (1 g/1000 mg) x (1 lb/453.6 g) x (1m3/35.31 ft3) x (60 min/hr)]
TPY = (lb/hr) x (8760 hr/year) x (1 ton/2000 lb)
3- EUDRYING1 has 5 total stacks. Therefore, it was assumed that the emission rate at one stack was representative of all stacks, and the emission rate at one stack was multiplied by 5 to calculate the emission rate for the entire unit running 8,760 hours per year.

PTE Calculations for EUBOILER1

Exhuast Flow Rate [(1)]	84	lb/MMCF
Conversion Factor [(1)]	1020	BTU/SCF
Boiler Heat Input Capacity	95	MMBTU/hr

CO Emission Rate [(2)]	**7.82**	**lb/hr**
CO Emission Rate [(2)]	**34.3**	**tpy**

1 - Based on AP 42 Chapter 1.4 Table 1.4-1
2 - CO emissions are derived using the equation below:
lb/hr = (84 lb/MMCF) x (1 MMSCF/1020 MMBTU) x (95 MMBTU/hr)
TPY = (lb/hr) x (8760 hr/year) x (1 ton/2000 lb)

Potential to Emit for Carbon Monoxide

PTE Calculations for EUBOILER2

Exhuast Flow Rate [1]	84	lb/MMCF
Conversion Factor [1]	1020	BTU/SCF
Boiler Heat Input Capacity	95	MMBTU/hr

CO Emission Rate [2]	**7.82**	**lb/hr**
	34.3	**tpy**

1 - Based on AP 42 Chapter 1.4 Table 1.4-1

2 - CO emissions are derived using the equation below:
lb/hr = (84 lb/MMCF) x (1 MMSCF/1020 MMBTU) x (95 MMBTU/hr)
TPY = (lb/hr) x (8760 hr/year) x (1 ton/2000 lb)

Potential to Emit for Nitrogen Oxide

Pollutant: Nitrogen Monoxide
Total Site PTE: 109.9 tons per year

Emission Units Contributing to Total

EUDRYING1	28.3	tons per year
EUBOILER1	40.8	tons per year
EUBOILER2	40.8	tons per year

PTE Calculations for EUDRYING1

Exhuast Flow Rate [1]	100	lb/MMCF
Conversion Factor [1]	1020	BTU/SCF
Dryer Heat Input Capacity	66	MMBTU/hr

NOx Emission Rate [2]	**6.47**	**lb/hr**
NOx Emission Rate [2]	**28.3**	**tpy**

1 - Based on AP 42 Chapter 1.4 Table 1.4-1

2 - NOx emissions are derived using the equation below:
lb/hr = (100 lb/MMCF) x (1 MMSCF/1020 MMBTU) x (95 MMBTU/hr)
TPY = (lb/hr) x (8760 hr/year) x (1 ton/2000 lb)

PTE Calculations for EUBOILER1

Exhuast Flow Rate [1]	100	lb/MMCF
Conversion Factor [1]	1020	BTU/SCF
Boiler Heat Input Capacity	95	MMBTU/hr

NOx Emission Rate [2]	**9.31**	**lb/hr**
NOx Emission Rate [2]	**40.8**	**tpy**

1 - Based on AP 42 Chapter 1.4 Table 1.4-1

2 - NOx emissions are derived using the equation below:
lb/hr = (100 lb/MMCF) x (1 MMSCF/1020 MMBTU) x (95 MMBTU/hr)
TPY = (lb/hr) x (8760 hr/year) x (1 ton/2000 lb)

Potential to Emit for Nitrogen Oxide

PTE Calculations for EUBOILER2

Exhuast Flow Rate [1]	100	lb/MMCF
Conversion Factor [1]	1020	BTU/SCF
Boiler Heat Input Capacity	95	MMBTU/hr

NOx Emission Rate [2]	**9.31**	**lb/hr**
NOx Emission Rate [2]	**40.8**	**tpy**

1 - Based on AP 42 Chapter 1.4 Table 1.4-1

2 - NOx emissions are derived using the equation below:
lb/hr = (100 lb/MMCF) x (1 MMSCF/1020 MMBTU) x (95 MMBTU/hr)
TPY = (lb/hr) x (8760 hr/year) x (1 ton/2000 lb)

Potential to Emit for Volatile Organic Compounds

Pollutant: Volatile Organic Compounds
Total Site PTE: 195.1 tons per year

Emission Units Contributing to Total

EUEXTRACTION	62.63	tons per year
EUDC	132.50	tons per year

PTE Calculations for EUEXTRACTION

VOC Emission Rate [(1)]	**14.30**	**lb/hr**
VOC Emission Rate [(1)]	**62.63**	**tpy**

1 - Based on permit limit at similair soybean processing facility, scaled to represent the plant production rate of 3,800 tons of soybeans per day

PTE Calculations for EUDC

VOC Emission Rate [(1)]	**30.25**	**lb/hr**
VOC Emission Rate [(1)]	**132.50**	**tpy**

1 - Based on manufacturer of equipment and plant production rate of 3,800 tons of soybeans per day

EGLE

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: P0788	Section Number (if applicable):

1. Additional Information ID
AI-03

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Per Form S-003 Question 6: Attached are Potential to Emit (PTE) calculations and actual emission calculations for hazardous air pollutants (HAPs)

Potential to Emit for Hazardous Air Pollutants

Pollutant: Hazardous Air Pollutants (Hexane)
Total Site PTE: 195.1 tons per year

Emission Units Contributing to Total

EUEXTRACTION	62.63	tons per year
EUDC	132.50	tons per year

PTE Calculations for EUEXTRACTION

VOC Emission Rate [(1)]	**14.30**	**lb/hr**
VOC Emission Rate [(1)]	**62.63**	**tpy**

1 - Based on permit limit at similair soybean processing facility, scaled to represent the plant production rate of 3,800 tons of soybeans per day

PTE Calculations for EUDC

VOC Emission Rate [(1)]	**30.25**	**lb/hr**
VOC Emission Rate [(1)]	**132.50**	**tpy**

1 - Based on manufacturer of equipment and plant production rate of 3,800 tons of soybeans per day

HAP Emission Calculations

Pollutant: Hazardous Air Pollutants (Hexane)
Actual Site Emissions 48.1 tons during operating period

Emission Units Contributing to Total

EUEXTRACTION	1.13	tons during operating period
EUDC	46.96	tons during operating period

Actual Emissions Calculations for EUEXTRACTION

HAP Emission Rate [1]	0.30	lb/hr

Month / Year[2]	Hours Operated	HAP Emissions (lb)[3]	HAP Emissions (ton)
Jan-2020	0.0	0.0	0.00
Feb-2020	432.0	129.6	0.06
Mar-2020	744.0	223.2	0.11
Apr-2020	671.0	201.3	0.10
May-2020	725.0	217.5	0.11
Jun-2020	720.0	216.0	0.11
Jul-2020	733.0	219.9	0.11
Aug-2020	744.0	223.2	0.11
Sep-2020	606.0	181.8	0.09
Oct-2020	739.0	221.7	0.11
Nov-2020	712.5	213.8	0.11
Dec-2020	692.5	207.8	0.10

HAP Emissions in 2020[2]	**1.13**	**tons**

1 - Based on July 2020 stack test by Montrose

2 - EUEXTRACTION Began operation in February 2020. Emission calculations cover the time period from February 2020 through December 2020

3 - HAP Emissions (lbs) = (Hours Operated) x (HAP Emission Rate [lb/hr])

Actual Emissions Calculations for EUDC

HAP Emission Rate [1]	12.49 lb/hr

Month / Year[2]	Hours Operated	HAP Emissions (lb)[3]	HAP Emissions (ton)
Jan-2020	0.0	0.0	0.00
Feb-2020	432.0	5,395.7	2.70
Mar-2020	744.0	9,292.6	4.65
Apr-2020	671.0	8,380.8	4.19
May-2020	725.0	9,055.3	4.53
Jun-2020	720.0	8,992.8	4.50
Jul-2020	733.0	9,155.2	4.58
Aug-2020	744.0	9,292.6	4.65
Sep-2020	606.0	7,568.9	3.78
Oct-2020	739.0	9,230.1	4.62
Nov-2020	712.5	8,899.1	4.45
Dec-2020	692.5	8,649.3	4.32

HAP Emissions in 2020[2]	**46.96 tons**

1 - Based on July 2020 stack test by Montrose

2 - EUDC Began operation in February 2020. Emission calculations cover the time period from February 2020 through December 2020

3 - HAP Emissions (lbs) = (Hours Operated) x (HAP Emission Rate [lb/hr])

EGLE

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: P0788	Section Number (if applicable):

1. Additional Information ID
AI-04

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Per S003 Question 7: The following emission units are subject to Compliance Assurance Monitoring:

EUPREP for PM10 and PM2.5
EUMEALGRINDING for PM10 and PM2.5
EULOADOUT for PM10 and PM2.5
EUINGREDIENTS for PM10 and PM2.5

Because the emission units have post-control emissions under 100 percent of the major source thresholds, a CAM Plan is not required to be submitted with this ROP application.

EGLE

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: P0788	Section Number (if applicable):

1. Additional Information ID
AI-05

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Per Form S-003 Question 11: Attached are the following plans:

Preventative Maintenance Plan & Malfunction Abatement Plan (PMP/MAP)

Fugitive Dust Plan

EGLE

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: P0788	Section Number (if applicable):

1. Additional Information ID
AI-06

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Per Form EU-003: Attached is the table listing all emission units with Permits to Install.

FORM EU-003 Emission Unit Table

Permit to Install Number	Emission Unit ID	Description (Include Process Equipment, Control Devices and Monitoring Devices)	Date Emission Unit was Installed/Modified/ Reconstructed
20-17B	EUSHIPRECEIVE	Grain shipping and receiving operations. Grain may be transported by truck or rail. Loadout and receiving are enclosed in the same building, and emissions are controlled by a baghouse.	July 22, 2019
20-17B	EUHANDLING	Completely enclosed grain handling operations consist of enclosed conveyors, bucket elevators, and an enclosed distributor. Fugitive particulate emissions are minimized by an oil spray on the grain.	July 22, 2019
20-17B	EUDRYING1	Rack dryer with two burners, each 33 MMBtu/hr maximum heat input (Total heat input: 66 MMBtu/hr).	October 10, 2019
20-17B	EUBINS	Grain storage bins and silos.	July 22, 2019
20-17B	EUROADS	On-site vehicle traffic.	November 19, 2019
20-17B	EUBOILER1	Natural gas fired boiler with maximum heat input of 95 MMBtu/hr.	November 11, 2019
20-17B	EUBOILER2	Natural gas fired boiler with maximum heat input of 95 MMBtu/hr.	November 11, 2019

FORM EU-003 Emission Unit Table

Permit to Install Number	Emission Unit ID	Description (Include Process Equipment, Control Devices and Monitoring Devices)	Date Emission Unit was Installed/Modified/ Reconstructed
20-17B	EUPREP	Processes to prepare soybeans for extraction vented to stack SVPREP, including the following: − Whole bean cleaning and aspiration controlled by the whole bean cyclone and the main exhaust filter. − Hull cleaning and aspiration controlled by the secondary cyclone and the main exhaust filter. − 2 Vertical seed conditioners (VSCA & VSCB) each controlled by a cyclone. − 2 Jet Dryers (A and B) each controlled by a filter. − 2 Hulloosenators (no exhaust to stack). − 2 Crown Cascade Dryers (CCDA & CCDB) controlled by CCD cyclone and the main exhaust filter. − 2 Crackers (no exhaust to stack). − 2 Crown Cascade Coolers (CCCA & CCCB) controlled by CCC cyclone and the main exhaust filter. 7 Flakers controlled by 1 cyclone.	February 10, 2020
20-17B	EUHULLGRINDING	Hull grinding operations consisting of 2 hammermills controlled by a baghouse.	February 10, 2020
20-17B	EUPELLETIZING	Hull pelletizing system including pellet cooler. The pellet cooler exhausts to a cyclone.	February 19, 2020
20-17B	EUMEALGRINDING	Meal grinding operations consisting of 3 hammermills controlled by a baghouse.	February 10, 2020
20-17B	EUEXTRACTION	Soybean oil extraction process: extractor, 2 evaporators, mineral oil adsorption system (MOS), solvent work tank, desolventizer toaster.	February 10, 2020
20-17B	EUDC	Dryer-Cooler: 3 meal dryers and 1 meal cooler each controlled by a cyclone.	February 10, 2020
20-17B	EUTANK1	27,000-gallon hexane storage tank, vented to extraction system.	December 20, 2019

FORM EU-003 Emission Unit Table

Permit to Install Number	Emission Unit ID	Description (Include Process Equipment, Control Devices and Monitoring Devices)	Date Emission Unit was Installed/Modified/ Reconstructed
20-17B	EUTANK2	27,000-gallon hexane storage tank, vented to extraction system.	December 20, 2019
20-17B	EUTANK3	27,000-gallon hexane storage tank, vented to extraction system.	December 20, 2019
20-17B	EUMEALSTORAGE	Indoor flat storage of crude soybean meal.	February 10, 2020
20-17B	EUHULLSTORAGE	4 steel bins for hull storage, each controlled by a baghouse.	February 10, 2020
20-17B	EUHULLLOADOUT	2 overhead bins and loadout operations for soybean hulls, into trucks and rail. Bins are each controlled by a baghouse.	February 17, 2020
20-17B	EULOADOUT	6 overhead bins and loadout operations for soybean meal, into trucks and rail. Bins are controlled by a baghouse.	February 17, 2020
20-17B	EUINGREDIENTS	Receiving ingredients by truck and rail, controlled by a baghouse, and indoor flat storage of ingredients.	June 15, 2020
20-17B	EUCOOLINGTWR	3-cell mechanical draft cooling tower with 10,000 gallon basin, equipped with mist/drift eliminators.	January 2020

EGLE

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: P0788	Section Number (if applicable):

1. Additional Information ID
AI-07

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Per Form EU-003 Question 2: ZFS Ithaca is proposing the following clarifications to PTI 20-17B:

Condition I.6 for EUDRYING1 - increase the carbon monoxide emission limit to 11.7 pounds per hour. A permit to install application to make this change was submitted on January 12, 2021.

Multiple Conditions for FGEXTRACTION - The EPA finalized an update to 40CFR Part 63 GGGG on March 18, 2020. Attached is a red-line version of the current PTI which accounts for the changes in the rule.

FGEXTRACTION
FLEXIBLE GROUP CONDITIONS

DESCRIPTION: Processes subject to NESHAP GGGG for Solvent Extraction for Vegetable Oil Production, including soybean oil extraction process and 3 hexane storage tanks controlled by mineral oil adsorption system (MOS), 3 meal dryers and 1 meal cooler each controlled by a cyclone, and storage of crude soybean meal.

Emission Units: EUEXTRACTION, EUDC, EUTANK1, EUTANK2, EUTANK3, EUMEALSTORAGE

POLLUTION CONTROL EQUIPMENT: mineral oil adsorption system (MOS)

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	14.30 pph	Hourly	EUEXTRACTION (SVVENTFAN)	SC V.1	R 336.1205(1), R 336.1225, R 336.1702(a)
2. VOC	62.63 tpy	12-month rolling time period as determined at the end of each calendar month	EUEXTRACTION (SVVENTFAN)	SC VI.10	R 336.1205(1), R 336.1225, R 336.1702(a)
3. VOC	30.25 pph	Hourly	EUDC (SVDC)	SC V.1	R 336.1205(1), R 336.1225, R 336.1702(a)
4. VOC	132.5 tpy	12-month rolling time period as determined at the end of each calendar month	EUDC (SVDC)	SC VI.10	R 336.1205(1), R 336.1225, R 336.1702(a)
5. PM	0.033 gr/dscf	Hourly	EUDC (SVDC)	SC V.1	R 336.1331(1)(c)
6. PM10	4.00 pph	Hourly	EUDC (SVDC)	SC V.1	R 336.1205(1), 40 CFR 52.21(c) and (d)
7. PM2.5	3.20 pph	Hourly	EUDC (SVDC)	SC V.1	R 336.1205(1), 40 CFR 52.21(c) and (d)
8. Visible Emissions	15% opacity	6-minute average	EUDC (SVDC)	SC VI.15	R 336.1301(1)(c)

II. MATERIAL LIMITS

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Soybeans	3,800 tons per day	Calendar day	FGEXTRACTION	SC VI.2	R 336.1225, R 336.1702(a), R 336.1331(1)(c), 40 CFR 52.21(c) and (d)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
2. Total extraction solvent loss	0.250 gallon per ton of soybeans processed [a]	3-month rolling time period as determined at the end of each calendar month	FGEXTRACTION	SC VI.6	R 336.1702(a)
3. Total extraction solvent loss	0.150 gallon per ton of soybeans processed [a]	12-month rolling time period as determined at the end of each calendar month	FGEXTRACTION	SC VI.7	R 336.1225, R 336.1702(a)
4. Total extraction solvent loss	0.2 gallon per ton of soybeans processed [a, b]	12-operating month rolling time period as determined at the end of each calendar month	FGEXTRACTION	SC VI.8	40 CFR 63.2840
5. Total extraction solvent loss	1.0 gallon per ton of soybeans processed [c]	3-month rolling time period as determined at the end of each calendar month	FGEXTRACTION	SC VI.9	R 336.1702(a)

[a] This limit does not apply during the *initial startup period*, defined in 40 CFR Part 63.2872.
[b] This limit is found in Table 1 of 40 CFR 63.2840, for conventional soybean processing at a new source, and applies only during *operating months*, which are defined in 40 CFR Part 63.2872.
[c] This limit applies only during the *initial startup period*, defined in 40 CFR Part 63.2872.

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGEXTRACTION unless a malfunction abatement plan (MAP) as described in Rule 911(2), for proper operation of the Mineral Oil Adsorption System (MOS) and the EUDC cyclones has been submitted 60 days prior to the startup of FGEXTRACTION, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
   a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices and fugitive dust minimization equipment, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
   b. An identification of the source and air-cleaning device and fugitive dust minimization equipment operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
   c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.
   ~~d. Per 40 CFR 63.2852, the permittee shall develop a written Startup, Shutdown, and Malfunction (SSM) Plan, in accordance with 40 CFR 63.2852 and 40 CFR 63.6(e)(3). The SSM Plan may be part of the MAP if it meets all applicable requirements of 40 CFR Subpart GGGG. The SSM plan shall provide detailed procedures for operating and maintaining FGEXTRACTION to minimize HAP emissions during a qualifying SSM event for which the source chooses the §63.2850(e)(2) malfunction period, or the §63.2850(c)(2) or (d)(2) initial startup period. The SSM plan must specify a program of corrective action for malfunctioning process and air pollution control equipment and reflect the best practices now in use by the industry to minimize emissions.~~

   If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District

Commented [BL1]: This condition was removed from 40 CFR Part 63 Subpart GGGG dated March 18, 2020

Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d), 40 CFR 63.2852)**

2. If FGEXTRACTION experiences an unscheduled shutdown as a result of a malfunction, or continues to operate during a malfunction (including the period reasonably necessary to correct the malfunction), or starts up after a shutdown resulting from a malfunction, then the permittee shall meet the requirements associated with one of two compliance options listed in paragraphs 40 CFR 63.2850(e)(1) through (2) within 15 days of the beginning date of the malfunction. **(40 CFR 63.2850(e))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate the FGEXTRACTION unless the Mineral Oil Adsorption System (MOS) and the EUDC cyclones are installed and operating properly and in accordance with the approved MAP. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) and (d))**

2. The permittee shall equip each hexane storage tank in FGEXTRACTION with a closed vent system that routes vapors back to the process and to the MOS control system. **(R 336.1225, R 336.1702(a), R 336.1910)**

3. Except during initial startup of FGEXTRACTION or for tank clean outs, the permittee shall not add extraction solvent to EUTANK1, EUTANK2, or EUTANK3 or the solvent work tank unless the vent from the respective tank is tied into the MOS and the MOS is installed and operating properly and in accordance with the approved MAP. **(R 336.1225, R 336.1702(a), R 336.1910, R 336.1911)**

4. The permittee shall not operate any dryer or cooler portion of EUDC if the cyclone associated with that dryer or cooler is not installed and operating properly and in accordance with the approved MAP. **(R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

5. The permittee shall equip and maintain the desolventizer toaster sparge deck with a device to measure the temperature, and a low temperature alarm. **(R 336.1225, R 336.1702(a), R 336.1910)**

6. The permittee shall equip and maintain the absorber system with a device to measure changes in the vacuum across the system. **(R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

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

1. Within 180 days after commencement of initial startup, the permittee shall verify VOC emission rates from EUEXTRACTION (SVEXTRACTION), and the VOC, PM, PM10, and PM2.5 emission rates from EUDC (SVDC) by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

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

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. 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 336.1205, R 336.1225, R 336.1331(1)(c), R 336.1702(a), R 336.1902, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) and (d))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.1225, R 336.1702(a), R 336.1331(1)(c), 40 CFR 52.21(c) and (d), 40 CFR 63.2840)**

2. The permittee shall keep, in a satisfactory manner, daily, monthly and 12-month rolling time period records of the tons of soybeans fed to FGEXTRACTION, as measured at EUPREP. **(R 336.1225, R 336.1702(a), R 336.1331(1)(c), 40 CFR 52.21(c) and (d), 40 CFR 63.2840, 40 CFR 63.2855)**

3. The permittee shall record the volume fraction of HAP present at greater than 1 percent by volume and gallons of extraction solvent in each shipment received. **(R 336.1225, R 336.1702(a), Table 1 of 40 CFR 63.2850)**

4. The permittee shall calculate and record, in a satisfactory manner, the monthly weighted average volume fraction of HAP in the extraction solvent received. **(R 336.1225, R 336.1702(a), 40 CFR 63.2850, 40 CFR 63.2854)**

5. The permittee shall keep, in a satisfactory manner, monthly records of the actual extraction solvent loss, in gallons, for FGEXTRACTION. **(R 336.1225, R 336.1702(a), 40 CFR 63.2840, Table 1 of 40 CFR 63.2850, 40 CFR 63.2853)**

6. After the initial startup period, the permittee shall calculate and record, in a satisfactory manner, the gallons total extraction solvent loss per ton of soybeans processed for FGEXTRACTION on a monthly and 3-month rolling time period basis, as required by SC II.2. **(R 336.1702(a))**

7. After the initial startup period, the permittee shall calculate and record, in a satisfactory manner, the gallons total extraction solvent loss per ton of soybeans processed for FGEXTRACTION on a monthly and 12-month rolling time period basis, as required by SC II.3. **(R 336.1225, R 336.1702(a))**

8. For each operating month, which is defined in 40 CFR Part 63.2872, the permittee shall calculate and record, in a satisfactory manner, the gallons total extraction solvent loss per ton of soybeans processed for FGEXTRACTION for the previous 12-operating month rolling time period, as required by SC II.4. **(40 CFR 63.2840)**

9. For the initial startup period, the permittee shall calculate and record, in a satisfactory manner, the gallons total extraction solvent loss per ton of soybeans processed for FGEXTRACTION, on a monthly and 3-month rolling time period basis, as required by SC II.5. **(R 336.1702(a))**

10. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period VOC emission calculation records for EUEXTRACTION (SVEXTRACTION) and EUDC (SVDC), as required by SC I.2 and SC I.4. Emission calculations shall be based on the most recent stack test data. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1), R 336.1225, R 336.1702(a))**

11. The permittee shall keep, in a satisfactory manner, the following records for FGEXTRACTION to demonstrate compliance with the Solvent Extraction for Vegetable Oil Production NESHAP: **(40 CFR 63.2850, 40 CFR 63.2862)**
    a. The permittee shall meet the recordkeeping requirements by startup of FGEXTRACTION. **(40 CFR 63.2862(a))**
    b. A plan for demonstrating compliance (as described in §63.2851) and a SSM plan (as described in §63.2852). Each plan shall describe the procedures for obtaining and recording data, and determining compliance. **(40 CFR 63.2862(b))**
    c. Records of the items under 40 CFR 63.2862(c), if any oilseed listed in 40 CFR 63.2832(a)(2) is processed in FGEXTRACTION. **(40 CFR 63.2862(c))**

d. After FGEXTRACTION has processed an oilseed listed in 40 CFR 63.2832(a)(2) for 12 operating months, and FGEXTRACTION is not operating during an initial startup period as described in §63.2850(c)(2) or (d)(2), or a malfunction period as described in §63.2850(e)(2), record the items under 40 CFR 63.2862(d) by the end of the calendar month following each operating month. **(40 CFR 63.2862(d))**
e. For each SSM event subject to an initial startup period as described in §63.2850(c)(2) or (d)(2), or a malfunction period as described in §63.2850(e)(2), record the items under 40 CFR 63.2862(e) by the end of the calendar month following each month in which the initial startup period or malfunction period occurred. **(40 CFR 63.2862(e))**

12. The permittee shall record the desolventizer toaster sparge deck temperature hourly during operation. If the temperature is lower than 195°F, then the permittee shall: **(R 336.1225, R 336.1702(a), R 336.1910)**
    a. Promptly examine the cause of the variance.
    b. Respond as needed to minimize the possibility of exceeding any emission limits in this permit.
    c. Implement any measures necessary to return the affected parameter(s) to the normal range.
    d. Record the date and time that the variance occurred, and record the measures taken to return the affected parameter(s) to the normal range.

13. The permittee shall record the percent LEL in main gas vent a minimum of four times daily. If the percent LEL is greater than 50%, then the permittee shall: **(R 336.1225, R 336.1702(a), R 336.1910)**
    a. Promptly examine the cause of the variance.
    b. Respond as needed to minimize the possibility of exceeding any emission limits in this permit.
    c. Implement any measures necessary to return the affected parameter(s) to the normal range.
    d. Record the date and time that the variance occurred, and record the measures taken to return the affected parameter(s) to the normal range.

