DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

B857064223

FACILITY: THE ANDERSONS MARATHON HOLDINGS LLC		**SRN / ID:** B8570
LOCATION: 26250 B DR N, SHERIDAN TWP		**DISTRICT:** Kalamazoo
CITY: SHERIDAN TWP		**COUNTY:** CALHOUN
CONTACT: Evan Dankert , Safety & Compliance Administrator		**ACTIVITY DATE:** 08/16/2022
STAFF: Amanda Chapel	**COMPLIANCE STATUS:** Non Compliance	**SOURCE CLASS:** MAJOR
SUBJECT:		
RESOLVED COMPLAINTS:		

On August 16, 2022, AQD's Amanda Cross (staff) conducted an unannounced air quality inspection of The Andersons Marathon Holdings LLC formerly named The Andersons Albion Ethanol, LLC located at 26250 B Drive North, Sheridan Township, Calhoun County. The purpose of the inspection was to determine compliance with MI-ROP-B8570-2015B, permits to install (PTIs) 144-15E, 144-15G and 119-19B, and all other applicable state and federal regulations.

The Andersons Marathon Holdings facility consists of a grain (corn) receiving and storage area and a dry mill corn processing ethanol plant. The stationary source is considered to be a major source of carbon monoxide, nitrogen oxides, volatile organic compounds, and greenhouse gases. The facility is subject to federal New Source Performance Standards (NSPS), 40 CFR Part 60 Subpart Db, Kb, VV, VVa, IIII, and KKKK and federal National Emissions Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63, Subpart ZZZZ. There are multiple emission units at the facility that are subject to federal Compliance Assurance Monitoring (CAM) regulations under 40 CFR Part 64, including EU-COOLINGDRUM, FGFERM, FGMILL, FGMILL2, FGOXID, and FGOXID2. Emission units and flexible groups that have been removed from the ROP with subsequent PTIs have been noted in the report.

The initial ethanol plant commenced operations in August 2006. An expansion to the existing ethanol plant along with a combined heat and power (CHP) facility commenced operations in February 2017. The facility current operates under MI-ROP-B8570-2015B, permits to install (PTIs) 144-15E, 144,15G and 119-19B The ROP is currently under renewal.

Mr. Evan Dankert was the staff contact for the walk-through inspection. Staff called Mr. Dankert when I arrived on site and he met me outside the training room. We walked through the facility based on the layout of the buildings. The following will discuss the walk through and observations. The Andersons Marathon Holdings facility operates 24-hour a day, 7-days a week and has 60 full time employees across all shifts.

FG-CHP (PTI 144-15G)

Combined heat and power (CHP) system to generate electricity and steam for the facility. Consists of EU-CT (combustion turbine) and EU-DB (duct burner) with a HRSG (heat recovery steam generator) to generate steam from the heat provided. There are three modes of operation, turbine only, turbine and duct burner, and duct burner only. Control equipment is a dry low NOx burner for NOx control on the turbine. Only natural gas is used in the turbine and duct burner.

This unit is stack tested every five years. The most recent stack test of the equipment was in 2019. Since the facility is stack testing as required, they are not operating a continuous monitoring system on this flexible group.

The facility is tracking hours the train runs in various modes as well as start-up, shutdown, and the temperature during the run time. They are also tracking the amount of natural gas used during these various run operations.

Record Requirement	Records
Natural Gas Usage in EU-CT	Highest Month: 2,830,036 CCF January 2022 Highest 12-Month Rolling: 659,698,978 CCF April 2022
Natural Gas Usage in EU-DB	Highest Month: 2,636,170 CCF May 2022 Highest 12-Month Rolling: 678,430,556 CCF December 2021
Sulfur Content of Fuel	Fuel shall not contain more than twenty grains of total sulfur per 100 cubic feet of gas

The facility provided the natural gas SDS as long with the SEMCO pipeline gas transportation agreement entered into in 2006. SEMCO has agreed to prove natural gas that shall not contain more than twenty grains of total sulfur per 100 cubic feet of gas. This satisfies condition VI.5.a.

EU-GRAINRECERIVE (119-19B)

Two truck unloading enclosures and receiving pit located at the grain elevator. These are controlled by baghouse C-201. Both truck bays were in use during the inspection. The enclosure has tarping and plastic barriers to close off as much as possible to prevent fugitive dust. There was some fugitive dust observed during the unloading of trucks, mostly resulting from corn being emptied from below the trucks into the receiving bays. The operators were also sweeping the area of stay corn during the unloading process.