14. The permittee shall monitor the operating parameters specified in the MAP, at the frequency specified in the MAP. The permittee shall keep a record of the times that a monitored parameter is found to be outside of the normal range. The permittee shall keep these records on file at the facility and make them available to the Department upon request. **(R 336.1225, R 336.1702(a), R 336.1910)**

15. The permittee shall conduct and record weekly non-certified visual emission observations of exhaust from EUDC (SVDC). **(R 336.1301(1)(c))**

VII. REPORTING

1. The permittee shall submit notifications containing the required information listed in §63.9 to the AQD District Supervisor within the time frames specified in 40 CFR 63.9. **(40 CFR 63.2860(b))**

2. Within 10 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of FGEXTRACTION. **(R 336.1201(7)(a))**

3. Within 10 days after a tank clean out or other event that causes tank vapors to be vented without being controlled by the MOS, the permittee shall notify the AQD District Supervisor, in writing, of the event or activity. **(R 336.1201(7)(a))**

4. The permittee shall submit an initial notification of compliance status, and subsequent annual compliance certifications. Each of these reports shall contain the following information:
    a. The name and address of the owner or operator.
    b. The physical address of the vegetable oil production process.
    c. Each listed oilseed type processed during the previous 12 operating months covered by the report.
    d. Each HAP identified under §63.2854(a) as being present in concentrations greater than 1 percent by volume in each delivery of solvent received during the 12 operating months period covered by the report.

e. A statement designating the source as a major source of HAP or a demonstration that the source qualifies as an area source. An area source is a source that is not a major source and is not collocated within a plant site with other sources that are individually or collectively a major source.
f. A compliance certification indicating whether the source complied with all of the requirements of 40 CFR 63 Subpart GGGG throughout the 12 operating months used for the report, including a certification of the items below:
   i. The initial notification shall certify that a plan for demonstrating compliance (as described in §63.2851) and SSM plan (as described in §63.2852) are complete and available on-site for inspection.
   ii. Each report must certify that the permittee is following the procedures described in the plan for demonstrating compliance.
   iii. Each report must certify that the compliance ratio is less than or equal to 1.00.

The permittee shall submit the initial notification of compliance status report to the AQD District Supervisor no later than 60 days after determining the initial 12 operating months compliance ratio. This report is generally due no later than 20 calendar months after initial startup (6 calendar months for the initial startup period, 12 operating months to record data, and 2 calendar months to complete the report). The first annual compliance certification is due 12 calendar months after the permittee submits the notification of compliance status. Each subsequent annual compliance certification is due 12 calendar months after the previous annual compliance certification. The annual compliance certification provides the compliance status for each operating month during the 12 calendar months period ending 60 days prior to the date on which the report is due. **(40 CFR 63.2860(d), 40 CFR 63.2861(a))**

5. The permittee shall submit a deviation notification report by the end of the calendar month following the month in which it was determined that the compliance ratio exceeded 1.00, in accordance with 40 CFR 63.2861(b), to the AQD District Supervisor. **(40 CFR 63.2861(b))**

~~6. If FGEXTRACTION is operated under an initial startup period subject to 40 CFR 63.2850(c)(2) or (d)(2) or a malfunction period subject to §63.2850(e)(2), the permittee shall submit a periodic SSM report by the end of the calendar month following each month in which the initial startup period or malfunction period occurred. The periodic SSM report must include the items in paragraphs 40 CFR 63.2861(c)(1) through (3). **(40 CFR 63.2861(c))**~~

~~7. The permittee shall submit immediate SSM reports, in accordance with 40 CFR 63.2861(d), to the AQD District Supervisor. **(40 CFR 63.2861(d))**~~

Commented [BL2]: This condition was removed from 40 CFR Part 63 Subpart GGGG dated March 18, 2020

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVEXTRACTION *	8.04	35	R 336.1225, 40 CFR 52.21(c) and (d)
2. SVDC	61	122	R 336.1225, 40 CFR 52.21(c) and (d)
* Exhausts horizontally.			

IX. OTHER REQUIREMENTS

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants: Solvent Extraction for Vegetable Oil Production as specified in 40 CFR Part 63 Subparts A and GGGG, as they apply to FGEXTRACTION. **(40 CFR Part 63.2832, 40 CFR Part 63 Subparts A & GGGG)**

EGLE

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: P0788	Section Number (if applicable):

1. Additional Information ID
AI-08

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Per Form AR-001: Attached is PTI 20-17B which contains applicable MACT, NESHAP, and NSPS requirements for the emissions units listed on From AR-001

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)**
    a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
    b) A visible emission limit specified by an applicable federal new source performance standard.
    c) A visible emission limit specified as a condition of this Permit to Install.

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

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

EMISSION UNIT SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUSHIPRECEIVE	Grain shipping and receiving operations. Grain may be transported by truck or rail. Loadout and receiving are enclosed in the same building, and emissions are controlled by a baghouse.	TBD	FGHANDLING
EUHANDLING	Completely enclosed grain handling operations consist of enclosed conveyors, bucket elevators, and an enclosed distributor. Fugitive particulate emissions are minimized by an oil spray on the grain.	TBD	FGHANDLING
EUDRYING1	Rack dryer with two burners, each 33 MMBtu/hr maximum heat input (Total heat input: 66 MMBtu/hr).	TBD	NA
EUBINS	Grain storage bins and silos.	TBD	FGHANDLING
EUROADS	On-site vehicle traffic.	TBD	NA
EUBOILER1	Natural gas fired boiler with maximum heat input of 95 MMBtu/hr.	TBD	FGBOILERS, FGBOILERMACT
EUBOILER2	Natural gas fired boiler with maximum heat input of 95 MMBtu/hr.	TBD	FGBOILERS, FGBOILERMACT
EUPREP	Processes to prepare soybeans for extraction vented to stack SVPREP, including the following: – Whole bean cleaning and aspiration controlled by the whole bean cyclone and the main exhaust filter. – Hull cleaning and aspiration controlled by the secondary cyclone and the main exhaust filter. – 2 Vertical seed conditioners (VSCA & VSCB) each controlled by a cyclone. – 2 Jet Dryers (A and B) each controlled by a filter. – 2 Hulloosenators (no exhaust to stack). – 2 Crown Cascade Dryers (CCDA & CCDB) controlled by CCD cyclone and the main exhaust filter. – 2 Crackers (no exhaust to stack). – 2 Crown Cascade Coolers (CCCA & CCCB) controlled by CCC cyclone and the main exhaust filter. 7 Flakers controlled by 1 cyclone.	TBD	NA
EUHULLGRINDING	Hull grinding operations consisting of 2 hammermills controlled by a baghouse.	TBD	NA
EUPELLETIZING	Hull pelletizing system including pellet cooler. The pellet cooler exhausts to a cyclone.	TBD	NA

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUMEALGRINDING	Meal grinding operations consisting of 3 hammermills controlled by a baghouse.	TBD	NA
EUEXTRACTION	Soybean oil extraction process: extractor, 2 evaporators, mineral oil adsorption system (MOS), solvent work tank, desolventizer toaster.	TBD	FGEXTRACTION
EUDC	Dryer-Cooler: 3 meal dryers and 1 meal cooler each controlled by a cyclone.	TBD	FGEXTRACTION
EUTANK1	27,000-gallon hexane storage tank, vented to extraction system.	TBD	FGEXTRACTION
EUTANK2	27,000-gallon hexane storage tank, vented to extraction system.	TBD	FGEXTRACTION
EUTANK3	27,000-gallon hexane storage tank, vented to extraction system.	TBD	FGEXTRACTION
EUMEALSTORAGE	Indoor flat storage of crude soybean meal.	TBD	FGEXTRACTION
EUHULLSTORAGE	4 steel bins for hull storage, each controlled by a baghouse.	TBD	FGLOADSTORE
EUHULLLOADOUT	2 overhead bins and loadout operations for soybean hulls, into trucks and rail. Bins are each controlled by a baghouse.	TBD	FGLOADSTORE
EULOADOUT	6 overhead bins and loadout operations for soybean meal, into trucks and rail. Bins are controlled by a baghouse.	TBD	FGLOADSTORE
EUINGREDIENTS	Receiving ingredients by truck and rail, controlled by a baghouse, and indoor flat storage of ingredients.	TBD	FGLOADSTORE
EUCOOLINGTWR	3-cell mechanical draft cooling tower with 10,000 gallon basin, equipped with mist/drift eliminators.	TBD	NA

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

EUDRYING1
EMISSION UNIT CONDITIONS

DESCRIPTION: Rack dryer with two burners, each 33 MMBtu/hr maximum heat input (Total heat input: 66 MMBtu/hr).

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.10 lbs per 1000 lbs of exhaust gases [a]	Hourly	EUDRYING1	SC V.1	R 336.1331(1)(a)
2. Visible emissions	0 percent opacity [b]	6-minute average	Rack dryer in which exhaust gases pass through a screen filter coarser than 50 mesh.	SC V.2	40 CFR 60.302(a)(2), 40 CFR 60.303(b)(3)
3. PM10	12.5 pph	Hourly	EUDRYING1	SC V.1	R 336.1205(1)(a), 40 CFR 52.21(c) and (d)
4. PM2.5	9.38 pph	Hourly	EUDRYING1	SC V.1	R 336.1205(1)(a), 40 CFR 52.21(c) and (d)
5. NOx	6.60 pph	Hourly	EUDRYING1	SC V.1	R 336.1205(1)(a), 40 CFR 52.21(c) and (d)
6. CO	5.54 pph	Hourly	EUDRYING1	SC V.1	R 336.1205(1)(a), 40 CFR 52.21(c) and (d)

[a] Calculated on a wet gas basis
[b] This limit applies on and after the 60th day of achieving the maximum production rate, but no later than 180 days after initial startup.

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Grain dried	16,000,000 bushels / yr	12-month rolling time period as determined at the end of each calendar month	EUDRYING1	SC VI.2	R 336.1205(1)(a) and (3), 40 CFR 52.21(c) and (d)

2. The permittee shall burn only pipeline quality natural gas in EUDRYING1. **(R 336.1205(1)(a) and (3), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d))**

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The maximum design heat input capacity for the burners of EUDRYING1 shall not exceed 66.0 MMBtu per hour (total for both burners). **(R 336.1205(1)(a) and (3), R 336.1224, R 336.1225, R 336.1702(a), 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 amount of grain processed through EUDRYING1 on a monthly basis. **(R 336.1205(1)(a) and (3), R 336.1301, R 336.1331, 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. Upon request of the AQD District Supervisor, the permittee shall verify PM, PM10, PM2.5, NOx, and/or CO emission rates from a single representative exhaust stack of EUDRYING1 by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M
NOx	40 CFR Part 60, Appendix A
CO	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 336.1205, R 336.1902, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) and (d))**

2. Within 60 days after achieving the maximum production rate, but not later than 180 days after commencement of initial startup, the permittee shall evaluate visible emissions from EUDRYING1, as required by federal Standards of Performance for New Stationary Sources, at owner's expense, in accordance 40 CFR Part 60 Subparts A and DD. Visible emission observation procedures must have prior approval by the AQD Technical Programs Unit and District Office. Verification of visible emissions includes the submittal of a complete report of opacity observations to the AQD Technical Programs Unit and District Office within 60 days following the last date of the evaluation. **(R 336.1301, 40 CFR 60.303)**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.1301, 40 CFR 52.21(c) and (d))**

2. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the bushels of grain dried in EUDRYING1. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) and (3), 40 CFR 52.21(c) and (d))**

VII. REPORTING

1. The permittee shall provide written notification of construction and operation to comply with the federal Standards of Performance for New Stationary Sources, 40 CFR 60.7. The permittee shall submit this notification to the AQD District Supervisor within the time frames specified in 40 CFR 60.7. **(40 CFR 60.7)**

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVDRYING1-1	24.5 x 66.2	121.4	R 336.1225, 40 CFR 52.21(c) and (d)
2. SVDRYING1-2	24.5 x 66.2	121.4	R 336.1225, 40 CFR 52.21(c) and (d)
3. SVDRYING1-3	24.5 x 66.2	121.4	R 336.1225, 40 CFR 52.21(c) and (d)
4. SVDRYING1-4	24.5 x 66.2	121.4	R 336.1225, 40 CFR 52.21(c) and (d)
5. SVDRYING1-5	24.5 x 66.2	121.4	R 336.1225, 40 CFR 52.21(c) and (d)

IX. OTHER REQUIREMENTS

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and DD (Standards of Performance for Grain Elevators), as they apply to EUDRYING1. **(40 CFR Part 60 Subparts A & DD)**

EUROADS
EMISSION UNIT CONDITIONS

DESCRIPTION: On-site vehicle traffic

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Visible emissions	5% opacity	6-minute average	EUROADS	SC VI.1	R 336.1301(1)(c), 40 CFR 52.21(c) and (d)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUROADS unless a nuisance minimization plan for fugitive dust, for all plant roadways, the plant yard, and all material handling operations, has been submitted within 60 days of permit issuance, and is implemented and maintained. The plan shall, at a minimum, specify the following:
   a) Identification of the supervisory personnel responsible for overseeing the implementation of the plan,
   b) A description of fugitive dust minimization procedures and equipment,
   c) A description of the methods and frequency of monitoring or surveillance procedures to determine when dust suppression measures are needed.

   If at any time the nuisance minimization plan fails adequately address fugitive dust emissions from EUROADS, the permittee shall amend the plan within 45 days after such an event occurs. The permittee shall also amend the plan within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the plan and any amendments to the plan to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the plan or amended plan shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1301(1)(c), 40 CFR 52.21(c) and (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. All haul roads routinely travelled by trucks shipping and receiving grain at the facility shall be paved. **(R 336.1301, 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))**

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall conduct and record weekly non-certified visual emission observations of on-site vehicle traffic when traffic is present. **(R 336.1301(1)(c), R 336.1303, 40 CFR 52.21 (c) and (d))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

EUPREP
EMISSION UNIT CONDITIONS

DESCRIPTION: Processes to prepare soybeans for extraction vented to stack SVPREP, including the following:

- Whole bean cleaning and aspiration controlled by the whole bean cyclone and the main exhaust filter.
- Hull cleaning and aspiration controlled by the secondary cyclone and the main exhaust filter.
- 2 Vertical seed conditioners (VSCA & VSCB) each controlled by a cyclone.
- 2 Jet Dryers (A and B) each controlled by a filter.
- 2 Hulloosenators (no exhaust to stack).
- 2 Crown Cascade Dryers (CCDA & CCDB) controlled by CCD cyclone and the main exhaust filter.
- 2 Crackers (no exhaust to stack).
- 2 Crown Cascade Coolers (CCCA & CCCB) controlled by CCC cyclone and the main exhaust filter.
- 7 Flakers controlled by 1 cyclone.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: cyclones and filters

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.0153 gr/dscf	Hourly	EUPREP (SVPREP)	SC V.1	R 336.1205(1), R 336.1331(1)(c)
2. PM	16.17 lb/hr	Hourly	EUPREP (SVPREP)	SC V.1	R 336.1205(1)
3. PM10	9.44 lb/hr	Hourly	EUPREP (SVPREP)	SC V.1	R 336.1205(1), 40 CFR 52.21 (c) and (d)
4. PM2.5	8.09 lb/hr	Hourly	EUPREP (SVPREP)	SC V.1	R 336.1205(1), 40 CFR 52.21 (c) and (d)
5. Visible Emissions	10% opacity	6-minute average	Exhaust from each process listed in SC IV.1	SC VI.3	R 336.1301(1)(c)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUPREP unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the cyclones and filters corresponding to various processes in EUPREP (listed in SC IV.1), has been submitted 60 days prior to the startup of EUPREP, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
   a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.

b. An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1205, R 336.1301, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate portions of EUPREP listed in the table below unless the corresponding control device is installed, maintained, and operated in a satisfactory manner. For the fabric filters, satisfactory operation includes maintaining the baghouse pressure drop within the range specified in the MAP. **(R 336.1205, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

	Process	Corresponding Control Device
a.	Whole bean cleaning and aspiration	Cyclone and main exhaust fabric filter
b.	Hull cleaning and aspiration	Cyclone and main exhaust fabric filter
c.	Vertical seed conditioners (VSCA & VSCB)	Cyclones
d.	Jet Dryers (A and B)	Fabric filters
e.	Crown Cascade Dryers (CCDA & CCDB)	Cyclone and main exhaust fabric filter
f.	Crown Cascade Coolers (CCCA & CCCB)	Cyclone and main exhaust fabric filter
g.	Hull screener and secondary aspirator	Cyclone and main exhaust fabric filter
h.	The vacuum exhaust fan for the flakers	Cyclone

2. The permittee shall equip and maintain each fabric filter in EUPREP with a pressure differential gauge. **(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. Within 180 days after commencement of initial startup, the permittee shall verify PM, PM10, and PM2.5 emission rates from EUPREP (SVPREP) by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

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

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. 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 336.1205, R 336.1331, R 336.1902, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) and (d))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall monitor and record the following: **(R 336.1205, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**
   a. Keep, in a satisfactory manner, a record of the days when equipment in EUPREP is operating,
   b. Monitor the pressure differential for each fabric filter in EUPREP continuously, and
   c. Record the pressure differential for each fabric filter in EUPREP on a daily basis when the equipment is operating.

2. The permittee shall keep, in a satisfactory manner, records of maintenance, corrective procedures, operational changes, and other parameters for the cyclones and filters corresponding to various processes in EUPREP, as specified in the MAP at the frequency specified in the MAP. The permittee shall keep these records on file at the facility and make them available to the Department upon request. **(R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

3. The permittee shall conduct and record weekly non-certified visual emission observations of exhaust from the processes listed in SC IV.1. **(R 336.1301(1)(c))**

VII. REPORTING

1. The permittee shall submit notifications containing the required information listed in §63.9 to the AQD District Supervisor within the time frames specified in 40 CFR 63.9. **(40 CFR 63.2860(b))**

2. Within 10 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUPREP. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVPREP	99	215	40 CFR 52.21 (c) and (d)

IX. OTHER REQUIREMENTS

NA

EUHULLGRINDING
EMISSION UNIT CONDITIONS

DESCRIPTION: Hull grinding operations consisting of 2 hammermills

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: One baghouse controls both hammermills

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.005 gr/dscf	Hourly	EUHULLGRINDING	SC V.1	R 336.1205(1), R 336.1331(1)(c)
2. PM	0.27 lb/hr	Hourly	EUHULLGRINDING	SC V.1	R 336.1205(1)
3. PM10	0.27 lb/hr	Hourly	EUHULLGRINDING	SC V.1	R 336.1205(1), 40 CFR 52.21 (c) and (d)
4. PM2.5	0.27 lb/hr	Hourly	EUHULLGRINDING	SC V.1	R 336.1205(1), 40 CFR 52.21 (c) and (d)
5. Visible Emissions	5% opacity	6-minute average	EUHULLGRINDING	SC VI.3	R 336.1301(1)(c)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUHULLGRINDING unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the baghouse, has been submitted 60 days prior to the startup of EUHULLGRINDING, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
   a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
   b. An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
   c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

   If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1301, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUHULLGRINDING unless the baghouse controlling both hammermills is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining the baghouse pressure drop within the range specified in the MAP. **(R 336.1205, R 336.1301, R 336.1331, 40 CFR 52.21(c) and (d))**

2. The permittee shall equip and maintain the baghouse for EUHULLGRINDING with a pressure differential gauge. **(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. Upon request of the AQD District Supervisor, the permittee shall verify PM, PM10, and PM2.5 emission rates from EUHULLGRINDING by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

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

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. 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 336.1205, R 336.1331, R 336.1902, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) and (d))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall monitor and record the following: **(R 336.1205, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**
   a. keep, in a satisfactory manner, a record of the days when equipment in EUHULLGRINDING is operating,
   b. monitor the pressure differential for the EUHULLGRINDING fabric filter continuously, and
   c. record the pressure differential for the EUHULLGRINDING fabric filter on a daily basis when the equipment is operating.

2. The permittee shall keep, in a satisfactory manner, records of maintenance, corrective procedures, operational changes, and other parameters for the EUHULLGRINDING baghouse, as specified in the MAP. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

3. The permittee shall conduct and record weekly non-certified visual emission observations of exhaust from EUHULLGRINDING. **(R 336.1301(1)(c))**

VII. REPORTING

1. Within 10 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUHULLGRINDING. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVHULLGRINDING	18	119	40 CFR 52.21(c) and (d)

IX. OTHER REQUIREMENTS

NA

EUPELLETIZING
EMISSION UNIT CONDITIONS

DESCRIPTION: Hull pelletizing system including pellet cooler.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: The pellet cooler exhaust to a cyclone.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.026 gr/dscf	Hourly	EUPELLETIZING	SC V.1	R 336.1205(1), R 336.1331(1)(c)
2. PM	1.60 lb/hr	Hourly	EUPELLETIZING	SC V.1	R 336.1205(1)
3. PM10	0.80 lb/hr	Hourly	EUPELLETIZING	SC V.1	R 336.1205(1), 40 CFR 52.21 (c) and (d)
4. PM2.5	0.80 lb/hr	Hourly	EUPELLETIZING	SC V.1	R 336.1205(1), 40 CFR 52.21 (c) and (d)
5. Visible Emissions	15% opacity	6-minute average	EUPELLETIZING	SC VI.2	R 336.1301(1)(c)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUPELLETIZING unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the cyclone, has been submitted 60 days prior to the startup of EUPELLETIZING, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
   a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
   b. An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
   c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

   If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1301, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate the pellet cooler of EUPELLETIZING unless the cyclone is installed, maintained, and operated in a satisfactory manner. **(R 336.1205, R 336.1301, R 336.1331, 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. Within 180 days after commencement of initial startup, the permittee shall verify PM, PM10, and PM2.5 emission rates from EUPELLETIZING by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

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

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. 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 336.1205, R 336.1331, R 336.1902, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) and (d))**

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, records of maintenance, corrective procedures, operational changes, and other parameters for the EUPELLETIZING cyclone, as specified by the MAP. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

2. The permittee shall conduct and record weekly non-certified visual emission observations of exhaust from EUPELLETIZING. **(R 336.1301(1)(c))**

VII. REPORTING

1. Within 10 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUPELLETIZING. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVPELLETIZING	21	119	40 CFR 52.21(c) and (d)

IX. OTHER REQUIREMENTS

NA

EUMEALGRINDING
EMISSION UNIT CONDITIONS

DESCRIPTION: Meal grinding operations consisting of 3 hammermills

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: One baghouse controls 3 hammermills

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.005 gr/dscf	Hourly	EUMEALGRINDING	SC V.1	R 336.1205(1), R 336.1331(1)(c)
2. PM	0.80 lb/hr	Hourly	EUMEALGRINDING	SC V.1	R 336.1205(1)
3. PM10	0.80 lb/hr	Hourly	EUMEALGRINDING	SC V.1	R 336.1205(1), 40 CFR 52.21 (c) and (d)
4. PM2.5	0.80 lb/hr	Hourly	EUMEALGRINDING	SC V.1	R 336.1205(1), 40 CFR 52.21 (c) and (d)
5. Visible Emissions	5% opacity	6-minute average	EUMEALGRINDING	SC VI.3	R 336.1301(1)(c)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUMEALGRINDING unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the baghouse, has been submitted 60 days prior to the startup of EUMEALGRINDING, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
   a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
   b. An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
   c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

   If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee

shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1301, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUMEALGRINDING unless the baghouse controlling the three hammermills is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining the baghouse pressure drop within the range specified in the MAP. **(R 336.1205, R 336.1301, R 336.1331, 40 CFR 52.21(c) and (d))**

2. The permittee shall equip and maintain the baghouse for EUMEALGRINDING with a pressure differential gauge. **(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. Within 180 days after commencement of initial startup, the permittee shall verify PM, PM10, and PM2.5 emission rates from EUMEALGRINDING by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

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

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. 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 336.1205, R 336.1331, R 336.1902, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) and (d))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall monitor and record the following: **(R 336.1205, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**
   a. Keep, in a satisfactory manner, a record of the days when equipment in EUMEALGRINDING is operating,
   b. Monitor the pressure differential for the EUMEALGRINDING fabric filter continuously, and
   c. Record the pressure differential for the EUMEALGRINDING fabric filter on a daily basis when the equipment is operating.

2. The permittee shall keep, in a satisfactory manner, records of maintenance, corrective procedures, operational changes, and other parameters for the EUMEALGRINDING baghouse, as specified in the MAP. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

3. The permittee shall conduct and record weekly non-certified visual emission observations of exhaust from EUMEALGRINDING. **(R 336.1301(1)(c))**

VII. REPORTING

1. Within 10 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUMEALGRINDING. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVMEALGRINDING	34	130	40 CFR 52.21(c) and (d)

IX. OTHER REQUIREMENTS

NA

EUCOOLINGTWR
EMISSION UNIT CONDITIONS

DESCRIPTION: 3-cell mechanical draft cooling tower with 10,000 gallon basin.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: mist/drift eliminators

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall equip and maintain EUCOOLINGTWR with mist/drift eliminators with a vendor-certified maximum drift rate of 0.005 percent or less. **(R 336.1205, 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. If a valid vendor certification is not available, the permittee may be required, upon request by the Department, to verify drift loss from EUCOOLINGTWR by testing, at owner's expense, in accordance with Department requirements. The permittee shall use the most recent version of the Cooling Technology Institute's Acceptable Test Code (ATC) 140, unless the AQD approves use of an alternate method. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Determination of drift loss includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(40 CFR 52.21(c) and (d))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall maintain a record of the vendor’s certification required in SC IV.1, for the life of EUCOOLINGTWR. **(R 336.1205, R 336.1910, 40 CFR 52.21(c) and (d))**

2. The permittee shall maintain a record of any maintenance conducted for EUCOOLINGTWR. **(40 CFR 52.21(c) and (d))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVCOOLTWR1	166	32	40 CFR 52.21(c) and (d)
2. SVCOOLTWR2	166	32	40 CFR 52.21(c) and (d)
3. SVCOOLTWR3	166	32	40 CFR 52.21(c) and (d)

IX. OTHER REQUIREMENTS

NA

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
FGHANDLING	Grain shipping and receiving operations, grain handling, and grain storage. Loading and unloading operations and grain handling are subject to NSPS DD for Grain Elevators. Emissions from loadout and receiving are controlled by a baghouse. Fugitive particulate emissions are minimized by an oil spray on the grain.	EUSHIPRECEIVE, EUHANDLING, EUBINS
FGLOADSTORE	Soybean hull and meal storage and loadout, and ingredient receiving and storage. Each emission unit is controlled by a baghouse.	EUHULLSTORAGE, EUHULLLOADOUT, EULOADOUT, EUINGREDIENTS
FGEXTRACTION	Processes subject to NESHAP GGGG for Solvent Extraction for Vegetable Oil Production, including soybean oil extraction process and 3 hexane storage tanks controlled by mineral oil adsorption system (MOS), 3 meal dryers and 1 meal cooler each controlled by a cyclone, and storage of crude soybean meal.	EUEXTRACTION, EUDC, EUTANK1, EUTANK2, EUTANK3, EUMEALSTORAGE
FGBOILERS	Two (2) natural gas fired boilers, each with maximum heat input of 95 MMBtu/hr.	EUBOILER1, EUBOILER2
FGBOILERMACT	Gas 1 Fuel Subcategory requirements for new Boilers/Process Heaters at major sources of Hazardous Air Pollutants per 40 CFR Part 63, Subpart DDDDD. These new boilers or process heaters must comply with this subpart upon startup.	EUBOILER1, EUBOILER2

FGHANDLING
FLEXIBLE GROUP CONDITIONS

DESCRIPTION: Grain shipping and receiving operations, grain handling, and grain storage. Loading and unloading operations and grain handling are subject to NSPS DD for Grain Elevators.

Emission Units: EUSHIPRECEIVE, EUHANDLING, EUBINS

POLLUTION CONTROL EQUIPMENT: Emissions from loadout and receiving are controlled by a baghouse. Fugitive particulate emissions are minimized by an oil spray on the grain.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.10 lbs per 1000 lbs of gas[a]	Hourly	Process emissions from SVSHIPRECEIVE	SC V.1	R 336.1331(1)(a)
2. PM	0.01 gr/dscf	At least 60 minutes and 60 dscf	Process emissions from SVSHIPRECEIVE	SC V.1	40 CFR 60.302(b)(1)
3. Visible emissions	0% opacity	6-minute average	Process emissions from SVSHIPRECEIVE	SC V.2	40 CFR 60.302(b)(2)
4. Visible emissions	5% opacity	6-minute average	Fugitive emissions from truck and railcar unloading	SC V.2	R 336.1301(1)(c), 40 CFR 52.21(c) and (d), 40 CFR 60.302(c)(1)
5. Visible emissions	5% opacity	6-minute average	Fugitive emissions from railcar loading	SC V.2	40 CFR 60.302(c)(1)
6. Visible emissions	0% opacity	6-minute average	Fugitive emissions from grain handling	SC V.2	40 CFR 60.302(c)(2)
7. Visible emissions	10% opacity	6-minute average	Fugitive emissions from truck loading	SC V.2	40 CFR 60.302(c)(3)

[a] Calculated on a wet gas basis

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Grain Received	48,000,000 Bu/yr	12-month rolling time period as determined at the end of each calendar month	EUSHIPRECEIVE	SC VI.3	R 336.1205, 40 CFR 52.21(c) and (d)
2. Grain Shipped	48,000,000 Bu/yr	12-month rolling time period as determined at the end of each calendar month	EUSHIPRECEIVE	SC VI.3	R 336.1205, 40 CFR 52.21(c) and (d)

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGHANDLING unless a malfunction abatement plan (MAP) as described in Rule 911(2), for proper operation of the particulate collection equipment, baghouse, and the oil spray equipment has been submitted 60 days prior to the startup of FGHANDLING, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
   a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices and fugitive dust minimization equipment, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
   b. An identification of the source and air-cleaning device and fugitive dust minimization equipment operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
   c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

   If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1301, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate any grain shipping or receiving equipment (EUSHIPRECEIVE) unless the shipping and receiving building baghouse is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining the baghouse pressure drop within the range specified in the MAP. **(R 336.1205, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

2. The permittee shall not operate grain handling operations (EUHANDLING), unless the oil application system is installed and operated in a satisfactory manner to minimize airborne particulate generated by the grain. **(R 336.1205, R 336.1301, R 336.1910, 40 CFR 52.21(c) and (d))**

3. The permittee shall equip and maintain the dust collector for EUSHIPRECEIVE with a pressure differential gauge. **(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. Within 60 days of achieving the maximum production rate, but not later than 180 days after commencement of initial startup, the permittee shall verify and quantify PM emission concentration from SVSHIPRECEIVE by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1331, R 336.2001, R 336.2003, R 336.2004, 40 CFR 60.302(b)(1))**

2. Within 60 days after achieving the maximum production rate, but not later than 180 days after commencement of initial startup, the permittee shall evaluate visible emissions from any FGHANDLING NSPS DD affected facility, as required by federal Standards of Performance for New Stationary Sources, at owner's expense, in accordance 40 CFR Part 60 Subparts A and DD. Visible emission observation procedures must have prior approval by the AQD Technical Programs Unit and District Office. Verification of visible emissions includes the submittal of a complete report of opacity observations to the AQD Technical Programs Unit and District Office within 60 days following the last date of the evaluation. **(R 336.1301, 40 CFR 60.303)**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

2. The permittee shall monitor and record the following: **(R 336.1205, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**
   a. Keep, in a satisfactory manner, a record of the days when equipment in EUSHIPRECEIVE is operating,
   b. Monitor the pressure differential for the EUSHIPRECEIVE fabric filter continuously, and
   c. Record the pressure differential for the EUSHIPRECEIVE fabric filter on a daily basis when the equipment is operating.

3. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the amount of grain received and the amount of grain shipped through EUSHIPRECEIVE. The permittee shall keep records on file and make them available to the Department upon request. **(R 336.1205, 40 CFR 52.21(c) and (d))**

4. The permittee shall keep, in a satisfactory manner, records of maintenance, corrective procedures, operational changes, and other parameters for the baghouse and the oil spray equipment, as specified in the MAP. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

VII. REPORTING

1. The permittee shall provide written notification of construction and operation to comply with the federal Standards of Performance for New Stationary Sources, 40 CFR 60.7. The permittee shall submit this notification to the AQD District Supervisor within the time frames specified in 40 CFR 60.7. **(40 CFR 60.7)**

2. Within 10 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of FGHANDLING. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVSHIPRECEIVE	42	158.9	40 CFR 52.21 (c) and (d)

IX. OTHER REQUIREMENTS

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and DD (Standards of Performance for Grain Elevators), as they apply to any affected facility in FGHANDLING. **(40 CFR Part 60 Subparts A & DD)**

FGLOADSTORE
FLEXIBLE GROUP CONDITIONS

DESCRIPTION: Soybean hull and meal storage and loadout, and ingredient receiving and storage.

Emission Units: EUHULLSTORAGE, EUHULLLOADOUT, EULOADOUT, EUINGREDIENTS

POLLUTION CONTROL EQUIPMENT: baghouses

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.10 lbs per 1000 lbs of gas[a]	Hourly	baghouse emissions from EULOADOUT	SC V.1	R 336.1331(1)(a)
2. PM	0.10 lbs per 1000 lbs of gas[a]	Hourly	baghouse emissions from EUINGREDIENTS	SC V.1	R 336.1331(1)(a)
3. PM10	0.005 gr/dscf	Hourly	baghouse emissions from EULOADOUT	SC V.1	R 336.1205(1), 40 CFR 52.21 (c) and (d)
4. PM10	0.005 gr/dscf	Hourly	baghouse emissions from EUINGREDIENTS	SC V.1	R 336.1205(1), 40 CFR 52.21 (c) and (d)
5. PM2.5	0.005 gr/dscf	Hourly	baghouse emissions from EULOADOUT	SC V.1	R 336.1205(1), 40 CFR 52.21 (c) and (d)
6. PM2.5	0.005 gr/dscf	Hourly	baghouse emissions from EUINGREDIENTS	SC V.1	R 336.1205(1), 40 CFR 52.21 (c) and (d)
7. Visible Emissions	10% opacity	6-minute average	Fugitive emissions from loading and unloading	SC VI.3	R 336.1301(1)(c)

[a] Calculated on a wet gas basis

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate any emission unit in FGLOADSTORE unless a malfunction abatement plan (MAP) as described in Rule 911(2), for proper operation of the corresponding baghouse has been submitted 60 days prior to the startup of FGLOADSTORE and is implemented and maintained. The MAP shall, at a minimum, specify the following:
   a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices and fugitive dust minimization equipment, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
   b. An identification of the source and air-cleaning device and fugitive dust minimization equipment operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
   c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1205, R 336.1301, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUHULLSTORAGE, EUHULLLOADOUT, EULOADOUT, or the receiving operations of EUINGREDIENTS unless the corresponding baghouse or baghouses are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining the baghouse pressure drop within the range specified in the MAP. **(R 336.1205, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

2. The permittee shall equip and maintain each fabric baghouse in FGLOADSTORE with a pressure differential gauge. **(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. Within 180 days after commencement of initial startup, the permittee shall verify PM, PM10, and PM2.5 emission rates from the EULOADOUT baghouse and PM, PM10, and PM2.5 emission rates from the EUINGREDIENTS baghouse by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

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

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. 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 336.1205, R 336.1331, R 336.1902, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) and (d))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall monitor and record the following: **(R 336.1205, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**
   a. Keep, in a satisfactory manner, a record of the days when each emission unit in FGLOADSTORE is operating,
   b. Monitor the pressure differential for each fabric filter in FGLOADSTORE continuously, and
   c. Record the pressure differential for each fabric filter in FGLOADSTORE on a daily basis when the equipment is operating.

2. The permittee shall keep, in a satisfactory manner, records of maintenance, corrective procedures, operational changes, and other parameters for the cyclones and filters corresponding to various processes in FGLOADSTORE, as specified in the MAP at the frequency specified in the MAP. The permittee shall keep these records on file at the facility and make them available to the Department upon request. **(R 336.1205, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

3. The permittee shall conduct and record weekly non-certified visual emission observations of fugitive emissions from loading and unloading. **(R 336.1301(1)(c))**

VII. REPORTING

1. The permittee shall provide written notification of construction and operation to comply with the federal Standards of Performance for New Stationary Sources, 40 CFR 60.7. The permittee shall submit this notification to the AQD District Supervisor within the time frames specified in 40 CFR 60.7. **(40 CFR 60.7)**

2. Within 10 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of FGLOADSTORE. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVHULLSTORAGE1 *	10	70	40 CFR 52.21 (c) and (d)
2. SVHULLSTORAGE2 *	10	70	40 CFR 52.21 (c) and (d)
3. SVHULLSTORAGE3 *	10	70	40 CFR 52.21 (c) and (d)
4. SVHULLSTORAGE4 *	10	70	40 CFR 52.21 (c) and (d)
5. SVHULLLOADOUT1 *	10	117	40 CFR 52.21 (c) and (d)
6. SVHULLLOADOUT2 *	10	117	40 CFR 52.21 (c) and (d)
7. SVLOADOUT (ingredient receiving and meal loadout)	45	168.5	40 CFR 52.21 (c) and (d)
* Exhausts horizontally.			

IX. OTHER REQUIREMENTS

NA

FGEXTRACTION
FLEXIBLE GROUP CONDITIONS

DESCRIPTION: Processes subject to NESHAP GGGG for Solvent Extraction for Vegetable Oil Production, including soybean oil extraction process and 3 hexane storage tanks controlled by mineral oil adsorption system (MOS), 3 meal dryers and 1 meal cooler each controlled by a cyclone, and storage of crude soybean meal.

Emission Units: EUEXTRACTION, EUDC, EUTANK1, EUTANK2, EUTANK3, EUMEALSTORAGE

POLLUTION CONTROL EQUIPMENT: mineral oil adsorption system (MOS)

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	14.30 pph	Hourly	EUEXTRACTION (SVVENTFAN)	SC V.1	R 336.1205(1), R 336.1225, R 336.1702(a)
2. VOC	62.63 tpy	12-month rolling time period as determined at the end of each calendar month	EUEXTRACTION (SVVENTFAN)	SC VI.10	R 336.1205(1), R 336.1225, R 336.1702(a)
3. VOC	30.25 pph	Hourly	EUDC (SVDC)	SC V.1	R 336.1205(1), R 336.1225, R 336.1702(a)
4. VOC	132.5 tpy	12-month rolling time period as determined at the end of each calendar month	EUDC (SVDC)	SC VI.10	R 336.1205(1), R 336.1225, R 336.1702(a)
5. PM	0.033 gr/dscf	Hourly	EUDC (SVDC)	SC V.1	R 336.1331(1)(c)
6. PM10	4.00 pph	Hourly	EUDC (SVDC)	SC V.1	R 336.1205(1), 40 CFR 52.21(c) and (d)
7. PM2.5	3.20 pph	Hourly	EUDC (SVDC)	SC V.1	R 336.1205(1), 40 CFR 52.21(c) and (d)
8. Visible Emissions	15% opacity	6-minute average	EUDC (SVDC)	SC VI.15	R 336.1301(1)(c)

II. MATERIAL LIMITS

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Soybeans	3,800 tons per day	Calendar day	FGEXTRACTION	SC VI.2	R 336.1225, R 336.1702(a), R 336.1331(1)(c), 40 CFR 52.21(c) and (d)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
2. Total extraction solvent loss	0.250 gallon per ton of soybeans processed [a]	3-month rolling time period as determined at the end of each calendar month	FGEXTRACTION	SC VI.6	R 336.1702(a)
3. Total extraction solvent loss	0.150 gallon per ton of soybeans processed [a]	12-month rolling time period as determined at the end of each calendar month	FGEXTRACTION	SC VI.7	R 336.1225, R 336.1702(a)
4. Total extraction solvent loss	0.2 gallon per ton of soybeans processed [a, b]	12-operating month rolling time period as determined at the end of each calendar month	FGEXTRACTION	SC VI.8	40 CFR 63.2840
5. Total extraction solvent loss	1.0 gallon per ton of soybeans processed [c]	3-month rolling time period as determined at the end of each calendar month	FGEXTRACTION	SC VI.9	R 336.1702(a)

[a] This limit does not apply during the *initial startup period*, defined in 40 CFR Part 63.2872.
[b] This limit is found in Table 1 of 40 CFR 63.2840, for conventional soybean processing at a new source, and applies only during *operating months*, which are defined in 40 CFR Part 63.2872.
[c] This limit applies only during the *initial startup period*, defined in 40 CFR Part 63.2872.

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGEXTRACTION unless a malfunction abatement plan (MAP) as described in Rule 911(2), for proper operation of the Mineral Oil Adsorption System (MOS) and the EUDC cyclones has been submitted 60 days prior to the startup of FGEXTRACTION, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
   a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices and fugitive dust minimization equipment, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
   b. An identification of the source and air-cleaning device and fugitive dust minimization equipment operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
   c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.
   d. Per 40 CFR 63.2852, the permittee shall develop a written Startup, Shutdown, and Malfunction (SSM) Plan, in accordance with 40 CFR 63.2852 and 40 CFR 63.6(e)(3). The SSM Plan may be part of the MAP if it meets all applicable requirements of 40 CFR Subpart GGGG. The SSM plan shall provide detailed procedures for operating and maintaining FGEXTRACTION to minimize HAP emissions during a qualifying SSM event for which the source chooses the §63.2850(e)(2) malfunction period, or the §63.2850(c)(2) or (d)(2) initial startup period. The SSM plan must specify a program of corrective action for malfunctioning process and air pollution control equipment and reflect the best practices now in use by the industry to minimize emissions.

   If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District

Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d), 40 CFR 63.2852)**

2. If FGEXTRACTION experiences an unscheduled shutdown as a result of a malfunction, or continues to operate during a malfunction (including the period reasonably necessary to correct the malfunction), or starts up after a shutdown resulting from a malfunction, then the permittee shall meet the requirements associated with one of two compliance options listed in paragraphs 40 CFR 63.2850(e)(1) through (2) within 15 days of the beginning date of the malfunction. **(40 CFR 63.2850(e))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate the FGEXTRACTION unless the Mineral Oil Adsorption System (MOS) and the EUDC cyclones are installed and operating properly and in accordance with the approved MAP. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) and (d))**

2. The permittee shall equip each hexane storage tank in FGEXTRACTION with a closed vent system that routes vapors back to the process and to the MOS control system. **(R 336.1225, R 336.1702(a), R 336.1910)**

3. Except during initial startup of FGEXTRACTION or for tank clean outs, the permittee shall not add extraction solvent to EUTANK1, EUTANK2, or EUTANK3 or the solvent work tank unless the vent from the respective tank is tied into the MOS and the MOS is installed and operating properly and in accordance with the approved MAP. **(R 336.1225, R 336.1702(a), R 336.1910, R 336.1911)**

4. The permittee shall not operate any dryer or cooler portion of EUDC if the cyclone associated with that dryer or cooler is not installed and operating properly and in accordance with the approved MAP. **(R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

5. The permittee shall equip and maintain the desolventizer toaster sparge deck with a device to measure the temperature, and a low temperature alarm. **(R 336.1225, R 336.1702(a), R 336.1910)**

6. The permittee shall equip and maintain the absorber system with a device to measure changes in the vacuum across the system. **(R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

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

1. Within 180 days after commencement of initial startup, the permittee shall verify VOC emission rates from EUEXTRACTION (SVEXTRACTION), and the VOC, PM, PM10, and PM2.5 emission rates from EUDC (SVDC) by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

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

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. 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 336.1205, R 336.1225, R 336.1331(1)(c), R 336.1702(a), R 336.1902, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) and (d))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.1225, R 336.1702(a), R 336.1331(1)(c), 40 CFR 52.21(c) and (d), 40 CFR 63.2840)**

2. The permittee shall keep, in a satisfactory manner, daily, monthly and 12-month rolling time period records of the tons of soybeans fed to FGEXTRACTION, as measured at EUPREP. **(R 336.1225, R 336.1702(a), R 336.1331(1)(c), 40 CFR 52.21(c) and (d), 40 CFR 63.2840, 40 CFR 63.2855)**

3. The permittee shall record the volume fraction of HAP present at greater than 1 percent by volume and gallons of extraction solvent in each shipment received. **(R 336.1225, R 336.1702(a), Table 1 of 40 CFR 63.2850)**

4. The permittee shall calculate and record, in a satisfactory manner, the monthly weighted average volume fraction of HAP in the extraction solvent received. **(R 336.1225, R 336.1702(a), 40 CFR 63.2850, 40 CFR 63.2854)**

5. The permittee shall keep, in a satisfactory manner, monthly records of the actual extraction solvent loss, in gallons, for FGEXTRACTION. **(R 336.1225, R 336.1702(a), 40 CFR 63.2840, Table 1 of 40 CFR 63.2850, 40 CFR 63.2853)**

6. After the initial startup period, the permittee shall calculate and record, in a satisfactory manner, the gallons total extraction solvent loss per ton of soybeans processed for FGEXTRACTION on a monthly and 3-month rolling time period basis, as required by SC II.2. **(R 336.1702(a))**

7. After the initial startup period, the permittee shall calculate and record, in a satisfactory manner, the gallons total extraction solvent loss per ton of soybeans processed for FGEXTRACTION on a monthly and 12-month rolling time period basis, as required by SC II.3. **(R 336.1225, R 336.1702(a))**

8. For each operating month, which is defined in 40 CFR Part 63.2872, the permittee shall calculate and record, in a satisfactory manner, the gallons total extraction solvent loss per ton of soybeans processed for FGEXTRACTION for the previous 12-operating month rolling time period, as required by SC II.4. **(40 CFR 63.2840)**

9. For the initial startup period, the permittee shall calculate and record, in a satisfactory manner, the gallons total extraction solvent loss per ton of soybeans processed for FGEXTRACTION, on a monthly and 3-month rolling time period basis, as required by SC II.5. **(R 336.1702(a))**

10. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period VOC emission calculation records for EUEXTRACTION (SVEXTRACTION) and EUDC (SVDC), as required by SC I.2 and SC I.4. Emission calculations shall be based on the most recent stack test data. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1), R 336.1225, R 336.1702(a))**

11. The permittee shall keep, in a satisfactory manner, the following records for FGEXTRACTION to demonstrate compliance with the Solvent Extraction for Vegetable Oil Production NESHAP: **(40 CFR 63.2850, 40 CFR 63.2862)**
    a. The permittee shall meet the recordkeeping requirements by startup of FGEXTRACTION. **(40 CFR 63.2862(a))**
    b. A plan for demonstrating compliance (as described in §63.2851) and a SSM plan (as described in §63.2852). Each plan shall describe the procedures for obtaining and recording data, and determining compliance. **(40 CFR 63.2862(b))**
    c. Records of the items under 40 CFR 63.2862(c), if any oilseed listed in 40 CFR 63.2832(a)(2) is processed in FGEXTRACTION. **(40 CFR 63.2862(c))**

d. After FGEXTRACTION has processed an oilseed listed in 40 CFR 63.2832(a)(2) for 12 operating months, and FGEXTRACTION is not operating during an initial startup period as described in §63.2850(c)(2) or (d)(2), or a malfunction period as described in §63.2850(e)(2), record the items under 40 CFR 63.2862(d) by the end of the calendar month following each operating month. **(40 CFR 63.2862(d))**
e. For each SSM event subject to an initial startup period as described in §63.2850(c)(2) or (d)(2), or a malfunction period as described in §63.2850(e)(2), record the items under 40 CFR 63.2862(e) by the end of the calendar month following each month in which the initial startup period or malfunction period occurred. **(40 CFR 63.2862(e))**

12. The permittee shall record the desolventizer toaster sparge deck temperature hourly during operation. If the temperature is lower than 195°F, then the permittee shall: **(R 336.1225, R 336.1702(a), R 336.1910)**
    a. Promptly examine the cause of the variance.
    b. Respond as needed to minimize the possibility of exceeding any emission limits in this permit.
    c. Implement any measures necessary to return the affected parameter(s) to the normal range.
    d. Record the date and time that the variance occurred, and record the measures taken to return the affected parameter(s) to the normal range.

13. The permittee shall record the percent LEL in main gas vent a minimum of four times daily. If the percent LEL is greater than 50%, then the permittee shall: **(R 336.1225, R 336.1702(a), R 336.1910)**
    a. Promptly examine the cause of the variance.
    b. Respond as needed to minimize the possibility of exceeding any emission limits in this permit.
    c. Implement any measures necessary to return the affected parameter(s) to the normal range.
    d. Record the date and time that the variance occurred, and record the measures taken to return the affected parameter(s) to the normal range.

14. The permittee shall monitor the operating parameters specified in the MAP, at the frequency specified in the MAP. The permittee shall keep a record of the times that a monitored parameter is found to be outside of the normal range. The permittee shall keep these records on file at the facility and make them available to the Department upon request. **(R 336.1225, R 336.1702(a), R 336.1910)**

15. The permittee shall conduct and record weekly non-certified visual emission observations of exhaust from EUDC (SVDC). **(R 336.1301(1)(c))**

VII. REPORTING

1. The permittee shall submit notifications containing the required information listed in §63.9 to the AQD District Supervisor within the time frames specified in 40 CFR 63.9. **(40 CFR 63.2860(b))**

2. Within 10 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of FGEXTRACTION. **(R 336.1201(7)(a))**

3. Within 10 days after a tank clean out or other event that causes tank vapors to be vented without being controlled by the MOS, the permittee shall notify the AQD District Supervisor, in writing, of the event or activity. **(R 336.1201(7)(a))**

4. The permittee shall submit an initial notification of compliance status, and subsequent annual compliance certifications. Each of these reports shall contain the following information:
    a. The name and address of the owner or operator.
    b. The physical address of the vegetable oil production process.
    c. Each listed oilseed type processed during the previous 12 operating months covered by the report.
    d. Each HAP identified under §63.2854(a) as being present in concentrations greater than 1 percent by volume in each delivery of solvent received during the 12 operating months period covered by the report.

e. A statement designating the source as a major source of HAP or a demonstration that the source qualifies as an area source. An area source is a source that is not a major source and is not collocated within a plant site with other sources that are individually or collectively a major source.
f. A compliance certification indicating whether the source complied with all of the requirements of 40 CFR 63 Subpart GGGG throughout the 12 operating months used for the report, including a certification of the items below:
   i. The initial notification shall certify that a plan for demonstrating compliance (as described in §63.2851) and SSM plan (as described in §63.2852) are complete and available on-site for inspection.
   ii. Each report must certify that the permittee is following the procedures described in the plan for demonstrating compliance.
   iii. Each report must certify that the compliance ratio is less than or equal to 1.00.

The permittee shall submit the initial notification of compliance status report to the AQD District Supervisor no later than 60 days after determining the initial 12 operating months compliance ratio. This report is generally due no later than 20 calendar months after initial startup (6 calendar months for the initial startup period, 12 operating months to record data, and 2 calendar months to complete the report). The first annual compliance certification is due 12 calendar months after the permittee submits the notification of compliance status. Each subsequent annual compliance certification is due 12 calendar months after the previous annual compliance certification. The annual compliance certification provides the compliance status for each operating month during the 12 calendar months period ending 60 days prior to the date on which the report is due. **(40 CFR 63.2860(d), 40 CFR 63.2861(a))**

5. The permittee shall submit a deviation notification report by the end of the calendar month following the month in which it was determined that the compliance ratio exceeded 1.00, in accordance with 40 CFR 63.2861(b), to the AQD District Supervisor. **(40 CFR 63.2861(b))**

6. If FGEXTRACTION is operated under an initial startup period subject to 40 CFR 63.2850(c)(2) or (d)(2) or a malfunction period subject to §63.2850(e)(2), the permittee shall submit a periodic SSM report by the end of the calendar month following each month in which the initial startup period or malfunction period occurred. The periodic SSM report must include the items in paragraphs 40 CFR 63.2861(c)(1) through (3). **(40 CFR 63.2861(c))**

7. The permittee shall submit immediate SSM reports, in accordance with 40 CFR 63.2861(d), to the AQD District Supervisor. **(40 CFR 63.2861(d))**

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVEXTRACTION *	8.04	35	R 336.1225, 40 CFR 52.21(c) and (d)
2. SVDC	61	122	R 336.1225, 40 CFR 52.21(c) and (d)
* Exhausts horizontally.			

IX. OTHER REQUIREMENTS

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants: Solvent Extraction for Vegetable Oil Production as specified in 40 CFR Part 63 Subparts A and GGGG, as they apply to FGEXTRACTION. **(40 CFR Part 63.2832, 40 CFR Part 63 Subparts A & GGGG)**

FGBOILERS
FLEXIBLE GROUP CONDITIONS

DESCRIPTION: Two (2) natural gas fired boilers, each with maximum heat input of 95 MMBtu/hr.