The baghouse was in operation during the time of the inspection. The magnehelic gauge read 1.0" H2O. There were no visible emissions observed from the baghouse. The area around the baghouse appears clean. Mr. Dankert indicated that the baghouses are checked daily and swept as needed.

Material	Limit	Time Period	Records

Grain Received	**34 Million Bushels**	**12-Month Rolling**	**26,285,353 bushels in July 2022**

EU-GRAINSHIPPED (MI-ROP-B8570-2015B)

This was removed in 2019. The facility no longer ships out corn as they use it all in their process. This should be removed from the ROP when it's renewed.

EU-INTERNALOP (144-15G)

Internal operations specifically storage and internal handling of grain at the grain elevator. All conveyors in this area are covered and there did not appear to be debris from receiving operations. Corn was actively being loaded and transferred during the inspection. There were no visible emissions observed and sweeping was ongoing. Particulate matter collected from the cleaning operation portion is removed and disposed of in a manner which minimizes fugitive emissions.

Material	Limit	Time Period	Records
Grain Handled Internally	**55 Million Bushels**	**12-Month Rolling**	**48,951,191 bushels in May 2022**

EU-GRAINDRY (144-15G)

One 62.1 MMBtu/hr natural gas fired grain dryer at the grain elevator. The dryer is designed so that the corn and hot are separated by a cylinder in the dryer. Hot air is forced up and the corn is dropped down, drying the corn. Exhaust gasses are passed through column plate perforations.

At the time of the inspection, the dryer was in operation. The area around the dryer appeared clean. Daily PM is completed around the dryer and other equipment to maintain cleanliness on site. Cleaning of the dryer is done periodically to clean out old corn that has fallen through to the bottom of the dryer and is unusable in the ethanol process.

Visible emissions readings are taken once a month and recorded. Records show visible emissions are typically zero from this emission unit. All emission units are contained on the same recordkeeping sheet and are identical in nature.

Material	Limit	Time Period	Records

Natural Gas	**125 Million Cubic Feet**	**12-Month Rolling**	**1.08 MMCF in January 2022**
Grain Dried	**10 Million Bushels**	**12-Month Rolling**	**7,939, 055 Million Bushels in February 2022**

EU-DAYBIN3 (119-19B)

This is a corn surge/day bin #3 installed in 2015 which is completely enclosed.

There are no specific recordkeeping requirements associated with EU-DAYBIN3.

FG-CORNHAND (MI-ROP-B8570-2015B)

This was removed with the permit issuance of 119-19A. EU-TRUCKPIT and EU-CORNELEV1 were moved to FGC-20 as they are controlled by baghouse C-20. EU-RECEIVINGCONV was moved to FG-ENCLOSEDCONV. This can be removed from the permit during the ROP renewal.

FGC-20 (PTI 119-19B)

Corn receiving, storage, and handling operations controlled by baghouse C-20. This emission unit contains EU-TRUCKPIT, EU-CORNELEV1, EU-CORNELEV2, and EU-DAYBIN1. During the inspection, no visible emission were observed. The baghouse was mostly clean. The differential pressure reading was 2.5" H2O during the inspection.

Trucks come into the facility and unload their corn into one of the corn-receiving areas at the facility. The facility expanded in 2017 and contain two separate, but very similar, corn processing methods. If necessary, the corn is dried (EU-GRAINDRY) and conveyed to the associated hammer mills for further processing before being combined into a slurry and added to the fermentation tanks.

Visible emissions readings are taken once a month and recorded. Records show visible emissions are typically zero from this emission unit.

The facility also submitted records for November 2021 and February 2022 to demonstrate daily magnehelic gauge readings of the baghouse. The records show that the baghouse magnehelic readings were within the acceptable range.

During the Month of November 2021, the following daily readings were not recorded in the facility's database, Mapcon; 7th, 8th, 15th, 18th, 22nd, 23rd, 26th, 27th, 28th, 29th. During the month of February 2022, the following daily magnahelic readings were not recorded in Mapcon; 1st, 4th, 5th, 6th, 11th, 12th, 15th, 19th, 20th, 25th,26th, 27th. The facility proposed as a

Corrective Action to the unrecorded daily readings, procedures will be established for monthly monitoring of Mapcon to ensure the completion of the daily magnahelic readings.