Emission Units: EUBOILER1, EUBOILER2

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NOx	9.31 pph	Hourly	Each boiler in FGBOILERS	SC V.1	R 336.1205(1), 40 CFR 52.21(c) and (d)
2. CO	7.82 pph	Hourly	Each boiler in FGBOILERS	SC V.1	R 336.1205(1), 40 CFR 52.21(d)

II. MATERIAL LIMITS

1. The permittee shall burn only pipeline quality natural gas in FGBOILERS. **(R 336.1205(1), R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), 40 CFR 52.21(c) and (d), 40 CFR 63.11195(e))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGBOILERS unless a malfunction abatement plan (MAP) as described in Rule 911(2), has been submitted 60 days prior to the startup of FGBOILERS, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
   a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
   b. An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
   c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

   If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1331, R 336.1225, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The maximum design heat input capacity for each boiler in FGBOILERS shall not exceed 95.0 MMBtu per hour on a fuel heat input basis. **(R 336.1205(1), 40 CFR Part 60 Subpart Dc)**

2. The permittee shall install, calibrate, maintain and operate, in a satisfactory manner, a device to monitor and record the fuel usage rate for each boiler in FGBOILERS on a continuous basis. **(R 336.1205(1), R 336.1225, R 336.1702(a), 40 CFR 52.21(c), and (d), 40 CFR 60.48c(g))**

V. TESTING/SAMPLING

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

1. Upon request of the AQD District Supervisor, the permittee shall verify NOx and CO emission rates from one or more boiler in FGBOILERS by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
NOx	40 CFR Part 60, Appendix A
CO	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 336.1205, R 336.1902, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) and (d))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.1331, 40 CFR 52.21(c) and (d))**

2. The permittee shall keep monthly natural gas usage records, in a format acceptable to the AQD District Supervisor, indicating the amount of natural gas used, in cubic feet, on a calendar month basis, and a 12-month rolling time period basis. The records must indicate the total amount of natural gas used in each boiler in FGBOILERS. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205, 40 CFR 52.21(c) and (d)), 40 CFR 60.48c(g)(2))**

3. The permittee shall maintain records of information necessary for all required notifications and reports for FGBOILERS, as well as information necessary to demonstrate compliance with the emission limits of this permit, including the following:
   a. Monitoring data;
   b. Verification of heat input capacity required to show compliance with SC IV.1;
   c. Identification, type and the amounts of fuel combusted in FGBOILERS on a calendar month basis;
   d. All records required by 40 CFR 60.7, 60.48c;
   e. All calculations necessary to show compliance with the limits contained in this permit.

   All of the above information shall be stored in a format acceptable to the Air Quality Division and shall be consistent with the requirements of 40 CFR 60.7(f). **(R 336.1205(1), R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702(a), R 336.1912, 40 CFR 60.7(f))**

VII. REPORTING

1. The permittee shall provide written notification of the date construction commences and actual startup of FGBOILERS, in accordance with 40 CFR 60.7 and 60.48c. The notification shall include the design heat input, an identification of the fuels to be combusted and the annual capacity factor for FGBOILERS. The permittee shall submit this notification to the AQD District Supervisor within the time frames specified in 40 CFR 60.7. **(40 CFR 60.7, 40 CFR 60.48c)**

2. Within 10 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of FGBOILERS. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBOILER1	52	82	40 CFR 52.21(c) and (d)
2. SVBOILER2	52	82	40 CFR 52.21(c) and (d)

IX. OTHER REQUIREMENTS

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Dc, as they apply to FGBOILERS. **(40 CFR Part 60 Subparts A & Dc)**

FGBOILERMACT
FLEXIBLE GROUP CONDITIONS

DESCRIPTION: Gas 1 Fuel Subcategory requirements for new Boilers/Process Heaters at major sources of Hazardous Air Pollutants per 40 CFR Part 63, Subpart DDDDD. These new boilers or process heaters must comply with this subpart upon startup.

Emission Units: EUBOILER1, EUBOILER2

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

1. The permittee shall only burn fuels as allowed in the Unit designed to burn gas 1 subcategory definition in 40 CFR 63.7575. **(40 CFR 63.7499(l))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee must meet the requirements in paragraphs (a)(1) and (3) of 40 CFR 63.7500, as listed below, except as provided in paragraphs (b) and (e) of 40 CFR 63.7500, stated in SC III.2 and SC III.3. The permittee must meet these requirements at all times the affected unit is operating. **(40 CFR 63.7500(a))**
   a. The permittee must meet each work practice standard in Table 3 of 40 CFR Part 63, Subpart DDDDD that applies to the boiler or process heater, for each boiler or process heater at the source. **(40 CFR 63.7500(a)(1))**
   b. At all times, the permittee must operate and maintain any affected source (as defined in 40 CFR 63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. **(40 CFR 63.7500(a)(3))**

2. As provided in 40 CFR 63.6(g), EPA may approve use of an alternative to the work practice standards. **(40 CFR 63.7500(b))**

3. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory are not subject to the emission limits in Tables 1 and 2 or 11 through 13 of 40 CFR Part 63, Subpart DDDDD, or the operating limits in Table 4 of 40 CFR Part 63, Subpart DDDDD. **(40 CFR 63.7500(e))**

4. The permittee must demonstrate initial compliance with the applicable work practice standards in Table 3 to 40 CFR Part 63, Subpart DDDDD within the applicable annual, biennial, or 5-year schedule as specified in 40 CFR 63.7515(d), stated in SC III.4, following the initial compliance date specified in 40 CFR 63.7495(a), stated in SC IX.3. Thereafter, you are required to complete the applicable annual, biennial, or 5-year tune-up as specified in 40 CFR 63.7515(d), stated in SC III.4. **(40 CFR 63.7510(g))**

5. If the permittee is required to meet an applicable tune-up work practice standard, the permittee must:
   a. Conduct the first annual tune-up no later than 13-months after the initial startup of the new or reconstructed boiler or process heater, the first biennial tune-up no later than 25-months after the initial startup of the new or reconstructed boiler or process heater, or the first 5-year tune-up no later than 61-months after the initial startup of the new or reconstructed boiler or process heater.

b. Conduct an annual performance tune-up according to 40 CFR 63.7540(a)(10), stated in SC IX.6.a; biennial performance tune-up according to 40 CFR 63.7540(a)(11), stated in SC IX.6.b; or 5-year performance tune-up according to 40 CFR 63.7540(a)(12), stated in SC IX.6.c. Each annual tune-up specified in 40 CFR 63.7540(a)(10) must be no more than 13-months after the previous tune-up. Each biennial tune-up specified in 40 CFR 63.7540(a)(11) must be conducted no more than 25-months after the previous tune-up. Each 5-year tune-up specified in 40 CFR 63.7540(a)(12) must be conducted no more than 61-months after the previous tune-up. **(40 CFR 63.7515(d))**

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee must keep records according to paragraphs (a)(1) and (2) of 40 CFR 63.7555, as listed below. **(40 CFR 63.7555(a))**
   a. A copy of each notification and report that the permittee submitted to comply with 40 CFR Part 63, Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that the permittee submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv). **(40 CFR 63.7555(a)(1))**
   b. Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in 40 CFR 63.10(b)(2)(viii). **(40 CFR 63.7555(a)(2))**

2. The permittee's records must be in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1). **(40 CFR 63.7560(a))**

3. As specified in 40 CFR 63.10(b)(1), the permittee must keep each record for 5-years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. **(40 CFR 63.7560(b))**

4. The permittee must keep each record on site, or they must be accessible from on-site (for example, through a computer network), for at least 2-years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). The permittee can keep the records off site for the remaining 3-years. **(40 CFR 63.7560(c))**

VII. REPORTING

1. The permittee must meet the notification requirements in 40 CFR 63.7545 according to the schedule in 40 CFR 63.7545, both stated in SC VII.2 through SC VII, and in Subpart A of 40 CFR Part 63. **(40 CFR 63.7495(d))**

2. The permittee must submit to the Administrator all of the notifications in 40 CFR 63.7(b) and (c), 40 CFR 63.8(e), (f)(4) and (6), and 40 CFR 63.9(b) through (h) that apply to the permittee by the dates specified. **(40 CFR 63.7545(a))**

3. As specified in 40 CFR 63.9(b)(4) and (5), the permittee must submit an Initial Notification not later than 15-days after the actual date of startup of the affected source. **(40 CFR 63.7545(c))**

4. If the permittee has switched fuels or made a physical change to the boiler or process heater and the fuel switch or physical change resulted in the applicability of a different subcategory, the permittee must provide notice of the date upon which the permittee switched fuels or made the physical change within 30-days of the switch/change. The notification must identify: **(40 CFR 63.7545(h))**
   a. The name of the owner or operator of the affected source, as defined in 40 CFR 63.7490, stated in SC IX.1, the location of the source, the boiler(s) and process heater(s) that have switched fuels, were physically changed, and the date of the notice. **(40 CFR 63.7545(h)(1))**
   b. The currently applicable subcategory under 40 CFR Part 63, Subpart DDDDD. **(40 CFR 63.7545(h)(2))**
   c. The date upon which the fuel switch or physical change occurred. **(40 CFR 63.7545(h)(3))**

5. The permittee must submit each report in Table 9 of 40 CFR Part 63, Subpart DDDDD that applies. **(40 CFR 63.7550(a))**

6. Unless the EPA Administrator has approved a different schedule for submission of reports under 40 CFR 63.10(a), the permittee must submit each report, according to paragraph (h) of 40 CFR 63.7550, stated in SC VII.8, by the date in Table 9 of 40 CFR Part 63, Subpart DDDDD and according to the requirements in paragraphs (b)(1) through (4) of 40 CFR 63.7550, as listed below. For units that are subject only to a requirement to conduct an annual tune-up according to 40 CFR 63.7540(a)(10), stated in SC IX.6.a, biennial tune-up according to 40 CFR 63.7540(a)(11), stated in SC IX.6.b, or 5-year tune-up according to 40 CFR 63.7540(a)(12), stated in SC IX.6.c, and not subject to emission limits or operating limits, the permittee may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of 40 CFR 63.7550, as listed below, instead of a semi-annual compliance report. **(40 CFR 63.7550(b))**
   a. The first semi-annual compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in 40 CFR 63.7495, stated in SC IX.3, and ending on December 31 after the compliance date that is specified for the source in 40 CFR 63.7495, stated in SC IX.3. When submitting an annual, biennial, or 5-year compliance report, the first compliance report must cover the period beginning on the compliance date specified for each boiler or process heater in 40 CFR 63.7495 and ending on December 31 within 1, 2, or 5-years, as applicable, after the compliance date that is specified in 40 CFR 63.7495. **(40 CFR 63.7550(b)(1))**
   b. The first semi-annual compliance report must be postmarked or submitted no later than September 15 or March 15, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in 40 CFR 63.7495, stated in SC IX.3. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than March 15. **(40 CFR 63.7550(b)(2), 40 CFR 63.7550(b)(5))**
   c. Each subsequent semi-annual compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Annual, biennial, and 5-year compliance reports must cover the applicable 1, 2, or 5-year periods from January 1 to December 31. **(40 CFR 63.7550(b)(3))**
   d. Each subsequent semi-annual compliance report must be postmarked or submitted no later than September 15 or March 15, whichever date is the first date following the end of the semiannual reporting period. Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than March 15. **(40 CFR 63.7550(b)(4), 40 CFR 63.7550(b)(5))**

7. A compliance report must contain the following information depending on how the permittee chooses to comply with the limits set in this rule. **(40 CFR 63.7550(c))**
   a. If the facility is subject to the requirements of a tune up the permittee must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii), (xiv), and (xvii) of 40 CFR 63.7550. **(40 CFR 63.7550(c)(1))**
   b. 40 CFR 63.7550(c)(5) is as follows:
      i. Company and Facility name and address. **(40 CFR 63.7550(c)(5)(i))**
      ii. Process unit information, emissions limitations, and operating parameter limitations. **(40 CFR 63.7550(c)(5)(ii))**
      iii. Date of report and beginning and ending dates of the reporting period. **(40 CFR 63.7550(c)(5)(iii))**

iv. Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual tune-up according to 40 CFR 63.7540(a)(10), stated in SC IX.6.a, biennial tune-up according to 40 CFR 63.7540(a)(11), stated in SC IX.6.b, or 5-year tune-up according to 40 CFR 63.7540(a)(12), stated in SC IX.6.c. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown. **(40 CFR 63.7550(c)(5)(xiv))**

v. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report. **(40 CFR 63.7550(c)(5)(xvii))**

8. The permittee must submit the reports according to the procedures specified in paragraph (h)(3) of 40 CFR 63.7550, as listed below. **(40 CFR 63.7550(h))**
   a. The permittee must submit all reports required by Table 9 of 40 CFR Part 63, Subpart DDDDD electronically to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's CDX.) The permittee must use the appropriate electronic report in CEDRI for 40 CFR Part 63, Subpart DDDDD. Instead of using the electronic report in CEDRI for 40 CFR Part 63, Subpart DDDDD, the permittee may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (*http://www.epa.gov/ttn/chief/cedri/index.html*), once the XML schema is available. If the reporting form specific to 40 CFR Part 63, Subpart DDDDD is not available in CEDRI at the time that the report is due, the permittee must submit the report to the Administrator at the appropriate address listed in 40 CFR 63.13. The permittee must begin submitting reports via CEDRI no later than 90-days after the form becomes available in CEDRI. **(40 CFR 63.7550(h)(3))**

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

1. 40 CFR Part 63, Subpart DDDDD applies to new or reconstructed affected sources as described in paragraph (a)(2) of 40 CFR 63.7490, as listed below. **(40 CFR 63.7490(a))**
   a. The affected source of 40 CFR Part 63, Subpart DDDDD is each new or reconstructed industrial, commercial, or institutional boiler or process heater, as defined in 40 CFR 63.7575, located at a major source. **(40 CFR 63.7490(a)(2))**

2. A boiler or process heater is:
   a. New if the permittee commences construction of the boiler or process heater after June 4, 2010, and the permittee meets the applicability criteria at the time the permittee commences construction. **(40 CFR 63.7490(b))**

3. If the permittee has a new or reconstructed boiler or process heater, the permittee must comply with 40 CFR Part 63, Subpart DDDDD by April 1, 2013, or upon startup of each boiler or process heater, whichever is later. **(40 CFR 63.7495(a))**

4. The permittee must be in compliance with the work practice standards of 40 CFR Part 63, Subpart DDDDD. **(40 CFR 63.7505(a))**

5. For affected sources (as defined in 40 CFR 63.7490, stated in SC IX.1) that have not operated since the previous compliance demonstration and more than one year has passed since the previous compliance demonstration, the permittee must complete a subsequent tune-up by following the procedures described in 40 CFR 63.7540(a)(10)(i) through (vi), stated in SC IX.6.a, and the schedule described in 40 CFR 63.7540(a)(13), stated in SC IX.6.d, for units that are not operating at the time of their scheduled tune-up. **(40 CFR 63.7515(g))**

6. The permittee must demonstrate continuous compliance with the work practice standards in Table 3 of 40 CFR Part 63, Subpart DDDDD that applies according to the methods specified in paragraphs (a)(10) through (13) of 40 CFR 63.7540, as listed below. **(40 CFR 63.7540(a))**
   a. If the boiler or process heater has a heat input capacity of 10 MMBtu per hour or greater, the permittee must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of 40 CFR 63.7540, as listed below. The tune-up must be conducted while burning the type of fuel or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12-months prior to the tune-up. This frequency does not apply to units with continuous oxygen trim systems that maintain an optimum air to fuel ratio. **(40 CFR 63.7540(a)(10))**
      i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36-months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment. **(40 CFR 63.7540(a)(10)(i))**
      ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available. **(40 CFR 63.7540(a)(10)(ii))**
      iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36-months from the previous inspection. **(40 CFR 63.7540(a)(10)(iii))**
      iv. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_x requirement to which the unit is subject. **(40 CFR 63.7540(a)(10)(iv))**
      v. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. **(40 CFR 63.7540(a)(10)(v))**
      vi. Maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (a)(10)(vi)(A) through (C) of 40 CFR 63.7540, as listed below. **(40 CFR 63.7540(a)(10)(vi))**
         (1) The concentrations of CO in the effluent stream in ppm by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater. **(40 CFR 63.7540(a)(10)(vi)(A))**
         (2) A description of any corrective actions taken as a part of the tune-up. **40 CFR 63.7540(a)(10)(vi)(B))**
         (3) The type and amount of fuel used over the 12-months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit. **(40 CFR 63.7540(a)(10)(vi)(C))**
   b. If the boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 MMBtu per hour and the unit is in the units designed to burn gas 1 subcategory, the permittee must conduct a tune-up of the boiler or process heater every 5-years as specified in paragraphs (a)(10)(i) through (vi) of 40 CFR 63.7540 to demonstrate continuous compliance. The permittee may delay the burner inspection specified in paragraph (a)(10)(i) of 40 CFR 63.7540 until the next scheduled or unscheduled unit shutdown, but the permittee must inspect each burner at least once every 72-months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5-years, set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up. **(40 CFR 63.7540(a)(12))**
   c. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30-calendar days of startup. **(40 CFR 63.7540(a)(13))**

7. Table 10 of 40 CFR Part 63, Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1 through 63.15 applies to the permittee. **(40 CFR 63.7565)**

EGLE

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: P0788	Section Number (if applicable):

1. Additional Information ID
AI-09

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Per Form AR-001: Attached is a newly created table containing applicable requirements from 40 CFR Part 63, Subpart GGGG - National Emission Standards for Hazardous Air Pollutants: Solvent Extraction for Vegetable Oil Production for EUEXTRACTION, EUDC, EUTANK1, EUTANK2, EUTANK3, and EUMEALSTORAGE

FGEXTRACTION
FLEXIBLE GROUP CONDITIONS

DESCRIPTION: Processes subject to NESHAP GGGG for Solvent Extraction for Vegetable Oil Production, including soybean oil extraction process and 3 hexane storage tanks controlled by mineral oil adsorption system (MOS), 3 meal dryers and 1 meal cooler each controlled by a cyclone, and storage of crude soybean meal.

Emission Units: EUEXTRACTION, EUDC, EUTANK1, EUTANK2, EUTANK3, EUMEALSTORAGE

POLLUTION CONTROL EQUIPMENT: mineral oil adsorption system (MOS)

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	14.30 pph	Hourly	EUEXTRACTION (SVVENTFAN)	SC V.1	R 336.1205(1), R 336.1225, R 336.1702(a)
2. VOC	62.63 tpy	12-month rolling time period as determined at the end of each calendar month	EUEXTRACTION (SVVENTFAN)	SC VI.10	R 336.1205(1), R 336.1225, R 336.1702(a)
3. VOC	30.25 pph	Hourly	EUDC (SVDC)	SC V.1	R 336.1205(1), R 336.1225, R 336.1702(a)
4. VOC	132.5 tpy	12-month rolling time period as determined at the end of each calendar month	EUDC (SVDC)	SC VI.10	R 336.1205(1), R 336.1225, R 336.1702(a)
5. PM	0.033 gr/dscf	Hourly	EUDC (SVDC)	SC V.1	R 336.1331(1)(c)
6. PM10	4.00 pph	Hourly	EUDC (SVDC)	SC V.1	R 336.1205(1), 40 CFR 52.21(c) and (d)
7. PM2.5	3.20 pph	Hourly	EUDC (SVDC)	SC V.1	R 336.1205(1), 40 CFR 52.21(c) and (d)
8. Visible Emissions	15% opacity	6-minute average	EUDC (SVDC)	SC VI.15	R 336.1301(1)(c)

II. MATERIAL LIMITS

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Soybeans	3,800 tons per day	Calendar day	FGEXTRACTION	SC VI.2	R 336.1225, R 336.1702(a), R 336.1331(1)(c), 40 CFR 52.21(c) and (d)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
2. Total extraction solvent loss	0.250 gallon per ton of soybeans processed [a]	3-month rolling time period as determined at the end of each calendar month	FGEXTRACTION	SC VI.6	R 336.1702(a)
3. Total extraction solvent loss	0.150 gallon per ton of soybeans processed [a]	12-month rolling time period as determined at the end of each calendar month	FGEXTRACTION	SC VI.7	R 336.1225, R 336.1702(a)
4. Total extraction solvent loss	0.2 gallon per ton of soybeans processed [a, b]	12-operating month rolling time period as determined at the end of each calendar month	FGEXTRACTION	SC VI.8	40 CFR 63.2840
5. Total extraction solvent loss	1.0 gallon per ton of soybeans processed [c]	3-month rolling time period as determined at the end of each calendar month	FGEXTRACTION	SC VI.9	R 336.1702(a)

[a] This limit does not apply during the *initial startup period*, defined in 40 CFR Part 63.2872.
[b] This limit is found in Table 1 of 40 CFR 63.2840, for conventional soybean processing at a new source, and applies only during *operating months*, which are defined in 40 CFR Part 63.2872.
[c] This limit applies only during the *initial startup period*, defined in 40 CFR Part 63.2872.

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGEXTRACTION unless a malfunction abatement plan (MAP) as described in Rule 911(2), for proper operation of the Mineral Oil Adsorption System (MOS) and the EUDC cyclones has been submitted 60 days prior to the startup of FGEXTRACTION, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
   a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices and fugitive dust minimization equipment, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
   b. An identification of the source and air-cleaning device and fugitive dust minimization equipment operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
   c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.
   ~~d. Per 40 CFR 63.2852, the permittee shall develop a written Startup, Shutdown, and Malfunction (SSM) Plan, in accordance with 40 CFR 63.2852 and 40 CFR 63.6(e)(3). The SSM Plan may be part of the MAP if it meets all applicable requirements of 40 CFR Subpart GGGG. The SSM plan shall provide detailed procedures for operating and maintaining FGEXTRACTION to minimize HAP emissions during a qualifying SSM event for which the source chooses the §63.2850(e)(2) malfunction period, or the §63.2850(c)(2) or (d)(2) initial startup period. The SSM plan must specify a program of corrective action for malfunctioning process and air pollution control equipment and reflect the best practices now in use by the industry to minimize emissions.~~

   If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District

Commented [BL1]: This condition was removed from 40 CFR Part 63 Subpart GGGG dated March 18, 2020

Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d), 40 CFR 63.2852)**

2. If FGEXTRACTION experiences an unscheduled shutdown as a result of a malfunction, or continues to operate during a malfunction (including the period reasonably necessary to correct the malfunction), or starts up after a shutdown resulting from a malfunction, then the permittee shall meet the requirements associated with one of two compliance options listed in paragraphs 40 CFR 63.2850(e)(1) through (2) within 15 days of the beginning date of the malfunction. **(40 CFR 63.2850(e))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate the FGEXTRACTION unless the Mineral Oil Adsorption System (MOS) and the EUDC cyclones are installed and operating properly and in accordance with the approved MAP. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) and (d))**

2. The permittee shall equip each hexane storage tank in FGEXTRACTION with a closed vent system that routes vapors back to the process and to the MOS control system. **(R 336.1225, R 336.1702(a), R 336.1910)**

3. Except during initial startup of FGEXTRACTION or for tank clean outs, the permittee shall not add extraction solvent to EUTANK1, EUTANK2, or EUTANK3 or the solvent work tank unless the vent from the respective tank is tied into the MOS and the MOS is installed and operating properly and in accordance with the approved MAP. **(R 336.1225, R 336.1702(a), R 336.1910, R 336.1911)**

4. The permittee shall not operate any dryer or cooler portion of EUDC if the cyclone associated with that dryer or cooler is not installed and operating properly and in accordance with the approved MAP. **(R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

5. The permittee shall equip and maintain the desolventizer toaster sparge deck with a device to measure the temperature, and a low temperature alarm. **(R 336.1225, R 336.1702(a), R 336.1910)**

6. The permittee shall equip and maintain the absorber system with a device to measure changes in the vacuum across the system. **(R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

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

1. Within 180 days after commencement of initial startup, the permittee shall verify VOC emission rates from EUEXTRACTION (SVEXTRACTION), and the VOC, PM, PM10, and PM2.5 emission rates from EUDC (SVDC) by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

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

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. 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 336.1205, R 336.1225, R 336.1331(1)(c), R 336.1702(a), R 336.1902, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) and (d))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.1225, R 336.1702(a), R 336.1331(1)(c), 40 CFR 52.21(c) and (d), 40 CFR 63.2840)**

2. The permittee shall keep, in a satisfactory manner, daily, monthly and 12-month rolling time period records of the tons of soybeans fed to FGEXTRACTION, as measured at EUPREP. **(R 336.1225, R 336.1702(a), R 336.1331(1)(c), 40 CFR 52.21(c) and (d), 40 CFR 63.2840, 40 CFR 63.2855)**

3. The permittee shall record the volume fraction of HAP present at greater than 1 percent by volume and gallons of extraction solvent in each shipment received. **(R 336.1225, R 336.1702(a), Table 1 of 40 CFR 63.2850)**

4. The permittee shall calculate and record, in a satisfactory manner, the monthly weighted average volume fraction of HAP in the extraction solvent received. **(R 336.1225, R 336.1702(a), 40 CFR 63.2850, 40 CFR 63.2854)**

5. The permittee shall keep, in a satisfactory manner, monthly records of the actual extraction solvent loss, in gallons, for FGEXTRACTION. **(R 336.1225, R 336.1702(a), 40 CFR 63.2840, Table 1 of 40 CFR 63.2850, 40 CFR 63.2853)**

6. After the initial startup period, the permittee shall calculate and record, in a satisfactory manner, the gallons total extraction solvent loss per ton of soybeans processed for FGEXTRACTION on a monthly and 3-month rolling time period basis, as required by SC II.2. **(R 336.1702(a))**

7. After the initial startup period, the permittee shall calculate and record, in a satisfactory manner, the gallons total extraction solvent loss per ton of soybeans processed for FGEXTRACTION on a monthly and 12-month rolling time period basis, as required by SC II.3. **(R 336.1225, R 336.1702(a))**

8. For each operating month, which is defined in 40 CFR Part 63.2872, the permittee shall calculate and record, in a satisfactory manner, the gallons total extraction solvent loss per ton of soybeans processed for FGEXTRACTION for the previous 12-operating month rolling time period, as required by SC II.4. **(40 CFR 63.2840)**

9. For the initial startup period, the permittee shall calculate and record, in a satisfactory manner, the gallons total extraction solvent loss per ton of soybeans processed for FGEXTRACTION, on a monthly and 3-month rolling time period basis, as required by SC II.5. **(R 336.1702(a))**

10. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period VOC emission calculation records for EUEXTRACTION (SVEXTRACTION) and EUDC (SVDC), as required by SC I.2 and SC I.4. Emission calculations shall be based on the most recent stack test data. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1), R 336.1225, R 336.1702(a))**

11. The permittee shall keep, in a satisfactory manner, the following records for FGEXTRACTION to demonstrate compliance with the Solvent Extraction for Vegetable Oil Production NESHAP: **(40 CFR 63.2850, 40 CFR 63.2862)**
    a. The permittee shall meet the recordkeeping requirements by startup of FGEXTRACTION. **(40 CFR 63.2862(a))**
    b. A plan for demonstrating compliance (as described in §63.2851) and a SSM plan (as described in §63.2852). Each plan shall describe the procedures for obtaining and recording data, and determining compliance. **(40 CFR 63.2862(b))**
    c. Records of the items under 40 CFR 63.2862(c), if any oilseed listed in 40 CFR 63.2832(a)(2) is processed in FGEXTRACTION. **(40 CFR 63.2862(c))**

d. After FGEXTRACTION has processed an oilseed listed in 40 CFR 63.2832(a)(2) for 12 operating months, and FGEXTRACTION is not operating during an initial startup period as described in §63.2850(c)(2) or (d)(2), or a malfunction period as described in §63.2850(e)(2), record the items under 40 CFR 63.2862(d) by the end of the calendar month following each operating month. **(40 CFR 63.2862(d))**
e. For each SSM event subject to an initial startup period as described in §63.2850(c)(2) or (d)(2), or a malfunction period as described in §63.2850(e)(2), record the items under 40 CFR 63.2862(e) by the end of the calendar month following each month in which the initial startup period or malfunction period occurred. **(40 CFR 63.2862(e))**

12. The permittee shall record the desolventizer toaster sparge deck temperature hourly during operation. If the temperature is lower than 195°F, then the permittee shall: **(R 336.1225, R 336.1702(a), R 336.1910)**
    a. Promptly examine the cause of the variance.
    b. Respond as needed to minimize the possibility of exceeding any emission limits in this permit.
    c. Implement any measures necessary to return the affected parameter(s) to the normal range.
    d. Record the date and time that the variance occurred, and record the measures taken to return the affected parameter(s) to the normal range.

13. The permittee shall record the percent LEL in main gas vent a minimum of four times daily. If the percent LEL is greater than 50%, then the permittee shall: **(R 336.1225, R 336.1702(a), R 336.1910)**
    a. Promptly examine the cause of the variance.
    b. Respond as needed to minimize the possibility of exceeding any emission limits in this permit.
    c. Implement any measures necessary to return the affected parameter(s) to the normal range.
    d. Record the date and time that the variance occurred, and record the measures taken to return the affected parameter(s) to the normal range.

14. The permittee shall monitor the operating parameters specified in the MAP, at the frequency specified in the MAP. The permittee shall keep a record of the times that a monitored parameter is found to be outside of the normal range. The permittee shall keep these records on file at the facility and make them available to the Department upon request. **(R 336.1225, R 336.1702(a), R 336.1910)**

15. The permittee shall conduct and record weekly non-certified visual emission observations of exhaust from EUDC (SVDC). **(R 336.1301(1)(c))**

VII. REPORTING

1. The permittee shall submit notifications containing the required information listed in §63.9 to the AQD District Supervisor within the time frames specified in 40 CFR 63.9. **(40 CFR 63.2860(b))**

2. Within 10 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of FGEXTRACTION. **(R 336.1201(7)(a))**

3. Within 10 days after a tank clean out or other event that causes tank vapors to be vented without being controlled by the MOS, the permittee shall notify the AQD District Supervisor, in writing, of the event or activity. **(R 336.1201(7)(a))**

4. The permittee shall submit an initial notification of compliance status, and subsequent annual compliance certifications. Each of these reports shall contain the following information:
    a. The name and address of the owner or operator.
    b. The physical address of the vegetable oil production process.
    c. Each listed oilseed type processed during the previous 12 operating months covered by the report.
    d. Each HAP identified under §63.2854(a) as being present in concentrations greater than 1 percent by volume in each delivery of solvent received during the 12 operating months period covered by the report.

e. A statement designating the source as a major source of HAP or a demonstration that the source qualifies as an area source. An area source is a source that is not a major source and is not collocated within a plant site with other sources that are individually or collectively a major source.
f. A compliance certification indicating whether the source complied with all of the requirements of 40 CFR 63 Subpart GGGG throughout the 12 operating months used for the report, including a certification of the items below:
   i. The initial notification shall certify that a plan for demonstrating compliance (as described in §63.2851) and SSM plan (as described in §63.2852) are complete and available on-site for inspection.
   ii. Each report must certify that the permittee is following the procedures described in the plan for demonstrating compliance.
   iii. Each report must certify that the compliance ratio is less than or equal to 1.00.

The permittee shall submit the initial notification of compliance status report to the AQD District Supervisor no later than 60 days after determining the initial 12 operating months compliance ratio. This report is generally due no later than 20 calendar months after initial startup (6 calendar months for the initial startup period, 12 operating months to record data, and 2 calendar months to complete the report). The first annual compliance certification is due 12 calendar months after the permittee submits the notification of compliance status. Each subsequent annual compliance certification is due 12 calendar months after the previous annual compliance certification. The annual compliance certification provides the compliance status for each operating month during the 12 calendar months period ending 60 days prior to the date on which the report is due. **(40 CFR 63.2860(d), 40 CFR 63.2861(a))**

5. The permittee shall submit a deviation notification report by the end of the calendar month following the month in which it was determined that the compliance ratio exceeded 1.00, in accordance with 40 CFR 63.2861(b), to the AQD District Supervisor. **(40 CFR 63.2861(b))**

~~6. If FGEXTRACTION is operated under an initial startup period subject to 40 CFR 63.2850(c)(2) or (d)(2) or a malfunction period subject to §63.2850(e)(2), the permittee shall submit a periodic SSM report by the end of the calendar month following each month in which the initial startup period or malfunction period occurred. The periodic SSM report must include the items in paragraphs 40 CFR 63.2861(c)(1) through (3). **(40 CFR 63.2861(c))**~~

~~7. The permittee shall submit immediate SSM reports, in accordance with 40 CFR 63.2861(d), to the AQD District Supervisor. **(40 CFR 63.2861(d))**~~

Commented [BL2]: This condition was removed from 40 CFR Part 63 Subpart GGGG dated March 18, 2020

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVEXTRACTION *	8.04	35	R 336.1225, 40 CFR 52.21(c) and (d)
2. SVDC	61	122	R 336.1225, 40 CFR 52.21(c) and (d)
* Exhausts horizontally.			

IX. OTHER REQUIREMENTS

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants: Solvent Extraction for Vegetable Oil Production as specified in 40 CFR Part 63 Subparts A and GGGG, as they apply to FGEXTRACTION. **(40 CFR Part 63.2832, 40 CFR Part 63 Subparts A & GGGG)**

Fugitive Dust Control Plan for Grain Receiving Haul Roads

ZFS Ithaca, LLC
1266 Washington Road
Ithaca, Michigan 48847

July 10, 2018

1.0 INTRODUCTION

This document is intended to fulfill the air quality permit requirement to create and implement a written Fugitive Dust Control Plan to minimize fugitive dust emissions from the haul roads at the ZFS Ithaca soybean plant. The Fugitive Dust Control Plan provides monitoring, control, and recordkeeping methods that will be used at the facility to reduce fugitive dust emissions.

The plan is required pursuant to the Michigan Department of Environmental Quality (MDEQ) Air Quality Division Permit requirements.

2.0 FUGITIVE DUST EMISSION SOURCES

This Fugitive Dust Control Plan addresses the areas of the facility that have the highest potential to generate non-process fugitive emissions, the grain shipping and receiving haul roads.

Fugitive dust is primarily generated from the roads at the facility. Facility road emissions are generated from the contact between the roads and the vehicle tires causing the re-suspension of loose material from the road surface.

The haul roads at the facility support high daily traffic rates, including both plant traffic and customer traffic. The average vehicle weight is highly variable, ranging from small pick-up trucks (0.5 tons) to large customer trucks (~40.0 tons). The primary source of vehicle traffic on the haul roads are from large customer trucks. Only roads that are in service are covered in this plan. Haul roads that are not in use due to construction activities are not addressed.

3.0 FUGITIVE DUST CONTROL METHODS AND RECORDKEEPING

3.1 Sweeping

Paved roads will be monitored and swept as needed. Paved road sweeping will not be conducted on days where rain, snow, or other adverse weather events occur. Additional roads will be paved as construction continues and they will be added to the paved road inventory upon completion. Paved roads will be monitored daily and swept as needed.

3.2 Dust Suppression

Haul roads that have not been paved due to construction activity will use dust suppression as a means of controlling fugitive dust. This will be accomplished through the application of calcium chloride and/or water to the unpaved road surface.

3.3 Visual Observation

A visual observation of haul roads will be conducted and recorded once per day when operating. If, anytime throughout the day an opacity greater than 5.0% is observed on the haul roads,

corrective action will be initiated. Only roads that are in service will be monitored. Haul roads that are not in use due to construction activities will not be observed. Personnel will navigate the road system to determine if excessive fugitive dust is present on the paved haul roads or if fugitive dust is leaving the property boundary.

Implementation of corrective actions shall be taken upon observation of visible fugitive emissions or more frequently in accordance with the Fugitive Dust Control Plan.

Corrective actions will be taken if observers identify any of the following:

- Visible dust greater than 5% opacity
- Buildup or accumulation of excessive dirt/debris on paved roads

Correction actions for the above observations include:

- An increase in the frequency of sweeping on the paved roads
- Water flush/rinse mud, dirt, or similar debris from the paved roads
- Calcium chloride and/or water application to dirt or gravel roads.

Personnel conducting the visual observation will document the inspection and any corrective actions taken on the Fugitive Dust Control Log (Appendix A).If adverse weather creates an unsafe environment to conduct the visual observation, that information will be documented in the Fugitive Dust Control Log. Records will be kept on site with the Fugitive Dust Control Plan for a minimum of five (5) years.

3.4 Speed Limit

Signage will be posted at the entrance to the facility to limit all vehicle traffic speed to 10 miles per hour (mph).

4.0 RESPONSIBLE PERSONNEL

The EHS Manager is responsible for the implementation and updating of the Fugitive Dust Control Plan. The EHS Manager will also be responsible for implementing any revisions made to the plan. All documentation and recordkeeping related to the plan will be reviewed and kept on file with the EHS Manager. A copy of this Fugitive Dust Control Plan will be retained on-site, and it will be made available to an authorized MDEQ representative upon request.

5.0 STAFF TRAINING

All facility staff that are responsible for visual observations and fugitive dust suppression activities shall be made aware of this plan and its contents, including control methods and associated recordkeeping requirements. Staff will immediately be made aware of any revisions to the plan.

ZFS Ithaca, LLC

Visual Emissions of On-Site Vehicle Traffic

Date:	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Truck Traffic Present Today?	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No
Was dust visually observed on haul road from gate entrance to scale?	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No
Was dust visually observed on haul road from scale to elevator?	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No
Was dust visually observed on haul road from scale to soy plant?	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No
Comments (dust, opacity, rain, snow, ice, spilled grain or meal products, excessive traffic speed, etc..)							
Signature of Observer							

Please add comments if visual dust is observed.

MALFUNCTION ABATEMENT PLAN
AND PREVENTATIVE MAINTENANCE PLAN

ZFS ITHACA, LLC

JANUARY 7, 2020

REVISED FEBRUARY 8, 2021

1.0 INTRODUCTION

This malfunction abatement plan and preventative maintenance plan has been prepared in accordance with Michigan Department of Environmental Quality (MDEQ) Act 451, Rule 336.1911 "Malfunction Abatement Plans." Compliance with the Malfunction Abatement Plan/Preventative Maintenance Plan (MAP/PMP) is based on maintaining equipment in good operating order.

ZFS Ithaca, LLC is responsible for preparing and maintaining a preventative maintenance program for control equipment. Preventative maintenance schedules have been established based on manufacturer's recommendations, permit requirements, and plant operating experience. Qualified individuals will perform inspections, maintenance, and repairs.

In general, all equipment used for control of air emissions will be operated and maintained to the extent possible to prevent, detect, and correct any failures or malfunctions that could result in emissions exceeding the levels specified in the renewable operating permit issued to ZFS Ithaca, LLC by MDEQ's Air Quality Division.

2.0 SOURCE DESCRIPTION

The emission sources, air pollution control equipment, and emissions to be controlled from facility are as follows.

Emission Source	Control Equipment	Stacks	Emissions Controlled
EUSHIPRECEIVE	Baghouse	SVSHIPRECEIVE	Particulate Matter
EUHANDLING	Oil Application System	N/A	Particulate Matter
EUPREP	Jet Dryer Baghouse A Jet Dryer Baghouse B Exhaust Filter VSC Cyclone A VSC Cyclone B Whole Bean Cyclone Secondary Cyclone CCD Cyclone CCC Cyclone Flaker Cyclone	SVPREP	Particulate Matter
EUHULLGRINDING	Baghouse	SVHULLGRINDING	Particulate Matter
EUMEALGRINDING	Baghouse	SVMEALGRINDING	Particulate Matter
EUPELLETIZING	Cyclone	SVPELLETIZING	Particulate Matter
EUHULLSTORAGE	Baghouse #1 Baghouse #2 Baghouse #3 Baghouse #4	SVHULLSTORAGE	Particulate Matter
EUHULLLOADOUT	Baghouse #1 Baghouse #2	SVHULLLOADOUT	Particulate Matter
EULOADOUT	Baghouse	SVLOADOUT	Particulate Matter
EUINGREDIENTS	Baghouse	SVLOADOUT	Particulate Matter
EUDC	Dryer Cyclone #1 Dryer Cyclone #2 Dryer Cyclone #3 Cooler Cyclone	SVDC	Particulate Matter
EUEXTRACTION	Mineral Oil System	SVEXTRACTION	VOC
EUBOILER1 & EUBOILER2	N/A	SVBOILER1 & SVBOILER2	N/A

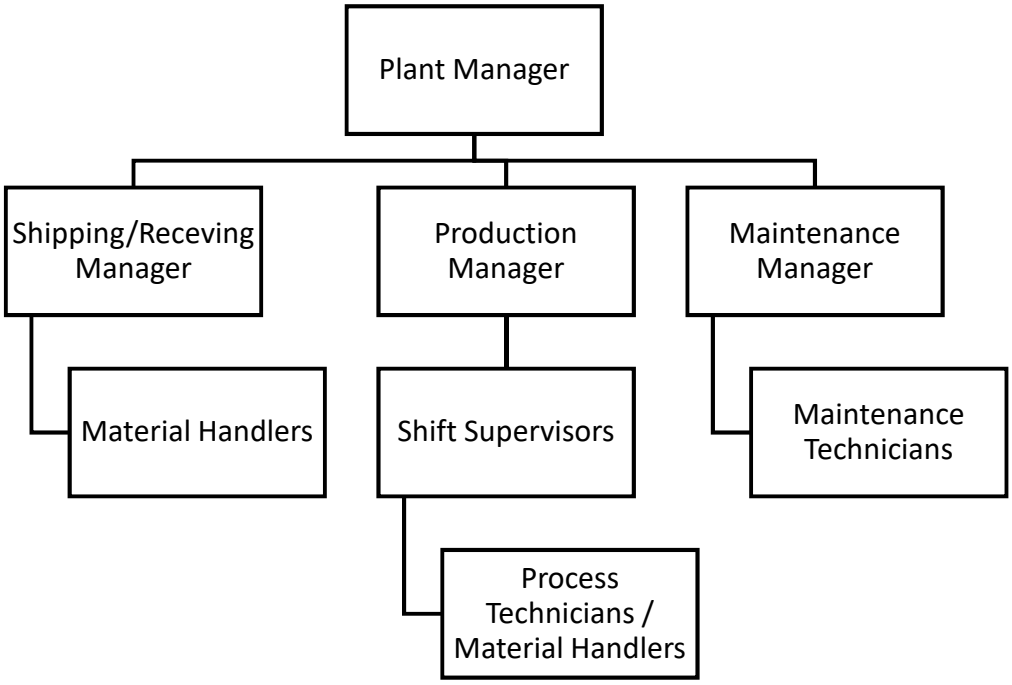
3.0 PREVENTATIVE MAINTEANCE PROGRAM (Rule 911(2)(a))

3.1 Responsible Personnel

The responsible personnel for the preventative maintenance program at ZFS Ithaca, LLC.

Position	Responsibility
Plant Manager	Overall operations
Production Manager, Shipping/Receiving Manager and Maintenance Manager	Overall operations and maintenance for their respective areas
Shift Supervisor(s)	Training, maintaining documentation, corrective actions, oversight of process operators, and general maintenance
CMMS Administrator	Spare parts inventory, maintaining documentation
Process Technicians, and Material Handlers	Pollution control equipment monitoring, malfunction response, routine inspections, preventative maintenance inspections
Maintenance Technicians	Repairs, routine inspections, preventative maintenance
EHS Manager	Maintaining documentation, reporting to the MDEQ

An organizational chart of supervisory personnel at ZFS Ithaca, LLC that are responsible for overseeing the inspection, maintenance, and repair of equipment are identified below.



3.2 Equipment Inspections

ZFS Ithaca depends on proper operation of equipment to ensure reliability, efficiency, production, and compliance. Preventative maintenance and monitoring are key components to ensuring the overall wellbeing of the facility.

Preventative maintenance includes equipment inspections, scheduled replacement of parts, and maintaining inventory of critical spare parts. The frequency of inspections and monitoring varies based on the nature of the task. Replacement of parts is regularly scheduled to occur during semi-annual plant shut downs, or will occur as the direct and immediate result of a malfunction that compromises the equipment's ability to function efficiently or within the specified parameters.

MALFUNCTION ABATEMENT PLAN/PREVENTATIVE MAINTENANCE PLAN
For:
EUSHIPRECEIVE – BAGHOUSE

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1. General Description of EUSHIPRECEIVE Baghouse

The grains receiving and shipping building has many pieces of equipment that use vacuum for dust control. This exiting air contains dust composed of grain, hull, and pod particulate which must be cleaned from the air before it can be discharged to the atmosphere. This particulate laden air passes through filter bags which are contained in a baghouse. The baghouse uses a rotating sweep that is attached to an air chamber to pulse the filter bags intermittently with a shot of air in order to drop the collected particulate from the bags. This material is then discharged out of an airlock into a conveyor where it is reintroduced back into the seed unloading receiving conveyors (drags). The exit air is now clean and leaves the baghouse through a stack (SVSHIPRECEIVE).

Equipment Details:

- Kice Industries, Inc. Model # CR344-12n
- 49,000 SCFM
- Maximum Pressure Differential of 20" w.c.
- 344 filter bags, each 4 ¾" ID x 144" long, 10.5 oz.
- Baghouse discharges particulate into the seed unloading receiving conveyors (drags) using a Rotary Airlock.
- Equipment discharging air to emissions control equipment include seed receiving pits, loadout bin, loadout spout and receiving bucket elevators.

Normal Operating Range: Pressure must be between 0.5 inch water column and 8 inches water column.

2. Particulate Control

Particulate matter is considered to be sufficiently controlled when the baghouse is operating within the range of 0.5 – 8 inches of water column.

3. Operating and Maintenance

a. No shipping or receiving equipment will be put into operation if the baghouse is not in service.

b. During operation, the differential pressure across the bags will be monitored continuously throughout the day, and recorded once a day to validate the proper operation of the baghouse.

c. A digital differential pressure gauge is used to monitor operation of the baghouse.

d. If at any point during operation the baghouse is shut down for any reason, all receiving equipment that isn't automatically shut down due to interlocks will be manually shut down.

e. If equipment is operating outside the normal recommended range, refer to Appendix A - Malfunction Response Summary to determine source of malfunction and how to correct malfunction. Internal staff will be notified to rectify the situation. Notify Shift Supervisor and fill out the Malfunction Report form in Appendix C.

f. For a checklist regarding regularly scheduled preventative maintenance, refer to Appendix B - Preventative Maintenance Work Plan.

4. Malfunction Prevention and Abatement Plan

a. The baghouse will be operated in accordance with good engineering practices.

b. Routine maintenance and inspection of the baghouse and its monitoring devices will be conducted in accordance with the maintenance plan developed by ZFS Ithaca, LLC. All maintenance work performed will be documented. Maintenance records will be kept on file for five (5) years from the date of maintenance activity.

5. Inventory

a. 344 Filter bags
b. 10 Filter cages
c. Self-lubricating roller chain
d. 1 Connecting Link-#60 Chain
e. 1 Offset Link-60# Chain
f. 1 Poly Chain Belt
g. 1 Vacuum Motor
h. 1 Cyclodrive Box & Quill Mount Bracket
i. 1 Gauge, Magnehelic
j. 1 Rotary Airlock Bearing
k. 6 V-Belt, 8VX1250
l. 2 V-Belt, 3VX560
m. 1 Motor, 25 HP, 3600 RPM
n. 1 SM Gearmotor
o. 2 Screw Conveyor Bearing

Any questions, concerns, malfunctions, or problems are to be reported to the Shipping/Receiving Manager.

MALFUNCTION ABATEMENT PLAN/PREVENTATIVE MAINTENANCE PLAN
For:
EUHANDLING – OIL APPLICATION SYSTEM

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1. General Description of EUHANDLING – Oil Application System

Grain coming into the facility often contains dust and other debris. The process of unloading and conveying grain can cause this dust to become airborne. To prevent dust from becoming airborne, refined soybean oil is added to the grain in the unloading conveyors to bind dust to the grain. This occurs prior to the grain transitioning to the bucket elevators. The refined soybean oil is supplied to the oil application system from a 10,000 gallon carbon steel double walled tank that is insulated and heat traced. A Martin Engineering Surfactant Dust System applies the refined soybean oil. The system works when the sensors detect grain within a conveyor; solenoids open; and soybean oil is applied. The system has the capability of applying up to 80 gallons an hour with each of the unloading drags receiving up to 20 gallons.

Equipment Details:

- Martin Engineering Surfactant Dust System
- Capacity to apply 80 gallons of oil an hour

Normal Operating Range: Application rate of 0.5 – 2.0 gallons refined soybean oil per 1,000bu of grain. When operating within this range, equipment will be considered to be operating properly.

2. Particulate Control

Particulate matter is considered to be sufficiently controlled when the oil addition system is in operation.

3. Operating and Maintenance

a. No receiving equipment will be put into operation if the oil application system is not in service.

b. Sensors within the oil addition system will send an alarm to the HMI/DCS if there is a no flow event.

c. If at any point during operation the oil application system is shut down for any reason, all receiving equipment that isn't automatically shut down by interlocks will be manually shut down.

d. If equipment is operating outside the normal recommended range, refer to Appendix A - Malfunction Response Summary to determine source of malfunction and how to correct malfunction. Internal staff will be notified to rectify the situation. Notify Shift Supervisor and fill out the Malfunction Report form in Appendix C.

e. For a checklist regarding regularly scheduled preventative maintenance, refer to Appendix B - Preventative Maintenance Work Plan.

4. Malfunction Prevention and Abatement Plan

a. The oil application system will be operated in accordance with good engineering practices.

b. Routine maintenance and inspection of the oil application systems and its monitoring devices will be conducted in accordance with the maintenance plan developed by ZFS Ithaca, LLC. All maintenance work performed will be documented. Maintenance records will be kept on file for five (5) years from the date of maintenance activity.

5. Inventory

a. 100' Polyethylene Tubing- ½" OD
b. 4 Push Lock ½ NPTM - ½ OD Tube (straight)
c. 4 Push Lock ½ NPTM – ½ OD Tube (90^{o})
d. 2 Solenoid Rebuild Kit
e. 6-8 Nozzles
f. 1 Pump

Any questions, concerns, malfunctions, or problems are to be reported to the Shipping/Receiving Manager.

MALFUNCTION ABATEMENT PLAN/PREVENTATIVE MAINTENANCE PLAN
For:
EUPREP – JET DRYER BAGHOUSE A & B

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1. General Description of EUPREP – JET DRYER BAGHOUSE A & B

The jet dryer removes dust and hulls from the bean flow during operation. The air which exits the jet dryer typically contains particulates from soybeans and hulls. This particulate laden air passes through filter bags which are contained in a baghouse. The baghouse uses a rotating sweep that is attached to an air chamber to pulse the filter bags intermittently with a shot of air in order to drop the collected particulate from the bags. This material is then discharged out of an airlock into a conveyor where it is reintroduced back into the process. The exit air is now clean and leaves the baghouse through the common stack, SVPREP. .

Equipment Details:

- Schenck Process, LLC / 144MCF416
- Filter A – FLT-20840 S/N: 1100343725-010-1
- Filter B – FLT-20940 S/N: 1100343725-020-1
- 48,000 CFM each
- Differential pressure range between 0.5-10" w.c.
- 402 filter bags, each 144" long
- Baghouse discharges particulate to the hull stream for grinding (hammermills).
- Equipment discharging air to emissions control equipment include jet dryers, where Jet Dryer A is connected to Baghouse A and Jet Dryer B is connected to Baghouse B.

Normal Operating Range:

- Pressure must be between 0.5 inches water column and 10 inches water column.
- Visible emissions from SVPREP must be less than 10% opacity
    - There are multiple piece of equipment that also route emissions to a common stack (SVPREP), and therefore a visible emissions reading of 10% or greater may also be the result of a malfunction with other equipment.

2. Particulate Control

Particulate matter is considered to be sufficiently controlled when the baghouse is operating within the range of 0.5 – 10 inches of water column.

If the visible emissions from SVPREP are less than 10% opacity, the baghouses are sufficiently controlling particulate matter. Should the visible emissions be greater than 10% opacity, this is an indication that a baghouse may be malfunctioning. However, there are multiple piece of equipment that also route emissions to SVPREP. Therefore, visible emissions of greater than 10% opacity indicates that any control device in EUPREP with emissions to SVPREP may be malfunctioning.

3. Operating and Maintenance

a. The jet dryers will not be put into operation if the associated baghouse is not in service.

b. During operation, the differential pressure across the bags will be monitored continuously throughout the day, and recorded once a day to validate the proper operation of the baghouse.

c. A magnehelic differential pressure gauge is used to monitor operation of the baghouse.

d. If at any point during operation the baghouse is shut down for any reason, corresponding equipment that isn't automatically shut down due to interlocks will be manually shut down.

e. If equipment is operating outside the normal recommended range, refer to Appendix A - Malfunction Response Summary to determine source of malfunction and how to correct malfunction. Internal staff will be notified to rectify the situation. Notify Shift Supervisor and fill out the Malfunction Report form in Appendix C.

f. For a checklist regarding regularly scheduled preventative maintenance, refer to Appendix B - Preventative Maintenance Work Plan.

4. Malfunction Prevention and Abatement Plan

a. The baghouse will be operated in accordance with good engineering practices.

b. Routine maintenance and inspection of the baghouse and its monitoring devices will be conducted in accordance with the maintenance plan developed by ZFS Ithaca, LLC. All maintenance work performed will be documented. Maintenance records will be kept on file for five (5) years from the date of maintenance activity.