FG-CORNBINS (MI-ROP-B8570-2015B/PTI 119-19B)

In the ROP this emission unit contains EU-CORNBIN1, EU-CORNBIN2, and EU-DAYBIN. EU-DAYBIN was renamed to EU-DAYBIN1 and was moved into the FGC-20 flexible group as it's controlled by baghouse C-20. In PTI No. 119-19B, this flexible group contains EU-CORNBIN1 and EU-CORNBIN2

Mr. Dankert and I walked to the top of corn bin 1 and 2. In 2020 facility recently applied for and obtained an amended permit to increase the PM limit from the FG-CORNBINS due to the lack of filters on the vents, as had been previously permitted. Once filters were installed, the facility applied for a new permit to include the filters and include the allowed visible emissions at 5%. During the inspection, there were no visible emissions from the filter vents. The area around the corn bins appeared clean and Mr. Dankert said this is swept daily during the daily PM.

Visible emissions readings are taken once a month and recorded. Records show visible emissions are typically zero from this emission unit.

FG-NEWCONV (MI-ROP-B8570-2015B)

EU-CORNELEV3 was never constructed and was removed from the permit in PTI 119-19. EU-TRANSCONV1/2 were moved to FGENCLOSEDCONV. Flexible group contained EU-CORNELEV3, EU -TRANSCONV1, EU-TRANSCONV2. This flexible group can be removed during the ROP renewal process.

FGENCLOSEDCONV (PTI119-19B)

Flexible group contains EU-RECEIVINGCONV, EU-BINEMPTCONV1,2, EU-TRANSCONV1,2, and EU-REDIRECTCONV. EU-REDIRECTCONV was added as part of this permit to be rolled into the ROP.

These conveyors are part of the 2017 expansion of the facility. They are enclosed and conditions appears maintained and checked daily.

FGMILL (MI-ROP-B8570-2015B)

In the ROP, this flexible group contains EU-CORNELEV2, EU-SCREEN, EU-BINEMPTCONV, EU-MILL1,2,3,4, EU-FEED. EU-CORNELEV2 was moved to FGC-20 as it's controlled by that baghouse. EU-SCREEN was renamed EU-SCALPER1. A second scalper was added to the permit as a second one was installed along with the first. When testing was last performed, both were operating, and the facility met the emission limits in the permit. EU-BINEMPTCONV was moved to FG-ENCLOSEDCONV along with a second bin empty conveyor which was installed, enclosed, in 2006. This can be removed during the ROP renewal as all equipment is contained in FGC-20 or FGC-30.

FGC-30 (PTI 119-19B)

This flexible group consists of EU-SCALPER1,2, EU-DAYBIN2, EU-MILL1,2,3,4, and EU-FEED. All emission units are controlled by the C-30 baghouse. EU-DAYBIN2 was installed at the same time as EU-DAYBIN1 and was operating at the time of the stack test.

This flexible group is part of the 2017 expansion for processing received corn for the fermentation process. There were no visible emissions from baghouse C-30 observed during the inspection. The differential pressure reading was 0.5" H2O during the inspection. The area around the baghouse was clean and free from particulate and dust. This is also checked during the daily PM.

Visible emissions readings are taken once a month and recorded. Records show visible emissions are typically zero from this emission unit.

Monthly pressure drop checks were submitted with the record request as well. The records show the magnehelic readings typically range between 0"- 2.5" H2O which is within the acceptable range of readings.

FG-MILL2 (MI-ROP-B8570-2015B)

This flexible group consists of EU-MILL5,6,7,8 which are controlled by milling baghouses C-30A-1,2,3,4. Mr. Dankert and I walked up to the milling area and looked at the operating hammer mills. They are fully contained inside. Baghouse C-30A is a four-cell baghouse. The differential pressure readings were as follows during the inspection:

C-30A-1: 0.5" H2O

C-30A-2: 2.0" H2O

C-30A-3: -3.0" H2O

C-30A-4: 1.5" H2O

No visible emissions were seen during the inspection. The area around the baghouse appeared clean and this area is also checked and swept during the daily PM.

FG-MILL/FG-MILL2 (MI-ROP-B8570-2015B/119-19B)

Facility submitted records showing that monthly magnehelic readings are being recorded for the "mill air filter" and "mill 5/6/7/8 filter blower". These reading appear to be done at the beginning of the month. Records show that the magnehelic gauges typically read between 0" and 3".

The facility also provided information on the calibration schedule for the magnehelic gauges. They were all calibrated on August 24, 2022. This is required to be done once per year.

Visible emissions readings are taken once a month and recorded. Records show visible emissions are typically zero from this emission unit.

FGNSPSTANKS (MI-ROP-B8570-2015B)

Flexible group consists of ethanol, denaturant, and denatured ethanol storage tanks. Emissions units are EU-190PROOF, EU-200PROOF, EU-DENATTANK1,2,3, and EU-DENATURANT. These are controlled by internal floating roofs.

Mr. Dankert confirmed the tanks contain a floating roof inside the tanks. Some of the tanks had small amounts of rust on the outside but appear to be in good condition. There are 3 final product tanks (denatured ethanol) tanks, 1 denaturant, 1 190-proof, 1 200-proof, and 1 small corrosion inhibitor tank in the tank farm.

FGNSPSVV (MI-ROP-B8570-2015B)/ FGNSPSVVa (MI-ROP-B8570-2015B)

This flexible group covers all pumps, valves, and pressure relief devices in light liquid and heavy liquid service and gas/vapor service and all pumps, valves, and pressure relief devices in light liquid and heavy liquid service and gas/vapor service constructed after November 7, 2006.

According to Mr. Dankert, the facility has 75 pressure relief valve (PRVs) and readings are taken off each vessel. There are 13 PRVs in distillation. The readings taken off the distillation vessels are monitored by the minute. If the PRV readers failed, the plant is designed to shut down. There are sealed roofs with no venting. The design of the floating roof prevents over fuming.

Tank recertification dates are as follows:

- 8401(190 proof tank)-4/30/2019
- 8403(200 proof tank)-4/30/2019
- 8411 (Fuel Additive)-5/01/2019
- 8414(denaturant tank) 5-20-20
- 8422 (denatured ethanol) 5-1-20
- 8433 (denatured ethanol) 5-19-20
- 8444 (denatured ethanol) Built in 2017, external due in 2022

For NSPSVVa, the tanks are subject to leak detection and repair (LDAR) procedures. Per the previous inspection, the facility hired a company to update the device inventory in August 2017. Monitoring is performed, in-house and by a third party. There are monthly checks of the tanks including checks of pumps, valves, and other parts of the tanks.

LDAR semi-annual monitoring reports were supplied for the records review. According to the contracted third party, it appears a leak was found in a pump on 8/24/22 and repaired. In house monthly tank checks were supplied for November 2021 and February 2022. Tanks, pipes, and dikes are inspected during this in-house inspection.

EU-NH3STGTANK (MI-ROP-B8570-2015B)

An 18,000-gallon anhydrous ammonia storage tank. Facility indicates that this has been taken out of service.

FG-FERM (MI-ROP-B8570-2015B/PTI 144-15G) – In the ROP the flexible group consists of EU-BEERWELL and EU-FERMENTER1,2,3,4,5. PTI 144-15D rolled the fermenters 6,7,8,9, and 10 into this emission unit as well, making FG-FERM2 unnecessary in the new ROP. In PTI 144-15G. this flexible group contains all the fermenters at the facility (1-10) and the beer well. These are controlled by a pre-condenser and fermentation CO2 scrubbers C-40 and C-40A.

The CO2 recovery facility was operating during the inspection. Mr. Dankert said the facility runs scrubbers C-40 and C-40A if the system is running. FG-PURGE scrubber is only run as needed. The pre-condenser was in operation at the time of the inspection and is run continuously.

Scrubber flow rates and exhaust gas temperature were obtained at the end of the inspection from the main control room.