5. Inventory

a. 402 Filter bags
b. 10 Filter cages
c. 1 Gauge, Magnehelic
d. 1 Rotary Airlock Bearing
e. 1 Screw Conveyor Bearing
f. 1 Diaphragm Assembly
g. 1 Inlet Tee Assembly
h. 1 Spring (3" O.D.)
i. 1 Sure Flex Sleeve
j. 1 Sprocket Assembly
k. 5 Blankout Plugs
l. 1 Explosion Vent and Sensor
m. 1 Blower
n. 1 Rotary Bin Indicator

Any questions, concerns, malfunctions, or problems are to be reported to the Production Manager.

MALFUNCTION ABATEMENT PLAN/PREVENTATIVE MAINTENANCE PLAN
For:
EUPREP – EXHAUST FILTER BAGHOUSE

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1. General Description of EUPREP – EXHAUST FILTER BAGHOUSE

The exhaust filter baghouse provides dust control for the rotary magnet and bucket elevator for soybean cleaning as well as dust control for air existing from the following control devices: whole bean cyclone, secondary cyclone, CCD cyclone, and CCC cyclone. Air entering the exhaust filter baghouse may contain dust, bean, or hull particulate which must be cleaned before it can be discharged. This particulate laden air passes through filter bags which are contained in a baghouse. The baghouse uses a rotating sweep that is attached to an air chamber to pulse the filter bags intermittently with a shot of air in order to drop the collected particulate from the bags. This material is then discharged out of an airlock into a conveyor where it is reintroduced back into the hull process. The exit air is now clean and leaves the baghouse through the common stack, SVPREP.

Equipment Details:

- Schenck Process, LLC / 144MCF416
- FLT-21710 S/N: 1100343725-050-1
- 47,000 CFM
- Differential pressure range between 0.5-10" w.c.
- 416 filter bags, each 144" long
- Baghouse discharges particulate to the hull stream for grinding (hammermills).
- Equipment discharging air to emissions control equipment include the whole bean cyclone, secondary cyclone, rotary magnet, bucket elevator, CCD cyclone, and CCC cyclone.

Normal Operating Range:

- Pressure must be between 0.5 inches water column and 10 inches water column.
- Visible emissions from SVPREP must be less than 10% opacity
    - There are multiple piece of equipment that also route emissions to a common stack (SVPREP), and therefore a visible emissions reading of 10% or greater may also be the result of a malfunction with other equipment.

2. Particulate Control

Particulate matter is considered to be sufficiently controlled when the baghouse is operating within the range of 0.5 – 10 inches of water column.

If the visible emissions from SVPREP are less than 10% opacity, the baghouses are sufficiently controlling particulate matter. Should the visible emissions be greater than 10% opacity, this is an indication that a baghouse may be malfunctioning. However, there are multiple piece of equipment that also route emissions to SVPREP. Therefore, visible emissions of greater than 10% opacity indicates that any control device in EUPREP with emissions to SVPREP may be malfunctioning.

3. Operating and Maintenance

a. The equipment that aspirates to the exhaust filter will not be put into operation if the associated baghouse is not in service.

b. During operation, the differential pressure across the bags will be monitored continuously throughout the day, and recorded once a day to validate the proper operation of the baghouse.

c. A magnehelic differential pressure gauge is used to monitor operation of the baghouse.

d. If at any point during operation the baghouse is shut down for any reason, corresponding equipment that isn't automatically shut down due to interlocks will be manually shut down.

e. If equipment is operating outside the normal recommended range, refer to Appendix A - Malfunction Response Summary to determine source of malfunction and how to correct malfunction. Internal staff will be notified to rectify the situation. Notify Shift Supervisor and fill out the Malfunction Report form in Appendix C.

f. For a checklist regarding regularly scheduled preventative maintenance, refer to Appendix B - Preventative Maintenance Work Plan.

4. Malfunction Prevention and Abatement Plan

a. The baghouse will be operated in accordance with good engineering practices.

b. Routine maintenance and inspection of the baghouse and its monitoring devices will be conducted in accordance with the maintenance plan developed by ZFS Ithaca, LLC. All maintenance work performed will be documented. Maintenance records will be kept on file for five (5) years from the date of maintenance activity.

5. Inventory

a. 416 Filter bags
b. 10 Filter cages
c. 1 Gauge, Magnehelic
d. 1 Rotary Airlock Bearing
e. 1 Screw Conveyor Bearing
f. 1 Diaphragm Assembly
g. 1 Inlet Tee Assembly
h. 1 Spring (3" O.D.)
i. 1 Sure Flex Sleeve
j. 1 Sprocket Assembly
k. 5 Blankout Plugs
l. 1 Explosion Vent and Sensor
m. 1 Blower
n. 1 Rotary Bin Indicator

Any questions, concerns, malfunctions, or problems are to be reported to the Production Manager.

MALFUNCTION ABATEMENT PLAN/PREVENTATIVE MAINTENANCE PLAN
For:
EUPREP – VSC CYCLONES A AND B

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1. General Description of EUPREP – VSC CYCLONES A & B

The vertical seed conditioner (VSC) slowly heats up soybeans as they pass from the top of the VSC to the bottom of the VSC over and around low pressure steam coils. Air flow through the VSC helps condition and facilitate migration of moisture throughout the beans to properly condition the soybean. Loose hulls and other particulates on the soybeans may fall off during bean conditioning. These hulls are captured in the VSC cyclone and recycled into the soybean process stream. The VSC cyclones exhaust to the common stack SVPREP

Equipment Details:

- Schenck Process LLC, H96 Collector
- Cyclone A: CY-20540 S/N: 1100343725-070-1
- Cyclone B: CY-20740 S/N: 1100343725-070-2
- 28,000 CFM each
- Cyclone discharges particulate into the soybean stream entering the jet dryers.
- Equipment discharging air to emissions control equipment include VSC Cyclones A and B, where each VSC is connected to a dedicated cyclone.

Normal Operating Range:

- Visible emissions from SVPREP must be less than 10% opacity
    - There are multiple piece of equipment that also route emissions to a common stack (SVPREP), and therefore a visible emissions reading of 10% or greater may also be the result of a malfunction with other equipment.

2. Particulate Control

If the visible emissions from SVPREP are less than 10% opacity, the cyclones are sufficiently controlling particulate matter. Should the visible emissions be greater than 10% opacity, this is an indication that a cyclone may be malfunctioning. However, there are multiple piece of equipment that also route emissions to SVPREP. Therefore, visible emissions of greater than 10% opacity indicates that any control device in EUPREP with emissions to SVPREP may be malfunctioning.

3. Operating and Maintenance

a. The VSC that aspirates to the cyclone will not be put into operation if the associated cyclone is not in service.

b. If at any point during operation a cyclone is shut down for any reason, corresponding equipment that isn't automatically shut down due to interlocks will be manually shut down.

c. If equipment is operating outside the normal recommended range, refer to Appendix A - Malfunction Response Summary to determine source of malfunction and how to correct malfunction. Internal staff will be notified to rectify the situation. Notify Shift Supervisor and fill out the Malfunction Report form in Appendix C.

d. For a checklist regarding regularly scheduled preventative maintenance, refer to Appendix B - Preventative Maintenance Work Plan.

4. Malfunction Prevention and Abatement Plan

a. The cyclones will be operated in accordance with good engineering practices.

b. Routine maintenance and inspection of the cyclones and their monitoring devices will be conducted in accordance with the maintenance plan developed by ZFS Ithaca, LLC. All maintenance work performed will be documented. Maintenance records will be kept on file for five (5) years from the date of maintenance activity.

5. Inventory

a. 5 feet pitch roller chain and connecting links
b. 1 Airlock motor
c. 1 Airlock rebuild kit
d. 2 Airlock bearings
e. 5 sq. ft. of tile and adhesive

Any questions, concerns, malfunctions, or problems are to be reported to the Production Manager.

MALFUNCTION ABATEMENT PLAN/PREVENTATIVE MAINTENANCE PLAN
For:
EUPREP – WHOLE BEAN CYCLONE

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1. General Description of EUPREP – WHOLE BEAN CYCLONE

The whole bean cyclone cleans dust laden air from soybean cleaning and aspiration equipment. The cyclone spins any particulate out and allows the clean air to move up and out the cyclone for further filtration at the Exhaust Filter Baghouse. The cyclone discharges the collected particulate matter out of a rotary valve which routes the particulate matter back in with the hull stream.

Equipment Details:

- Schenck Process LLC H85 Collector
- CY-20355 S/N: 1100343725-060-1
- 20,500 CFM
- Cyclone discharges particulate to the hull stream for grinding (hammermills).
- Equipment discharging air to emissions control equipment includes the scalparater and whole bean aspirators.

Normal Operating Range:

- Visible emissions from SVPREP must be less than 10% opacity
    - There are multiple piece of equipment that also route emissions to a common stack (SVPREP), and therefore a visible emissions reading of 10% or greater may also be the result of a malfunction with other equipment.

2. Particulate Control

If the visible emissions from SVPREP are less than 10% opacity, the cyclone is sufficiently controlling particulate matter. Should the visible emissions be greater than 10% opacity, this is an indication that the cyclone may be malfunctioning. However, there are multiple piece of equipment that also route emissions to SVPREP. Therefore, visible emissions of greater than 10% opacity indicates that any control device in EUPREP with emissions to SVPREP may be malfunctioning.

3. Operating and Maintenance

a. The equipment that aspirates to the cyclone will not be put into operation if the associated cyclone is not in service.

b. If at any point during operation the cyclone is shut down for any reason, corresponding equipment that isn't automatically shut down due to interlocks will be manually shut down.

c. If equipment is operating outside the normal recommended range, refer to Appendix A - Malfunction Response Summary to determine source of malfunction and how to correct malfunction. Internal staff will be notified to rectify the situation. Notify Shift Supervisor and fill out the Malfunction Report form in Appendix C.

d. For a checklist regarding regularly scheduled preventative maintenance, refer to Appendix B - Preventative Maintenance Work Plan.

4. Malfunction Prevention and Abatement Plan

a. The cyclone will be operated in accordance with good engineering practices.

b. Routine maintenance and inspection of the cyclone and its monitoring device(s) will be conducted in accordance with the maintenance plan developed by ZFS Ithaca, LLC. All maintenance work performed will be documented. Maintenance records will be kept on file for five (5) years from the date of maintenance activity.

5. Inventory

a. 5 feet pitch roller chain and connecting links
b. 1 Airlock motor
c. 1 Airlock rebuild kit
d. 2 Airlock bearings
e. 5 sq. ft. of tile and adhesive

Any questions, concerns, malfunctions, or problems are to be reported to the Production Manager.

MALFUNCTION ABATEMENT PLAN/PREVENTATIVE MAINTENANCE PLAN
For:
EUPREP – SECONDARY CYCLONE

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1. General Description of EUPREP – SECONDARY CYCLONE

The secondary cyclone cleans dust laden air from the hull screeners and secondary aspirators. The cyclone spins any particulate out and allows the clean air to move up and out the cyclone for further filtration at the Exhaust Filter Baghouse. The cyclone discharges the collected particulate matter out of a rotary valve which routes the particulate matter back in with the hull stream.

Equipment Details:

- Schenck Process LLC 1HE27 Collector
- CY-21755 S/N: 1100343725-100-1
- 4,000 CFM
- Cyclone discharges particulate to the hull stream for grinding (hammermills).
- Equipment discharging air to emissions control equipment include hull screeners and secondary aspirators.

Normal Operating Range:

- Visible emissions from SVPREP must be less than 10% opacity
    - There are multiple piece of equipment that also route emissions to a common stack (SVPREP), and therefore a visible emissions reading of 10% or greater may also be the result of a malfunction with other equipment.

2. Particulate Control

If the visible emissions from SVPREP are less than 10% opacity, the cyclone is sufficiently controlling particulate matter. Should the visible emissions be greater than 10% opacity, this is an indication that the cyclone may be malfunctioning. However, there are multiple piece of equipment that also route emissions to SVPREP. Therefore, visible emissions of greater than 10% opacity indicates that any control device in EUPREP with emissions to SVPREP may be malfunctioning.

3. Operating and Maintenance

a. The equipment that aspirates to the cyclone will not be put into operation if the associated cyclone is not in service.

b. If at any point during operation the cyclone is shut down for any reason, corresponding equipment that isn't automatically shut down due to interlocks will be manually shut down.

c. If equipment is operating outside the normal recommended range, refer to Appendix A - Malfunction Response Summary to determine source of malfunction and how to correct malfunction. Internal staff will be notified to rectify the situation. Notify Shift Supervisor and fill out the Malfunction Report form in Appendix C.

d. For a checklist regarding regularly scheduled preventative maintenance, refer to Appendix B - Preventative Maintenance Work Plan.

4. Malfunction Prevention and Abatement Plan

a. The cyclone will be operated in accordance with good engineering practices.

b. Routine maintenance and inspection of the cyclone and its monitoring device(s) will be conducted in accordance with the maintenance plan developed by ZFS Ithaca, LLC. All maintenance work performed will be documented. Maintenance records will be kept on file for five (5) years from the date of maintenance activity.

5. Inventory

a. 5 feet pitch roller chain and connecting links
b. 1 Airlock motor
c. 1 Airlock rebuild kit
d. 2 Airlock bearings
e. 5 sq. ft. of tile and adhesive

Any questions, concerns, malfunctions, or problems are to be reported to the Production Manager

MALFUNCTION ABATEMENT PLAN/PREVENTATIVE MAINTENANCE PLAN
For:
EUPREP – CCD CYCLONE

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1. General Description of EUPREP – CCD CYCLONE

The CCD cyclone cleans dust laden air from two Cascade dryers. The cyclone spins any particulate out and allows the clean air to move up and out the cyclone for further filtration at the Exhaust Filter Baghouse. The cyclone discharges the collected particulate matter out of a rotary valve which routes the particulate matter back in with the hull stream.

Equipment Details:

- Schenck Process LLC H96 Collector
- CY-21125 S/N: 1100343725-080-1
- 27,000 CFM
- Cyclone discharges particulate to the hull stream for cleaning and aspiration
- Equipment discharging air to emissions control equipment include two (2) cascade dryers

Normal Operating Range:

- Visible emissions from SVPREP must be less than 10% opacity
    - There are multiple piece of equipment that also route emissions to a common stack (SVPREP), and therefore a visible emissions reading of 10% or greater may also be the result of a malfunction with other equipment.

2. Particulate Control

If the visible emissions from SVPREP are less than 10% opacity, the cyclone is sufficiently controlling particulate matter. Should the visible emissions be greater than 10% opacity, this is an indication that the cyclone may be malfunctioning. However, there are multiple piece of equipment that also route emissions to SVPREP. Therefore, visible emissions of greater than 10% opacity indicates that any control device in EUPREP with emissions to SVPREP may be malfunctioning.

3. Operating and Maintenance

a. The equipment that aspirates to the cyclone will not be put into operation if the associated cyclone is not in service.

b. If at any point during operation the cyclone is shut down for any reason, corresponding equipment that isn't automatically shut down due to interlocks will be manually shut down.

c. If equipment is operating outside the normal recommended range, refer to Appendix A - Malfunction Response Summary to determine source of malfunction and how to correct malfunction. Internal staff will be notified to rectify the situation. Notify Shift Supervisor and fill out the Malfunction Report form in Appendix C.

d. For a checklist regarding regularly scheduled preventative maintenance, refer to Appendix B - Preventative Maintenance Work Plan.

4. Malfunction Prevention and Abatement Plan

a. The cyclone will be operated in accordance with good engineering practices.

b. Routine maintenance and inspection of the cyclone and its monitoring device(s) will be conducted in accordance with the maintenance plan developed by ZFS Ithaca, LLC. All maintenance work performed will be documented. Maintenance records will be kept on file for five (5) years from the date of maintenance activity.

5. Inventory

a. 5 feet pitch roller chain and connecting links
b. 1 Airlock motor
c. 1 Airlock rebuild kit
d. 2 Airlock bearings
e. 5 sq. ft. of tile and adhesive

Any questions, concerns, malfunctions, or problems are to be reported to the Production Manager.

MALFUNCTION ABATEMENT PLAN/PREVENTATIVE MAINTENANCE PLAN
For:
EUPREP – CCC CYCLONE

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1. General Description of EUPREP – CCC CYCLONE

The CCC cyclone cleans dust laden air from two Cascade coolers. The cyclone spins any particulate out and allows the clean air to move up and out the cyclone for further filtration at the Exhaust Filter Baghouse. The cyclone discharges the collected particulate matter out of a rotary valve which routes the particulate matter back in with the hull stream.

Equipment Details:

- Schenck Process LLC H96 Collector
- CY-21155 S/N: 1100343725-150-1
- 27,000 CFM
- Cyclone discharges particulate to the hull stream for cleaning and aspiration
- Equipment discharging air to emissions control equipment include two (2) cascade coolers

Normal Operating Range:

- Visible emissions from SVPREP must be less than 10% opacity
    - There are multiple piece of equipment that also route emissions to a common stack (SVPREP), and therefore a visible emissions reading of 10% or greater may also be the result of a malfunction with other equipment.

2. Particulate Control

If the visible emissions from SVPREP are less than 10% opacity, the cyclone is sufficiently controlling particulate matter. Should the visible emissions be greater than 10% opacity, this is an indication that the cyclone may be malfunctioning. However, there are multiple piece of equipment that also route emissions to SVPREP. Therefore, visible emissions of greater than 10% opacity indicates that any control device in EUPREP with emissions to SVPREP may be malfunctioning.

3. Operating and Maintenance

a. The equipment that aspirates to the cyclone will not be put into operation if the associated cyclone is not in service.

b. If at any point during operation the cyclone is shut down for any reason, corresponding equipment that isn't automatically shut down due to interlocks will be manually shut down.

c. If equipment is operating outside the normal recommended range, refer to Appendix A - Malfunction Response Summary to determine source of malfunction and how to correct malfunction. Internal staff will be notified to rectify the situation. Notify Shift Supervisor and fill out the Malfunction Report form in Appendix C.

d. For a checklist regarding regularly scheduled preventative maintenance, refer to Appendix B - Preventative Maintenance Work Plan.

4. Malfunction Prevention and Abatement Plan

a. The cyclone will be operated in accordance with good engineering practices.

b. Routine maintenance and inspection of the cyclone and its monitoring device(s) will be conducted in accordance with the maintenance plan developed by ZFS Ithaca, LLC. All maintenance work performed will be documented. Maintenance records will be kept on file for five (5) years from the date of maintenance activity.

5. Inventory

a. 5 feet pitch roller chain and connecting links
b. 1 Airlock motor
c. 1 Airlock rebuild kit
d. 2 Airlock bearings
e. 5 sq. ft. of tile and adhesive

Any questions, concerns, malfunctions, or problems are to be reported to the Production Manager.

MALFUNCTION ABATEMENT PLAN/PREVENTATIVE MAINTENANCE PLAN
For:
EUPREP – FLAKER CYCLONE

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1. General Description of EUPREP – FLAKER CYCLONE

The facility contains flaking equipment which converts soy bean cracks into soy flakes. A flaker fan draws heated fresh air through flaker aspiration before entering into a cyclone. The cyclone pulls particulate out and allows cleaned air to move up and out of the cyclone to the fan which discharges to a common stack (SVPREP). The cyclone discharges the collected particulate matter out of a rotary valve which routes the material back to the process.

Equipment Details:

- Schenck Process LLC H85 Collector
- CY-21420 S/N: 1100343725-110-1
- 22,000 CFM
- Cyclone discharges particulate into the flake stream leaving the flakers and feeding extraction.
- Equipment discharging air to emissions control equipment include seven (7) flakers.

Normal Operating Range:

- Visible emissions from SVPREP must be less than 10% opacity
    - There are multiple piece of equipment that also route emissions to a common stack (SVPREP), and therefore a visible emissions reading of 10% or greater may also be the result of a malfunction with other equipment.

2. Particulate Control

If the visible emissions from SVPREP are less than 10% opacity, the cyclone is sufficiently controlling particulate matter. Should the visible emissions be greater than 10% opacity, this is an indication that the cyclone may be malfunctioning. However, there are multiple piece of equipment that also route emissions to SVPREP. Therefore, visible emissions of greater than 10% opacity indicates that any control device in EUPREP with emissions to SVPREP may be malfunctioning.

3. Operating and Maintenance

a. The equipment that aspirates to the cyclone will not be put into operation if the associated cyclone is not in service.

b. If at any point during operation the cyclone is shut down for any reason, corresponding equipment that isn't automatically shut down due to interlocks will be manually shut down.

c. If equipment is operating outside the normal recommended range, refer to Appendix A - Malfunction Response Summary to determine source of malfunction and how to correct malfunction. Internal staff will be notified to rectify the situation. Notify Shift Supervisor and fill out the Malfunction Report form in Appendix C.

d. For a checklist regarding regularly scheduled preventative maintenance, refer to Appendix B - Preventative Maintenance Work Plan.

4. Malfunction Prevention and Abatement Plan

a. The cyclone will be operated in accordance with good engineering practices.

b. Routine maintenance and inspection of the cyclone and its monitoring device(s) will be conducted in accordance with the maintenance plan developed by ZFS Ithaca, LLC. All maintenance work performed will be documented. Maintenance records will be kept on file for five (5) years from the date of maintenance activity.

5. Inventory

a. 5 feet pitch roller chain and connecting links
b. 1 Airlock motor
c. 1 Airlock rebuild kit
d. 2 Airlock bearings
e. 5 sq. ft. of tile and adhesive

Any questions, concerns, malfunctions, or problems are to be reported to the Production Manager.

MALFUNCTION ABATEMENT PLAN/PREVENTATIVE MAINTENANCE PLAN
For:
EUHULLGRINDING BAGHOUSE

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1. General Description of EUHULLGRINDING BAGHOUSE

The EUHULLGRINDING baghouse provides dust control for the two hammermills that grind hulls. This particulate laden air passes through filter bags which are contained in a baghouse. The baghouse uses an air manifold to pulse the filter bags intermittently with a shot of air in order to drop the collected particulate from the bags. This material is then discharged out an airlock and reintroduced into the hull stream. The clean exit air from the baghouse leaves through the stack SVHULLGRINDING.

Equipment Details:

- Schenck Process LLC 144LST64
- FLT-21875
- 6,500 ACFM
- Differential pressure range between 0.5-10" w.c.
- 64 filter bags, each 144" long
- Baghouse discharges particulate into the hull stream feeding the pelletizing equipment
- Equipment discharging air to emissions control equipment include two (2) hammermills that grind hulls.

Normal Operating Range: Pressure must be between 0.5 inch water column and 10 inches water column. The visible emissions from the stack of the baghouse must be less than 5% opacity.

2. Particulate Control

Particulate matter is considered to be sufficiently controlled when the baghouse is operating within the range of 0.5 – 10 inches of water column and the visible emissions from the stack are less than 5% opacity.

3. Operating and Maintenance

a. EUHULLGRINDING will not be put into operation if the baghouse is not in service.

b. During operation, the differential pressure across the bags will be monitored continuously throughout the day, and recorded once a day to validate the proper operation of the baghouse.

c. A magnehelic differential pressure gauge is used to monitor operation of the baghouse.

d. If at any point during operation the baghouse is shut down for any reason, all equipment that aspirates to the baghouse that isn't automatically shut down due to interlocks will be manually shut down.

e. If equipment is operating outside the normal recommended range, refer to Appendix A - Malfunction Response Summary to determine source of malfunction and how to correct malfunction. Internal staff will be notified to rectify the situation. Notify Shift Supervisor and fill out the Malfunction Report form in Appendix C.

f. For a checklist regarding regularly scheduled preventative maintenance, refer to Appendix B - Preventative Maintenance Work Plan.

4. Malfunction Prevention and Abatement Plan

a. The baghouse will be operated in accordance with good engineering practices.

b. Routine maintenance and inspection of the baghouse and its monitoring devices will be conducted in accordance with the maintenance plan developed by ZFS Ithaca, LLC. All maintenance work performed will be documented. Maintenance records will be kept on file for five (5) years from the date of maintenance activity.

5. Inventory

a. 64 Filter bags
b. 10 Filter cages
c. 1 of Each Replacement Belt
d. 1 Rotary Airlock Bearing
e. 1 Rotary Airlock
f. 1 Blower
g. 1 Poppet Valve
h. 1 Timer
i. 1 Gauge, Magnehelic

Any questions, concerns, malfunctions, or problems are to be reported to the Production Manager.

MALFUNCTION ABATEMENT PLAN/PREVENTATIVE MAINTENANCE PLAN
For:
EUMEALGRINDING BAGHOUSE

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1. General Description of EUMEALGRINDING BAGHOUSE

The facility uses various equipment to sort and size soybean meal. The meal sorting and sizing process is aspirated, and particulate laden air passes through filter bags which are contained in a baghouse. The baghouse filters are pulsed intermittently with a shot of air in order to drop the collected particulate from the bags. This material is then discharged out of an airlock and introduced back into the process. The air that exhausts from the baghouse discharges to the atmosphere through stack SVMEALGRINDING.

Equipment Details:

- Schenck Process LLC 144MCF255-226
- FLT-21690 S/N: 1100343725-030-1
- 19,500 CFM
- Differential pressure range between 0.5-10" w.c.
- 255 filter bags, each 144" long
- Baghouse discharges particulate into the meal stream feeding meal storage
- Equipment discharging air to emissions control equipment include three (3) hammermills that grind meal.

Normal Operating Range: Pressure must be between 0.5 inch water column and 10 inches water column. The visible emissions from the stack of the baghouse must be less than 5% opacity.

2. Particulate Control

Particulate matter is considered to be sufficiently controlled when the baghouse is operating within the range of 0.5 – 10 inches of water column and the visible emissions from the stack are less than 5% opacity.

3. Operating and Maintenance

a. EUMEALGRINDING will not be put into operation if the baghouse is not in service.

b. During operation, the differential pressure across the bags will be monitored continuously throughout the day, and recorded once a day to validate the proper operation of the baghouse.

c. A magnehelic differential pressure gauge is used to monitor operation of the baghouse.

d. If at any point during operation the baghouse is shut down for any reason, all equipment that aspirates to the baghouse that isn't automatically shut down due to interlocks will be manually shut down.

e. If equipment is operating outside the normal recommended range, refer to Appendix A - Malfunction Response Summary to determine source of malfunction and how to correct malfunction. Internal staff will be notified to rectify the situation. Notify Shift Supervisor and fill out the Malfunction Report form in Appendix C.

f. For a checklist regarding regularly scheduled preventative maintenance, refer to Appendix B - Preventative Maintenance Work Plan.

4. Malfunction Prevention and Abatement Plan

a. The baghouse will be operated in accordance with good engineering practices.

b. Routine maintenance and inspection of the baghouse and its monitoring devices will be conducted in accordance with the maintenance plan developed by ZFS Ithaca, LLC. All maintenance work performed will be documented. Maintenance records will be kept on file for five (5) years from the date of maintenance activity.

5. Inventory

a. 255 Filter bags
b. 10 Filter cages
c. 1 Gauge, Magnehelic
d. 1 Rotary Airlock Bearing
e. 1 Screw Conveyor Bearing
f. 1 Diaphragm Assembly
g. 1 Inlet Tee Assembly
h. 1 Spring (3" O.D.)
i. 1 Sure Flex Sleeve
j. 1 Sprocket Assembly
k. 5 Blankout Plugs
l. 1 Explosion Vent and Sensor
m. 1 Blower
n. 1 Rotary Bin Indicator

Any questions, concerns, malfunctions, or problems are to be reported to the Production Manager.

MALFUNCTION ABATEMENT PLAN/PREVENTATIVE MAINTENANCE PLAN
For:
EUPELLETIZING CYCLONE

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1. General Description of EUPELLETIZING CYCLONE

The facility contains pelletizing equipment which converts soy bean hulls into pellets. Dust laden air from this process is cleaned by the pelletizing cyclone. The cyclone pulls particulate out and allows cleaned air to move up and out of the cyclone to the fan which discharges to stack SVPELLETIZING. The cyclone discharges the collected particulate matter out of a rotary valve which routes the material back to the hull stream.

Equipment Details:

- Schenck Process LLC 1HE43 Collector
- 9,500 CFM
- Cyclone discharges particulate into the hull stream feeding the pelletizing equipment
- Equipment discharging air to emissions control equipment include pelletizing.

Normal Operating Range: Visible emissions from the stack of the cyclone must be less than 15% opacity

2. Particulate Control

If the visible emissions from the stack of the cyclone are less than 15% opacity, the cyclone is sufficiently controlling particulate matter.

3. Operating and Maintenance

a. The equipment that aspirates to the cyclone will not be put into operation if the associated cyclone is not in service.

b. If at any point during operation the cyclone is shut down for any reason, corresponding equipment that isn't automatically shut down due to interlocks will be manually shut down.

c. If equipment is operating outside the normal recommended range, refer to Appendix A - Malfunction Response Summary to determine source of malfunction and how to correct malfunction. Internal staff will be notified to rectify the situation. Notify Shift Supervisor and fill out the Malfunction Report form in Appendix C.

d. For a checklist regarding regularly scheduled preventative maintenance, refer to Appendix B - Preventative Maintenance Work Plan.

4. Malfunction Prevention and Abatement Plan

a. The cyclone will be operated in accordance with good engineering practices.

b. Routine maintenance and inspection of the cyclone and its monitoring device(s) will be conducted in accordance with the maintenance plan developed by ZFS Ithaca, LLC. All maintenance work performed will be documented. Maintenance records will be kept on file for five (5) years from the date of maintenance activity.

5. Inventory

a. 5 feet pitch roller chain and connecting links
b. 1 Airlock motor
c. 1 Airlock rebuild kit
d. 2 Airlock bearings
e. 5 sq. ft. of tile and adhesive

Any questions, concerns, malfunctions, or problems are to be reported to the Production Manager.

MALFUNCTION ABATEMENT PLAN/PREVENTATIVE MAINTENANCE PLAN
For:
EUHULLSTORAGE BAGHOUSE #1, #2, #3, and #4

1. General Description of EUHULLSTORAGE BAGHOUSE #1, #2, #3, and #4

Soybean hulls are a product generated during the soybean preparation process. The hulls are transferred through the process and to a storage bin. During transfer, dust is generated within the equipment. This particulate laden air passes through filter bags which are contained in a baghouse. The baghouse filters are pulsed intermittently with air in order to drop the collected particulate from the bags. This material is then discharged back into the storage bin. The air that exhausts from the baghouse through a stack (SVHULLSTORAGE 1, SVHULLSTORAGE 2, SVHULLSTORAGE 3, OR SVHULLSTORAGE 4) where it is released to the atmosphere.

Equipment Details:

- Schenck Process LLC 72ST36
- Baghouse #1 – FLT-50225 S/N: 1100349117-050-1
- Baghouse #2 – FLT-50235 S/N: 1100349117-050-2
- Baghouse #3 – FLT-50245 S/N: 1100349117-050-3
- Baghouse #4 – FLT-50255 S/N: 1100349117-050-4
- 1,600 CFM each
- Differential pressure is greater than zero.
- 36 filter bags, each 72” long
- Baghouses discharge particulate into the storage bin that they are connected to
- Each baghouse is attached to a separate hull storage bin and controls emissions during transfer or hulls into and out of the bin

Normal Operating Range: Pressure must be greater than zero. The visible emissions from the stack of the baghouse should be 0% opacity.

2. Particulate Control

Particulate matter is considered to be sufficiently controlled when the baghouse is operating at a differential pressure greater than zero and there are no visible emissions from the stack.

3. Operating and Maintenance

a. EUHULLSTORAGE will not be put into operation if the baghouse is not in service.

b. During operation, the differential pressure across the bags will be monitored continuously throughout the day, and recorded once a day to validate the proper operation of the baghouses.

c. A digital differential pressure gauge is used to monitor operation of each baghouse.

d. If at any point during operation a baghouse is shut down for any reason, all equipment that aspirates to the baghouse that isn't automatically shut down due to interlocks will be manually shut down.

e. If equipment is operating outside the normal recommended range, refer to Appendix A - Malfunction Response Summary to determine source of malfunction and how to correct malfunction. Internal staff will be notified to rectify the situation. Notify Shift Supervisor and fill out the Malfunction Report form in Appendix C.

f. For a checklist regarding regularly scheduled preventative maintenance, refer to Appendix B - Preventative Maintenance Work Plan.

4. Malfunction Prevention and Abatement Plan

a. The baghouses will be operated in accordance with good engineering practices.

b. Routine maintenance and inspection of the baghouses and their monitoring devices will be conducted in accordance with the maintenance plan developed by ZFS Ithaca, LLC. All maintenance work performed will be documented. Maintenance records will be kept on file for five (5) years from the date of maintenance activity.

5. Inventory

a. 36 Filter bags
b. 10 Filter cages
c. 1 Gauge, Magnehelic
d. 1 Rotary Airlock Bearing
e. 1 Screw Conveyor Bearing
f. 1 Diaphragm Assembly
g. 1 Inlet Tee Assembly
h. 1 Spring (3" O.D.)
i. 1 Sure Flex Sleeve
j. 1 Sprocket Assembly
k. 5 Blankout Plugs
l. 1 Explosion Vent and Sensor
m. 1 Blower
n. 1 Rotary Bin Indicator

Any questions, concerns, malfunctions, or problems are to be reported to the Shipping/Receiving Manager.

MALFUNCTION ABATEMENT PLAN/PREVENTATIVE MAINTENANCE PLAN
For:
EUHULLLOADOUT BAGHOUSE #1 and #2

1. General Description of EUHULLLOADOUT BAGHOUSE #1 and #2

Soy bean hulls are a product generated during the soybean preparation process. The hulls are transferred through the process and to a storage bin. During transfer, dust is generated within the equipment. This particulate laden air passes through filter bags which are contained in a baghouse. The baghouse filters are pulsed intermittently with air in order to drop the collected particulate from the bags. This material is then discharged back into the storage bin. The air exhausts from the baghouse through a stack (SVHULLLOADOUT 1 OR SVHULLLOADOUT 2) where it is released to the atmosphere.

Equipment Details:

- Schenck Process LLC 72ST36
- Baghouse #1 – FLT-50415 S/N: 1100349117-070-1
- Baghouse #2 – FLT-50425 S/N: 1100349117-070-2
- 1,600 CFM each
- Differential pressure greater than zero.
- 36 filter bags, each 72" long
- Baghouses discharge particulate into the storage bin that they are connected to
- Each baghouse is attached to a separate hull storage bin and controls emissions during transfer or hulls into and out of the bin

Normal Operating Range: Pressure must be greater than zero. The visible emissions from the stack of the baghouses should be 0% opacity.

2. Particulate Control

Particulate matter is considered to be sufficiently controlled when the baghouse is operating at a differential pressure greater than zero and there are no visible emissions from the stack.

3. Operating and Maintenance

a. EUHULLLOADOUT will not be put into operation if the baghouse is not in service.

b. During operation, the differential pressure across the bags will be monitored continuously throughout the day, and recorded once a day to validate the proper operation of the baghouses.

c. A digital differential pressure gauge is used to monitor operation of each baghouse.

d. If at any point during operation a baghouse is shut down for any reason, all equipment that aspirates to the baghouse that isn't automatically shut down due to interlocks will be manually shut down.

e. If equipment is operating outside the normal recommended range, refer to Appendix A - Malfunction Response Summary to determine source of malfunction and how to correct malfunction. Internal staff will be notified to rectify the situation. Notify Shift Supervisor and fill out the Malfunction Report form in Appendix C.

f. For a checklist regarding regularly scheduled preventative maintenance, refer to Appendix B - Preventative Maintenance Work Plan.

4. Malfunction Prevention and Abatement Plan

a. The baghouses will be operated in accordance with good engineering practices.

b. Routine maintenance and inspection of the baghouses and their monitoring devices will be conducted in accordance with the maintenance plan developed by ZFS Ithaca, LLC. All maintenance work performed will be documented. Maintenance records will be kept on file for five (5) years from the date of maintenance activity.

5. Inventory

a. 36 Filter bags
b. 10 Filter cages
c. 1 Gauge, Magnehelic
d. 1 Rotary Airlock Bearing
e. 1 Screw Conveyor Bearing
f. 1 Diaphragm Assembly
g. 1 Inlet Tee Assembly
h. 1 Spring (3" O.D.)
i. 1 Sure Flex Sleeve
j. 1 Sprocket Assembly
k. 5 Blankout Plugs
l. 1 Explosion Vent and Sensor
m. 1 Blower
n. 1 Rotary Bin Indicator

Any questions, concerns, malfunctions, or problems are to be reported to the Shipping/Receiving Manager.

MALFUNCTION ABATEMENT PLAN/PREVENTATIVE MAINTENANCE PLAN
For:
EULOADOUT BAGHOUSE

1. General Description of EULOADOUT BAGHOUSE

The meal loadout building has several pieces of equipment that use vacuum for dust control. The exiting air that contains dust, bean, hull, and meal particulate must be cleaned before it can be discharged. This particulate laden air passes through filter bags which are contained in a baghouse. The baghouse uses a rotating sweep that is attached to an air chamber to pulse the filter bags intermittently with a shot of air in order to drop the collected particulate from the bags. This material is then discharged out of an airlock and into the meal inventory. The exit air is now clean and leaves the baghouse through a stack (SVLOADOUT).

Equipment Details:

- Schenck Process LLC 144MCF204-194
- FLT-50850 S/N: 1100349117-050-1
- 15,750 CFM
- Differential pressure between 0.2-8.0" w.c.
- 204 filter bags, each 144" long
- Baghouse discharges particulate to flat storage
- Equipment discharging air to emissions control equipment include transfer equipment for loading meal.

Normal Operating Range: Pressure must be between 0.2 inch water column and 8 inches water column. The visible emissions from the stack of the baghouses should be 0% opacity.

The EUINGREDIENTS Baghouse also routes to the same stack as EULOADOUT (SVLOADOUT). Therefore, a visible emissions greater than 0% may also be the result of a malfunction with EUINGREDIENTS.

2. Particulate Control

Particulate matter is considered to be sufficiently controlled when the baghouse is operating within the range of 0.2 – 8 inches of water column and there are no visible emissions from the stack.

3. Operating and Maintenance

a. EULOADOUT will not be put into operation if the baghouse is not in service.

b. During operation, the differential pressure across the bags will be monitored continuously throughout the day, and recorded once a day to validate the proper operation of the baghouses.

c. A digital differential pressure gauge is used to monitor operation of each baghouse.

d. If at any point during operation a baghouse is shut down for any reason, all equipment that aspirates to the baghouse that isn't automatically shut down due to interlocks will be manually shut down.

e. If equipment is operating outside the normal recommended range, refer to Appendix A - Malfunction Response Summary to determine source of malfunction and how to correct malfunction. Internal staff will be notified to rectify the situation. Notify Shift Supervisor and fill out the Malfunction Report form in Appendix C.

f. For a checklist regarding regularly scheduled preventative maintenance, refer to Appendix B - Preventative Maintenance Work Plan.

4. Malfunction Prevention and Abatement Plan

a. The baghouses will be operated in accordance with good engineering practices.

b. Routine maintenance and inspection of the baghouse and its monitoring devices will be conducted in accordance with the maintenance plan developed by ZFS Ithaca, LLC. All maintenance work performed will be documented. Maintenance records will be kept on file for five (5) years from the date of maintenance activity.

5. Inventory

a. 204 Filter bags
b. 10 Filter cages
c. 1 Gauge, Magnehelic
d. 1 Rotary Airlock Bearing
e. 1 Screw Conveyor Bearing
f. 1 Diaphragm Assembly
g. 1 Inlet Tee Assembly
h. 1 Spring (3" O.D.)
i. 1 Sure Flex Sleeve
j. 1 Sprocket Assembly
k. 5 Blankout Plugs
l. 1 Explosion Vent and Sensor
m. 1 Blower
n. 1 Rotary Bin Indicator

Any questions, concerns, malfunctions, or problems are to be reported to the Shipping/Receiving Manager.

MALFUNCTION ABATEMENT PLAN/PREVENTATIVE MAINTENANCE PLAN
For:
EUINGREDIENTS BAGHOUSE

1. General Description of EUINGREDIENTS BAGHOUSE

The process of receiving incoming ingredients to be blended with the soybean meal can generate dust. The dust is collected through a vacuum system. The collected air passes through filter bags which are contained in a baghouse. The baghouse uses a rotating sweep that is attached to an air chamber to pulse the filter bags intermittently with a shot of air in order to drop the collected particulate from the bags. This material is then discharged out of an airlock and into the flat storage building for inclusion with soybean meal. The exit air from the baghouse leaves through the same stack as EULOADOUT (SVLOADOUT).

Equipment Details:

- Schenck Process LLC 144MCF204-194
- FLT-50950
- 17,100 CFM
- Differential pressure between 0.2-8.0" w.c.
- 204 filter bags, each 144" long
- Baghouse discharges particulate into flat storage
- Emissions routed to control equipment include emissions generated from receiving ingredients.

Normal Operating Range: Pressure must be between 0.2 inch water column and 8.0 inches water column. The visible emissions from the stack of the baghouses should be 0% opacity.

The EUINGREDIENTS Baghouse also routes to the same stack as EULOADOUT (SVLOADOUT). Therefore, a visible emissions reading greater than zero may also be the result of a malfunction with EULOADOUT.

2. Particulate Control

Particulate matter is considered to be sufficiently controlled when the baghouse is operating within the range of 0.2 – 8.0 inches of water column and there are no visible emissions from the stack.

3. Operating and Maintenance

a. EUINGREDIENTS will not be put into operation if the baghouse is not in service.

b. During operation, the differential pressure across the bags will be monitored continuously throughout the day, and recorded once a day to validate the proper operation of the baghouses.

c. A digital differential pressure gauge is used to monitor operation of each baghouse.

d. If at any point during operation a baghouse is shut down for any reason, all equipment that aspirates to the baghouse that isn't automatically shut down due to interlocks will be manually shut down.

e. If equipment is operating outside the normal recommended range, refer to Appendix A - Malfunction Response Summary to determine source of malfunction and how to correct malfunction. Internal staff will be notified to rectify the situation. Notify Shift Supervisor and fill out the Malfunction Report form in Appendix C.

f. For a checklist regarding regularly scheduled preventative maintenance, refer to Appendix B - Preventative Maintenance Work Plan.

4. Malfunction Prevention and Abatement Plan

a. The baghouses will be operated in accordance with good engineering practices.

b. Routine maintenance and inspection of the baghouse and its monitoring devices will be conducted in accordance with the maintenance plan developed by ZFS Ithaca, LLC. All maintenance work performed will be documented. Maintenance records will be kept on file for five (5) years from the date of maintenance activity.

5. Inventory

a. 204 Filter bags
b. 10 Filter cages
c. 1 Gauge, Magnehelic
d. 1 Rotary Airlock Bearing
e. 1 Screw Conveyor Bearing
f. 1 Diaphragm Assembly
g. 1 Inlet Tee Assembly
h. 1 Spring (3" O.D.)
i. 1 Sure Flex Sleeve
j. 1 Sprocket Assembly
k. 5 Blankout Plugs
l. 1 Explosion Vent and Sensor
m. 1 Blower
n. 1 Rotary Bin Indicator

Any questions, concerns, malfunctions, or problems are to be reported to the Shipping/Receiving Manager.

MALFUNCTION ABATEMENT PLAN/PREVENTATIVE MAINTENANCE PLAN
For:
EUDC CYCLONES: DRYER CYCLONE #1, #2, #3, and COOLER CYCLONE

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1. General Description of EUDC CYCLONES: DRYER CYCLONE #1, #2, #3, and COOLER CYCLONE

After the solvent has been removed from the meal, it is toasted, dried, and cooled. The DC (dryer/cooler) equipment serves to dry and then cool meal. In drying, the Dryer fan blows fresh air in through a heater in to the three dryer trays of the DC. This air pushes moisture out of the meal and then moves the airflow out the ducts. Each tray contains its own duct. The three ducts then discharge into their own cyclones. The cyclones spin any particulate out and allows the clean air to move up and out the cyclones to a common stack (SVDC). The cyclones discharge the collected particulate matter out of a rotary valve which routes the particulate matter back in with the meal stream.

Similar to the dyer system, the Cooler fan blows fresh air in to the cooler tray of the DC. This air pushes heat out of the meal and then moves the airflow out of the duct. The duct then discharges into a cyclone. The cyclone spins any particulate out and allows the clean air to move up and out of the cyclone to a common stack (SVDC). The cyclone discharges the collected particulate matter out of a rotary valve which puts the particulate matter back in with the meal stream.

Equipment Details:

- Crown 71-00389-E09
- Cooler Cyclone – CY-31820
- Dryer Cyclone #1 – CY-31830
- Dryer Cyclone #2 – CY-31840
- Dryer Cyclone #3 – CY-31850
- 17,900 CFM each
- Cyclone discharges particulate into the meal stream for meal grinding.
- Equipment discharging air to emissions control equipment include the desolventizer toaster, dryers, and coolers.

Normal Operating Range: Visible emissions from the stack of the cyclone must be less than 15% opacity

2. Particulate Control

If the visible emissions from the stack of the cyclone are less than 15% opacity, the cyclone is sufficiently controlling particulate matter.

3. Operating and Maintenance

a. The equipment that aspirates to the cyclone will not be put into operation if the associated cyclone is not in service.

b. If at any point during operation the cyclone is shut down for any reason, corresponding equipment that isn't automatically shut down due to interlocks will be manually shut down.

c. If equipment is operating outside the normal recommended range, refer to Appendix A - Malfunction Response Summary to determine source of malfunction and how to correct malfunction. Internal staff will be notified to rectify the situation. Notify Shift Supervisor and fill out the Malfunction Report form in Appendix C.

d. For a checklist regarding regularly scheduled preventative maintenance, refer to Appendix B - Preventative Maintenance Work Plan.

4. Malfunction Prevention and Abatement Plan

a. The cyclone will be operated in accordance with good engineering practices.

b. Routine maintenance and inspection of the cyclone and its monitoring device(s) will be conducted in accordance with the maintenance plan developed by ZFS Ithaca, LLC. All maintenance work performed will be documented. Maintenance records will be kept on file for five (5) years from the date of maintenance activity.

5. Inventory

a. 5 feet pitch roller chain and connecting links
b. 1 Airlock motor
c. 1 Airlock rebuild kit
d. 2 Airlock bearings
e. 5 sq. ft. of tile and adhesive

Any questions, concerns, malfunctions, or problems are to be reported to the Production Manager.

MALFUNCTION ABATEMENT PLAN/PREVENTATIVE MAINTENANCE PLAN
For:
EUEXTRACTION – MINERAL OIL SYSTEM

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1. General Description of EUEXTRACTION – MINERAL OIL SYSTEM

The hexane vapors in the discharge air of the extraction process are absorbed into the mineral oil absorber. Mineral oil is used to absorb the hexane vapors by cascading over packing material in the absorber column. The hexane laden oil is then pumped and heated up with an oil interchanger and then with a heater. Next the mineral oil is stripped of hexane through the mineral oil stripper. The mineral oil stripper is under vacuum by means of the evaporator condenser which then reintroduces the condensed hexane back into the process as a liquid. The stripped mineral oil then is pumped back through the interchanger and a cooler. The cooled mineral oil then enters the top of the absorber and the process repeats. Hexane vapors not captured by the mineral oil absorber exhaust to the atmosphere through the vent fan (SVVENTFAN).

Equipment Details:

- Crown Mineral Oil Absorber
- Crown 71-00389-E27 Heat Exchanger
- Durco M3 2K3x1.5-10ARV Mineral Oil Pump
- Equipment discharging to emissions control equipment include the Mineral Oil Scrubber and Vent Condenser.

Normal Operating Range: The typical LEL operating range of the main gas vent is between 0% - 50%. The sparge deck temperature is normally above 195°F. When operating within these ranges, equipment will be considered to be operating properly.

2. Hexane Emissions Control

The LEL is monitored out of the vent fan stack using a gas detector. The LEL value is recorded at least four (4) times per day while operating.

3. Operating and Maintenance

a. No equipment in EUEXTRACTION will be put into operation if the Mineral Oil System is not in service.

b. If at any point during operation the Mineral Oil System is shut down for any reason, corresponding equipment in EUEXTRACTION that isn't automatically shut down due to interlocks will be manually shut down.

c. The system is monitored regularly to check the temperatures, flows, pressures, and vacuums in the system when operating.

d. If equipment is operating outside the normal recommended range, refer to Appendix A - Malfunction Response Summary to determine source of malfunction and how to correct malfunction. Internal staff will be notified to rectify the situation. Notify Shift Supervisor and fill out the Malfunction Report form in Appendix C.

e. For a checklist regarding regularly scheduled preventative maintenance, refer to Appendix B - Preventative Maintenance Work Plan.

4. Malfunction Prevention and Abatement Plan

a. The mineral oil system will be operated in accordance with manufacturer's specifications and good engineering practices.

b. Routine maintenance and inspection of the cyclone and its monitoring device(s) will be conducted in accordance with the maintenance plan developed by ZFS Ithaca, LLC. All maintenance work performed will be documented. Maintenance records will be kept on file for five (5) years from the date of maintenance activity.

5. Inventory

a. 1 barrel of unused Mineral Oil
b. 1 pump
c. 1 motor
d. 1 set of spare plates for heat exchanger

Any questions, concerns, malfunctions, or problems are to be reported to the Production Manager.

MALFUNCTION ABATEMENT PLAN/PREVENTATIVE MAINTENANCE PLAN
For:
EUBOILER1 & EUBOILER2

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1. General Description of Boilers

Boilers supply heat and steam to the process. Boilers operate independent of each other, but may operate simultaneously if needed.

Equipment Details:

- Manufacturer: Johnston
- Boiler 1 Model # 11378-01
- Boiler 2 Model # 11378-02
- 95,000,000 BTU each
- Fire natural gas only

2. Control

There are no air-cleaning or control devices on the boilers.

3. Operating and Maintenance

ZFS staff monitor the steam output of each boiler and make operational adjustments based on process needs. If a boiler is operating abnormally and not providing the desired steam, ZFS will contact a 3rd party to evaluate the boiler operation.

ZFS does not perform maintenance or repairs on the boilers. For a checklist regarding regularly scheduled preventative maintenance, refer to Appendix B - Preventative Maintenance Work Plan.

ZFS staff conduct periodical checks of the boiler to ensure equipment is operating normally. If an abnormality is detected, ZFS will contact a 3rd party to evaluate the issue and make appropriate repairs or adjustments as necessary. Operating issues include, but are not limited to:

- Abnormal sounds from within the boiler
- Unusual color from the flame in the boiler
- Valve or pump not operating correctly
- Any leaks in piping or boiler
- Any measuring device not operating correctly

4. Malfunction Prevention and Abatement Plan

a. The boilers will be operated in accordance with manufacturer's specifications and good engineering practices.

b. Routine maintenance and inspection of the boilers will be conducted in accordance with the maintenance plan developed by ZFS Ithaca, LLC. All maintenance work performed will be documented. Maintenance records will be kept on file for five (5) years from the date of maintenance activity.

5. Inventory

- 1 natural gas regulating valve
- 3 PSVs for each boiler (6 in total)

ZFS does not keep additional spare parts in inventory for the boilers. ZFS will use a 3rd party contractor to provide necessary parts for maintenance and repair of the boilers.

Any questions, concerns, malfunctions, or problems are to be reported to the Production Manager.

APPENDIX A

MALFUNCTION RESPONSE SUMMARY

Malfunction Response Summary

All corrective actions are based on checking the instrumentation before preceding to physical action

EUSHIPRECEIVE

Control Device	Manufacturer / Model	Monitoring Parameter	Parameter Range	Malfunction Detection	Possible Malfunctions	Corrective Actions
Bag House	Kice Industries / CR344-12N	Differential Pressure	0.5 - 8" of Water Column	Low Differential Pressure	Bags malfunction due to failure or improper seating	Inspect bag(s) / cage(s) to see if there is a failure. If so, repair/correct.
					Tube sheet integrity is compromised	Repair or replace tube sheet
				High Differential Pressure	Bags are blinding off or clogging due to issues or over saturation	Inspect cleaning mechanism system to ensure it is working properly. Correct if necessary.
						Check that volume of air to the filter has not decreased.
						Inspect bags and replace fouled bags as needed.