- C-40: 55 gpm
- C-40A: 65 gpm
- Exhaust gas temperature: 86.7 F

Pollutant	Limit	Time Period	Records (Monthly and 12-Mo Rolling, per permit)
VOC from FGFERM through scrubber C-40	14.0 pph	Hourly	Highest Monthly: 1.35 tons Highest 12-Month: 16.05 tons in December 2021 (3.66 pph)
Acetaldehyde from FGFERM through scrubber C-40	1.3 pph	Hourly	Highest 12-Month: 0.15 tons in December 2021 (0.03 pph)
VOC from FGFERM2 through scrubber C-40A	13.0 pph	Hourly	Highest Monthly: 3.88 tons Highest 12-Month: 45.0 tons in July 2022 (10.27 pph)
Acetaldehyde from FGFERM2 through scrubber C-40A	0.93	Hourly	Highest Monthly: 1.05 tons Highest 12-Month: 3.88 tons in December 2021 (0.88 pph)
	No set permit limit		

VOC through purge scrubber			**Highest Monthly: 0.47 tons in Dec 2021** **Highest 12-Month: 5.03 tons in July 2022 (1.14 pph)**
FERM/FERM2 hours of operation	**No set permit limit**	**Hourly**	**Highest Monthly: 744 hours** **Highest 12-Month: 8760 hours in December 2021**

FG-FERM2 (MI-ROP-B8570-2015B)

These emission units have been included with FG-FERM in the PTI 144-15D and these conditions are obsolete.

FG-PURGE (PTI 144-15G)

This flexible group consists of EU-FERMENTER1,2,3,4,5,6,7,8,9, and 10 controlled by purge scrubber C-120. This is run while the neighboring CO2 recovery facility is operating. At the time of the inspection, this was running. The liquid flow rate control panel read 3.2 gpm.

Pollutant	Limit	Time Period	Records
Hours of FG-PURGE through scrubber C-120	**5,000 hours**	**12-Month Rolling**	**Highest Monthly: 336 hours in December 2021** **Highest 12-Month: 3870 hours in December 2021**

Mr. Dankert provided records showing the weekly maintenance schedule of the purge scrubber. This documentation details the total run time of the month for the purge scrubber. Since the purge scrubber is not run continuously, the run time of the scrubber is recorded, monthly. In February 2021, the purge scrubber ran for 11:27:50. He also provided an example record of the liquid flow rate which is continuously monitored throughout the day. Records for November 2021 were provided.

FG-METH (MI-ROP-B8570-2015B)

This equipment has been removed from the facility and can be removed during ROP renewal.

FG-OXID (PTI 144-15E)

This flexible group consists of the EU-RECTIFIER, EU-SIDESTRIPPER, EU-BEERCOLUMN, EU-YEASTANK,2, EU-DRYER1,2, EU-TO&WHRB, EU-CENTRIFUGE1,2,3,4, EU-190PROOFCONDENSER, and EU-200PROOFCONDENSER. All these emission units are controlled by the thermal oxidizer C-10. All units vent to a heat recovery steam generator (HRSG) which is subject to 40 CFR Part 60 Subpart Db.

Mr. Dankert noted that the control equipment associated with this flexible group is a thermal oxidizer (TO). The newer side of the operation has a regenerative thermal oxidizer (RTO). The dryers are natural gas dryers only. Both were running at the time of the inspection. No other fuel is used in the dryers. At the time of the inspection, there were no visible emissions from the stacks of the TO. The condition around the dryers was clean and well maintained.

At the time of the inspection, the TO combustion chamber temperature was 1491 F. Outlet temperature was 329 F. NOx emissions are monitored with a continuous emission monitoring system (CEMs). The NOx CEMs unit read 46.9 ppm and O2 was 6.16% instantaneously.

Visible emissions readings are taken once a month and recorded. Records show visible emissions are typically zero from this emission unit.

Pollutant	Limit	Time Period	Records
PM10	3.1 pph	Hourly	Highest Monthly: 0.69 tons Highest 12-Month: 7.83 tons in May 2022 (1.79 pph)
PM2.5	3.1 pph	Hourly	Highest Monthly: 0.69 tons Highest 12-Month: 7.83 tons in May 2022 (1.79 pph)
VOC	4.2 pph	Hourly	Highest Monthly: 0.71 tons Highest 12-Month: 8.12 tons in May 2022 (1.85 pph)
CO	No permit limit in this FG	Hourly	Highest Monthly: 0.92 tons Highest 12-Month: 10.84 tons in January 2022 (2.47 pph)