Malfunction Response Summary

All corrective actions are based on checking the instrumentation before preceding to physical action

EUHANDLING

Control Device	Manufacturer / Model	Monitoring Parameter	Parameter Range	Malfunction Detection	Possible Malfunctions	Corrective Actions
Oil Application System	Martin Engineering	Flow	0.5 - 2.0 gpm per 1,000 bushels	No Oil Flow	No Inventory	Order oil
					Valve Misalignment	Re-align valve
					Pump Malfunction	Check power and fuses
						Repair or replace pump
					Solenoid Malfunction	Check power to coil
						Repair or replace solenoid
					Photo Eye Dirty or Malfunction	Clean photo eye
						Check power to photo eye
						Replace photo eye
					Clogged tube or nozzle	Clear blockage
						Replace hose
Oil Application System	Martin Engineering	Flow	0.5 - 2.0 gpm per 1,000 bushels	Low Oil Flow	Valve Misalignment	Re-align valve
					Pump Malfunction	Check power and fuses
						Repair or replace pump
					Solenoid Malfunction	Check power to coil
						Repair or replace solenoid
					Photo Eye Dirty or Malfunction	Clean photo eye
						Check power to photo eye
						Replace photo eye
					Clogged tube or nozzle	Clear blockage
						Replace hose
				High Flow Oil	Faulty nozzle	Inpsect and correct if possible
						Replace

Malfunction Response Summary

All corrective actions are based on checking the instrumentation before preceding to physical action

EUPREP - Jet Dryer Baghouse A and B

Control Device	Manufacturer / Model	Monitoring Parameter	Parameter Range	Malfunction Detection	Possible Malfunctions	Corrective Actions
Bag Houses	Schenck Process, LLC / 144MCF416	Differential Pressure	0.5-10" w.c.	Low Differential Pressure	Bags malfunction due to failure or improper seating	Inspect bag(s) / cage(s) to see if there is a failure. If so, repair/correct.
					Tube sheet integrity is compromised	Repair or replace tube sheet
				High Differential Pressure	Bags are blinding off or clogging due to issues or over saturation	Inspect cleaning mechanism system to ensure it is working properly. Correct if necessary.
						Check that volume of air to the filter has not decreased.
						Inspect bags and replace fouled bags as needed.

* Note: Equipment routes air to SVPREP which contains an opacity monitoring requirement - more information is on EUPREP - SVPREP

Malfunction Response Summary

All corrective actions are based on checking the instrumentation before preceding to physical action

EUPREP - EXHAUST FILTER

Control Device	Manufacturer / Model	Monitoring Parameter	Parameter Range	Malfunction Detection	Possible Malfunctions	Corrective Actions
Bag Houses	Schenck Process, LLC / 144MCF416	Differential Pressure	0.5-10" w.c.	Low Differential Pressure	Bags malfunction due to failure or improper seating	Inspect bag(s) / cage(s) to see if there is a failure. If so, repair/correct.
					Tube sheet integrity is compromised	Repair or replace tube sheet
				High Differential Pressure	Bags are blinding off or clogging due to issues or over saturation	Inspect cleaning mechanism system to ensure it is working properly. Correct if necessary.
						Check that volume of air to the filter has not decreased.
						Inspect bags and replace fouled bags as needed.

* Note: Equipment routes air to SVPREP which contains an opacity monitoring requirement - more information is on EUPREP - SVPREP

Malfunction Response Summary

All corrective actions are based on checking the instrumentation before preceding to physical action

Multiple pieces of equipment discharge air through the common stack (SVPREP), which must be monitored for opacity. Therefore, should the opacity parameter fall outside of the normal range, staff could investigate any of the equipment in this table to diagnose and correct the issue. Staff may be able to correct the issue without checking every piece of equipment listed in the table.

EUPREP - SVPREP

Control Device	Manufacturer / Model	Monitoring Parameter	Parameter Range	Malfunction Detection	Possible Malfunctions	Corrective Actions
EUPREP - JET DRYER (2 Bag Houses)	Schenck Process, LLC / 144MCF416	Opacity	< 10%	Visible emissions > 10%	Bags malfunction due to failure or improper seating	Shut down, find problem, and correct
EUPREP - EXHAUST FILTER (Bag House)	Schenck Process, LLC / 144MCF416	Opacity	< 10%	Visible emissions > 10%	Bags malfunction due to failure or improper seating	Shut down, find problem, and correct
EUPREP - VSC CYCLONES	Schenck Process LLC / H96 Collector	Opacity	<10%	Visible emissions > 10%	Airlock not discharging material	Dislodge bridging material to open flow through airlock Inspect and repair airlock as needed
EUPREP - WHOLE BEAN CYCLONE	Schenck Process LLC / H85 Collector	Opacity	<10%	Visible emissions > 10%	Airlock not discharging material	Dislodge bridging material to open flow through airlock Inspect and repair airlock as needed
EUPREP - SECONDARY CYCLONE	Schenck Process LLC / 1HE27 Collector	Opacity	<10%	Visible emissions > 10%	Airlock not discharging material	Dislodge bridging material to open flow through airlock Inspect and repair airlock as needed
EUPREP - CCD CYCLONE	Schenck Process LLC / H96 Collector	Opacity	<10%	Visible emissions > 10%	Airlock not discharging material	Dislodge bridging material to open flow through airlock Inspect and repair airlock as needed
EUPREP - CCC CYCLONE	Schenck Process LLC / H96 Collector	Opacity	<10%	Visible emissions > 10%	Airlock not discharging material	Dislodge bridging material to open flow through airlock Inspect and repair airlock as needed
EUPREP - FLAKER CYCLONE	Schenck Process LLC / H85 Collector	Opacity	<10%	Visible emissions > 10%	Airlock not discharging material	Dislodge bridging material to open flow through airlock Inspect and repair airlock as needed

Malfunction Response Summary

All corrective actions are based on checking the instrumentation before preceding to physical action

EUHULLGRINDING BAGHOUSE

Control Device	Manufacturer / Model	Monitoring Parameter	Parameter Range	Malfunction Detection	Possible Malfunctions	Corrective Actions
Bag Houses	Schenck Process LLC / 144LST64	Differential Pressure	0.5-10" w.c.	Low Differential Pressure	Bags malfunction due to failure or improper seating	Inspect bag(s) / cage(s) to see if there is a failure. If so, repair/correct.
					Tube sheet integrity is compromised	Repair or replace tube sheet
				High Differential Pressure	Bags are blinding off or clogging due to issues or over saturation	Inspect cleaning mechanism system to ensure it is working properly. Correct if necessary.
						Check that volume of air to the filter has not decreased.
						Inspect bags and replace fouled bags as needed.
		Opacity	< 5%	Visible emissions > 5%	Bags malfunction due to failure or improper seating	Shut down, find problem, and correct

Malfunction Response Summary

All corrective actions are based on checking the instrumentation before preceding to physical action

EUMEALGRINDING BAGHOUSE

Control Device	Manufacturer / Model	Monitoring Parameter	Parameter Range	Malfunction Detection	Possible Malfunctions	Corrective Actions
Bag Houses	Schenck Process LLC / 144MCF255-226	Differential Pressure	0.5-10" w.c.	Low Differential Pressure	Bags malfunction due to failure or improper seating	Inspect bag(s) / cage(s) to see if there is a failure. If so, repair/correct.
					Tube sheet integrity is compromised	Repair or replace tube sheet
				High Differential Pressure	Bags are blinding off or clogging due to issues or over saturation	Inspect cleaning mechanism system to ensure it is working properly. Correct if necessary.
						Check that volume of air to the filter has not decreased.
						Inspect bags and replace fouled bags as needed.
		Opacity	< 5%	Visible emissions > 5%	Bags malfunction due to failure or improper seating	Shut down, find problem, and correct

Malfunction Response Summary

All corrective actions are based on checking the instrumentation before preceding to physical action

EUPELLETIZING CYCLONE

Control Device	Manufacturer / Model	Monitoring Parameter	Parameter Range	Malfunction Detection	Possible Malfunctions	Corrective Actions
Cyclone	Schenck Process LLC / 1HE43 Collector	Opacity	< 15%	Visible emissions > 15%	Airlock not discharging material	Dislodge bridging material to open flow through airlock
						Inspect and repair airlock as needed

Malfunction Response Summary

All corrective actions are based on checking the instrumentation before preceding to physical action

EUHULLSSTORAGE BAGHOUSE #1, #2, #3, and #4

Control Device	Manufacturer / Model	Monitoring Parameter	Parameter Range	Malfunction Detection	Possible Malfunctions	Corrective Actions
Bag Houses	Schenck Process LLC / 72ST36	Differential Pressure	> 0	Low Differential Pressure	Bags malfunction due to failure or improper seating	Inspect bag(s) / cage(s) to see if there is a failure. If so, repair/correct.
					Tube sheet integrity is compromised	Repair or replace tube sheet
				High Differential Pressure	Bags are blinding off or clogging due to issues or over saturation	Inspect cleaning mechanism system to ensure it is working properly. Correct if necessary.
						Check that volume of air to the filter has not decreased.
						Inspect bags and replace fouled bags as needed.
		Opacity	No Visible Emissions	Visible emissions > 0%	Bags malfunction due to failure or improper seating	Shut down, find problem, and correct

Malfunction Response Summary

All corrective actions are based on checking the instrumentation before preceding to physical action

EUHULLLOADOUT BAGHOUSE #1 and #2

Control Device	Manufacturer / Model	Monitoring Parameter	Parameter Range	Malfunction Detection	Possible Malfunctions	Corrective Actions
Bag Houses	Schenck Process LLC / 72ST36	Differential Pressure	> 0	Low Differential Pressure	Bags malfunction due to failure or improper seating	Inspect bag(s) / cage(s) to see if there is a failure. If so, repair/correct.
					Tube sheet integrity is compromised	Repair or replace tube sheet
				High Differential Pressure	Bags are blinding off or clogging due to issues or over saturation	Inspect cleaning mechanism system to ensure it is working properly. Correct if necessary.
						Check that volume of air to the filter has not decreased.
						Inspect bags and replace fouled bags as needed.
		Opacity	No Visible Emissions	Visible emissions > 0%	Bags malfunction due to failure or improper seating	Shut down, find problem, and correct

Malfunction Response Summary

All corrective actions are based on checking the instrumentation before preceding to physical action

EULOADOUT BAGHOUSE

Control Device	Manufacturer / Model	Monitoring Parameter	Parameter Range	Malfunction Detection	Possible Malfunctions	Corrective Actions
Bag Houses	Schenck Process LLC / 144MCF204-194	Differential Pressure	0.2-8.0" w.c.	Low Differential Pressure	Bags malfunction due to failure or improper seating	Inspect bag(s) / cage(s) to see if there is a failure. If so, repair/correct.
					Tube sheet integrity is compromised	Repair or replace tube sheet
				High Differential Pressure	Bags are blinding off or clogging due to issues or over saturation	Inspect cleaning mechanism system to ensure it is working properly. Correct if necessary.
						Check that volume of air to the filter has not decreased.
						Inspect bags and replace fouled bags as needed.
		Opacity*	No Visible Emissions	Visible emissions > 0%	Bags malfunction due to failure or improper seating	Shut down, find problem, and correct

**Note: The EULOADOUT Baghouse routes to the same stack as the EUINGREDIENTS Baghouse. If visible emissions are observed, this may be caused by the EUINGREDIENTS Baghouse and not the EULOADOUT Baghouse*

Malfunction Response Summary

All corrective actions are based on checking the instrumentation before preceding to physical action

EUINGREDIENTS BAGHOUSE

Control Device	Manufacturer / Model	Monitoring Parameter	Parameter Range	Malfunction Detection	Possible Malfunctions	Corrective Actions
Bag Houses	Schenck Process LLC / 144MCF204-194	Differential Pressure	> 0	Low Differential Pressure	Bags malfunction due to failure or improper seating	Inspect bag(s) / cage(s) to see if there is a failure. If so, repair/correct.
					Tube sheet integrity is compromised	Repair or replace tube sheet
				High Differential Pressure	Bags are blinding off or clogging due to issues or over saturation	Inspect cleaning mechanism system to ensure it is working properly. Correct if necessary.
						Check that volume of air to the filter has not decreased.
						Inspect bags and replace fouled bags as needed.
		Opacity*	No Visible Emissions	Visible emissions > 0%	Bags malfunction due to failure or improper seating	Shut down, find problem, and correct

**Note: The EUINGREDIENTS Baghouse routes to the same stack as the EULOADOUT Baghouse. If visible emissions are observed, this may be caused by the EULOADOUT Baghouse and not the EUINGREDIENTS Baghouse*

Malfunction Response Summary

All corrective actions are based on checking the instrumentation before preceding to physical action

EUDC CYCLONES #1, #2, #3, and #4

Control Device	Manufacturer / Model	Monitoring Parameter	Parameter Range	Malfunction Detection	Possible Malfunctions	Corrective Actions
Cyclone	Crown / 71-00389-E09	Opacity	< 15%	Visible emissions > 15%	Airlock not discharging material	Dislodge bridging material to open flow through airlock Inspect and repair airlock as needed

Malfunction Response Summary

All corrective actions are based on checking the instrumentation before preceding to physical action

EUEXTRACTION

Control Device	Manufacturer / Model	Monitoring Parameter	Parameter Range	Malfunction Detection	Possible Malfunctions	Corrective Actions
Mineral Oil System	Crown	LEL (Lower Explosive Limit)	< 50%	LEL > 50%	Vent fan pulling too hard on system	Cut back speed of vent fan
					DT vaccum is unbalanced	Adjust sparge steam flow
					Extractor vaccum is unbalanced	Inlet temperature of flakes are too high, decrease flake temperature
						Hexane temperature is too high, decrease hexane temperature
					Mineral oil absorber is not at the correct temperature (70-90F)	Correct the temperture on the stripper side
						Get proper cooling water flow through heat exchanger
						Clean the interchanger and/or cooler
					Mineral oil stripper is not at the correct temperature (215-240F)	Adjust mineral oil heater
						Inspect the steam trap for debris
						Clean out the mineral oil heater
						Adjust sparge steam flow
					Mineral oil system is not at the correct flow rate	Inpsect/Repair hot mineral oil pump
						Inpsect/Repair cold mineral oil pump
						Clear any blockages in the lines
						Clean out heater, interchanger, and/or cooler
						Clean out the packing in the absorber and/or stripper
						Refill the system with mineral oil
					Leak in the system	Check all associated equipment for possible leaks
					Sparge steam on Mineral Oil Stripper not working correctly	Check metering valve
						Check the sparge steam needle valve and make sure enough steam is flowing.
						Check steam trap and make sure its operating properly
					Mineral oil level in aborber is too high	Check cold oil pump
						clean the strainer
						Check mineral oil flow in cooler interchanger
					Water in mineral oil in absorber	Drain water from absorber

Malfunction Response Summary

All corrective actions are based on checking the instrumentation before preceding to physical action

EUBOILER1 & EUBOILER2

Equipment	Manufacturer / Model	Monitoring Parameter	Parameter Range	Malfunction Detection	Possible Malfunctions	Corrective Actions
Boiler 1	Johnston / 11378-01	If a boiler is not providing the desired amount of steam, ZFS will contact a 3rd party to evaluate the boiler operation. ZFS does not perform maintenance or repairs on the boilers.				
Boiler 2	Johnston / 11378-02					

APPENDIX B

PREVENTATIVE MAINTENANCE WORK PLAN

Preventative Maintenance Work Plan

EUSHIPRECEIVING BAGHOUSE #1

MAINTENANCE ACTIVITY	FREQUENCY
Check the cleaning manifold(sweep) and verify proper operation	Monthly
Check the drives, including the timing belt drive from the speed reducer for damage or excessive wear	Monthly
Check the fan motor and turntable bearings in the clean air chamber for proper rotation. Add grease as recommended by the motor and bearing manufacturers	Monthly
Check the general suction fan, motor and bearings for proper operation. Add grease as recommended by the motor and bearing manufacturers	Monthly
Inspect the explosion vent panels to verify that they are in good operating conditions	Monthly
Check the grease in the speed reducer	Yearly
Inspect the cleaning manifold UHMW skid plate for wear, and replace as necessary	Yearly
Inspect the turntable bearing for wear and replace as necessary	Yearly
Replace filter socks/bags	Yearly

Preventative Maintenance Work Plan
EUHANDLING

MAINTENANCE ACTIVITY	FREQUENCY
Confirm corresponding flow on flowmeter and know if nozzles are operational and open	Bi-Monthly
Conduct visual inspection of pump cabinet, manifold, tubes and fittings. Check for leaks or worn items.	Bi-Monthly
Conduct visual inspection of nozzle operation	Bi-Monthly

Note: Bi-Monthly = Every two (2) months

Preventative Maintenance Work Plan

EUPREP Jet Dryer Baghouse A and B

MAINTENANCE ACTIVITY	FREQUENCY
Check the cleaning manifold(sweep) and verify proper operation	Monthly
Check the drives, including the timing belt drive from the speed reducer for damage or excessive wear	Monthly
Check the fan motor and turntable bearings in the clean air chamber for proper rotation. Add grease as recommended by the motor and bearing manufacturers	Monthly
Check the general suction fan, motor and bearings for proper operation. Add grease as recommended by the motor and bearing manufacturers	Monthly
Inspect the explosion vent panels to verify that they are in good operating conditions	Monthly
Check the grease in the speed reducer	Yearly
Inspect the turntable bearing for wear and replace as necessary	Yearly
Replace filter socks/bags	Yearly

Preventative Maintenance Work Plan

EUPREP - Exhaust Filter

MAINTENANCE ACTIVITY	FREQUENCY
Check the cleaning manifold(sweep) and verify proper operation	Monthly
Check the drives, including the timing belt drive from the speed reducer for damage or excessive wear	Monthly
Check the fan motor and turntable bearings in the clean air chamber for proper rotation. Add grease as recommended by the motor and bearing manufacturers	Monthly
Check the general suction fan, motor and bearings for proper operation. Add grease as recommended by the motor and bearing manufacturers	Monthly
Inspect the explosion vent panels to verify that they are in good operating conditions	Monthly
Check the grease in the speed reducer	Yearly
Inspect the turntable bearing for wear and replace as necessary	Yearly
Replace filter socks/bags	Yearly

Preventative Maintenance Work Plan
VSC CYCLONES A & B

MAINTENANCE ACTIVITY	FREQUENCY
Oil airlock chain	Monthly
Grease airlock bearings	Monthly
Inspect and clean out ductwork as needed	Semiannually
Inspect and clean out cyclone as needed	Semiannually

Note: Semiannually maintenance activites are typically conducted during schedule shutdowns in Spring and Fall each year.

Preventative Maintenance Work Plan

EUPREP - WHOLE BEAN CYCLONE

MAINTENANCE ACTIVITY	FREQUENCY
Oil airlock chain	Monthly
Grease airlock bearings	Monthly
Inspect and clean out ductwork as needed	Semiannually
Inspect and clean out cyclone as needed	Semiannually

Note: Semiannually maintenance activites are typically conducted during schedule shutdowns in Spring and Fall each year.

Preventative Maintenance Work Plan
EUPREP - SECONDARY CYCLONE

MAINTENANCE ACTIVITY	FREQUENCY
Oil airlock chain	Monthly
Grease airlock bearings	Monthly
Inspect and clean out ductwork as needed	Semiannually
Inspect and clean out cyclone as needed	Semiannually

Note: Semiannually maintenance activites are typically conducted during schedule shutdowns in Spring and Fall each year.

Preventative Maintenance Work Plan

EUPREP - CCD CYCLONE

MAINTENANCE ACTIVITY	FREQUENCY
Oil airlock chain	Monthly
Grease airlock bearings	Monthly
Inspect and clean out ductwork as needed	Semiannually
Inspect and clean out cyclone as needed	Semiannually

Note: Semiannually maintenance activites are typically conducted during schedule shutdowns in Spring and Fall each year.

Preventative Maintenance Work Plan

EUPREP - CCC CYCLONE

MAINTENANCE ACTIVITY	FREQUENCY
Oil airlock chain	Monthly
Grease airlock bearings	Monthly
Inspect and clean out ductwork as needed	Semiannually
Inspect and clean out cyclone as needed	Semiannually

Note: Semiannually maintenance activites are typically conducted during schedule shutdowns in Spring and Fall each year.

Preventative Maintenance Work Plan

EUPREP - FLAKER CYCLONE

MAINTENANCE ACTIVITY	FREQUENCY
Oil airlock chain	Monthly
Grease airlock bearings	Monthly
Inspect and clean out ductwork as needed	Semiannually
Inspect and clean out cyclone as needed	Semiannually

Note: Semiannually maintenance activites are typically conducted during schedule shutdowns in Spring and Fall each year.

Preventative Maintenance Work Plan

EUHULLGRINDING BAGHOUSE

MAINTENANCE ACTIVITY	FREQUENCY
Check the general suction fan, motor and bearings for proper operation. Add grease as recommended by the motor and bearing manufacturers	Monthly
Inspect the explosion vent panels to verify that they are in good operating conditions	Monthly
Check the pinch valve (explosion prevention valve) on the suction side of the main fan	Monthly
Check the sock blower for proper operation	Monthly
Check the solenoid bank for proper operation and timing	Monthly
Replace filter socks/bags	Yearly

Preventative Maintenance Work Plan

EUPELLETIZING CYCLONE

MAINTENANCE ACTIVITY	FREQUENCY
Oil airlock chain	Monthly
Grease airlock bearings	Monthly
Inspect and clean out ductwork as needed	Semiannually
Inspect and clean out cyclone as needed	Semiannually

Note: Semiannually maintenance activites are typically conducted during schedule shutdowns in Spring and Fall each year.

Preventative Maintenance Work Plan

EUMEALGRINDING BAGHOUSE

MAINTENANCE ACTIVITY	FREQUENCY
Check the cleaning manifold(sweep) and verify proper operation	Monthly
Check the drives, including the timing belt drive from the speed reducer for damage or excessive wear	Monthly
Check the fan motor and turntable bearings in the clean air chamber for proper rotation. Add grease as recommended by the motor and bearing manufacturers	Monthly
Check the general suction fan, motor and bearings for proper operation. Add grease as recommended by the motor and bearing manufacturers	Monthly
Inspect the explosion vent panels to verify that they are in good operating conditions	Monthly
Check the pinch valve (explosion prevention valve) on the suction side of the main fan	Monthly
Check the grease in the speed reducer	Yearly
Inspect the turntable bearing for wear and replace as necessary	Yearly
Replace filter socks/bags	Yearly

Preventative Maintenance Work Plan

EUEXTRACTION - MINERAL OIL SYSTEM

MAINTENANCE ACTIVITY	FREQUENCY
Check oil level in pumps	Monthly
Check pumps and pump seals	Monthly
Grease pump motors	Annually
Clean/boil out absorber	Annually
Clean/boil out stripper	Annually

Preventative Maintenance Work Plan

EUDC CYCLONES #1, #2, #3, and #4

MAINTENANCE ACTIVITY	FREQUENCY
Oil airlock chain	Monthly
Grease airlock bearings	Monthly
Inspect and clean out ductwork as needed	Semiannually
Inspect and clean out cyclone as needed	Semiannually

Note: Semiannually maintenance activites are typically conducted during schedule shutdowns in Spring and Fall each year.

Preventative Maintenance Work Plan

EUHULLSSTORAGE BAGHOUSE #1, #2, #3, and #4

MAINTENANCE ACTIVITY	FREQUENCY
Check for dust in the clean air outlet from filter	Monthly
Check filter hopper for moisture, build-up, or bridging	Monthly
Open petcock on the compressed air header and check for moisture	Monthly
Check fan and motor bearings for excessinve heat	Monthly
Check filter bags for signs of excessive wear or build-up	Monthly
Check for signs of moisture throughout entire filter	Monthly
Inspect the turntable bearing for wear and replace as necessary	Yearly
Replace filter socks/bags	Yearly

Preventative Maintenance Work Plan

EUHULLLOADOUT BAGHOUSE #1 and #2

MAINTENANCE ACTIVITY	FREQUENCY
Check for dust in the clean air outlet from filter	Monthly
Check filter hopper for moisture, build-up, or bridging	Monthly
Open petcock on the compressed air header and check for moisture	Monthly
Check fan and motor bearings for excessinve heat	Monthly
Check filter bags for signs of excessive wear or build-up	Monthly
Check for signs of moisture throughout entire filter	Monthly
Inspect the turntable bearing for wear and replace as necessary	Yearly
Replace filter socks/bags	Yearly

Preventative Maintenance Work Plan

EULOADOUT BAGHOUSE

MAINTENANCE ACTIVITY	FREQUENCY
Check the cleaning manifold(sweep) and verify proper operation	Monthly
Check the drives, including the timing belt drive from the speed reducer for damage or excessive wear	Monthly
Check the fan motor and turntable bearings in the clean air chamber for proper rotation. Add grease as recommended by the motor and bearing manufacturers	Monthly
Check the general suction fan, motor and bearings for proper operation. Add grease as recommended by the motor and bearing manufacturers	Monthly
Inspect the explosion vent panels to verify that they are in good operating conditions	Monthly
Check the grease in the speed reducer	Yearly
Inspect the turntable bearing for wear and replace as necessary	Yearly
Replace filter socks/bags	Yearly

Preventative Maintenance Work Plan

EUINGREDIENTS BAGHOUSE

MAINTENANCE ACTIVITY	FREQUENCY
Check the cleaning manifold(sweep) and verify proper operation	Monthly
Check the drives, including the timing belt drive from the speed reducer for damage or excessive wear	Monthly
Check the fan motor and turntable bearings in the clean air chamber for proper rotation. Add grease as recommended by the motor and bearing manufacturers	Monthly
Check the general suction fan, motor and bearings for proper operation. Add grease as recommended by the motor and bearing manufacturers	Monthly
Inspect the explosion vent panels to verify that they are in good operating conditions	Monthly
Check the grease in the speed reducer	Yearly
Inspect the turntable bearing for wear and replace as necessary	Yearly
Replace filter socks/bags	Yearly

Preventative Maintenance Work Plan
EUBOILER1 & EUBOILER2

MAINTENANCE ACTIVITY	FREQUENCY
CSD-1	Semiannually
Internal Inspection	Annually
Test PSVs	Annually

*All maintenance, and the frequency at which it occurs, is conducted by the manufacturer of the boilers and/or other 3rd party

APPENDIX C

MALFUNCTION REPORT

MALFUNCTION REPORT FORM

Equipment Involved	Date and Time of Incident	Date and Time Incident Resolved
Nature of Incident		

Describe the incident and how it was noticed.
Describe the repairs made to remediate the incident.
What was the cause of the incident

Estimated time out of compliance	What is the chance of it happening again?

What actions will be taken to prevent a recurrence?	By Whom	Date of Completion

Incident Investigated by:	Date
Employee Signature	Supervisor Signature

* Please attach additional notes or comments to this form.