NOx	**27.5 pph**	**24-Hour Rolling Avg**	**10.1 pph**
Acetaldehyde	**0.35 pph**	**Hourly**	**Highest Monthly: 0.04 tons** **Highest 12-Month: 0.42 tons in May 2022 (0.09 pph)**
NOx	**0.1 lb/MMBTU**	**30-Day Rolling Avg**	**0.05 lb/MMBTU**
Acrolein	**No permit limit in this FG, identified as a HAP**		**Highest Monthly: 0.06 tons** **Highest 12-Month: 0.68 tons in May 2022 (0.15 pph)**
Hours of Operation	**No permit limit in this FG**	**Monthly**	**Highest Monthly: 744 in December 2021**

Mr. Dankert supplied a printout of the CEMs showing the 24-hour averages calculated daily and NOx in MMBTU for 30-day rolling for the month of November 2021. This is an example of the NOx CEMs monitoring the 24-hour NOX average and MMBTU continuously.

The diesel fuel SDS was also provided identifying the fuel as ultra-low sulfur fuel at less than 0.0015% sulfur.

FG-OXID2 (MI-ROP-B8570-2015B)

This flexible group consists of the EU-RECTIFIER2, EU-SIDESTRIPPER2, EU-BEERCOLUMN2, EU-DRYER3,4, EU-CENTRIFUGE5,6,7,8, EU-190PROOFCOND2, and EU-RTO2. All these emission units are controlled by the thermal oxidizer C-10A. The process underwent testing in July 2017 and demonstrated compliance with hourly emission limits for PM10, PM2.5, VOC, NOx, CO, SO2, and acetaldehyde.

These dryers are also natural gas only dryers. They were both running at the time of the inspection. These dryers are routed through an RTO, C-10A. There were no visible emissions observed from the RTO during the inspection. The RTO combustion chamber temperature was 1650 F and the outlet temp was 364 F. High limit alarm on the RTO combustion chamber is 1800 F and low limit alarm is 1200 F.

Visible emissions readings are taken once a month and recorded. Records show visible emissions are typically zero from this emission unit.

Pollutant	Limit	Time Period	Records

PM10	**5.01 pph**	**Hourly**	**Highest Monthly: 1.45 tons** **Highest 12-Month: 16.43 tons in December 2021 (3.75 pph)**
PM2.5	**5.01 pph**	**Hourly**	**Highest Monthly: 1.45 tons** **Highest 12-Month: 16.43 tons in December 2021 (3.75 pph)**
VOC	**4.5 pph**	**Hourly**	**Highest Monthly: 0.13 tons** **Highest 12-Month: 1.47 tons in December 2021 (0.34 pph)**
NOx	**10.8 pph**	**Hourly**	**Highest Monthly: 3.83 tons** **Highest 12-Month: 43.40 tons in December 2021 (9.91 pph)**
CO	**9.1 pph**	**Hourly**	**Highest Monthly: 1.26 tons** **Highest 12-Month: 14.33 tons in December 2021 (3.27 pph)**
Acetaldehyde	**0.33 pph**	**Hourly**	**Highest Monthly: 0.09 tons** **Highest 12-Month: 1.01 tons in December 2021 (0.23 pph)**
SO2	**10.8 pph**	**Hourly**	**Highest Monthly: 1.30 tons** **Highest 12-Month: 14.75 tons in December 2021 (3.36 pph)**
Hours of Operation	**No permit limit in this FG**	**Monthly**	**Highest Monthly: 744 in December 2021**

EU-COOLINGDRUM (MI-ROP-B8570-2015B)

This emission unit is a cooling drum which is controlled by baghouse C-70A. It was in operation during the inspection. There were no visible emissions seen during the inspection. The

differential pressure gauge is up a ladder on this baghouse. The differential pressure readings were -0.36" H2O and -0.27" H2O.

Visible emissions readings are taken once a month and recorded. Records show visible emissions are typically zero from this emission unit.

A screen printout was submitted by the facility shows the fan amperage and bag pressure drop readings which are monitored continuously. Typical operation shows that the pressure drop ranges between -1"-1" of water with a sharp drop in the middle of July and a small spike at the end of October.

FG-LOADOUT (MI-ROP-B8570-2015B)

This consists of two denatured ethanol truck load-outs and one denatured ethanol rail load-out. Emission units are EU-LOADOUTRL, EU-LOADOUTTRK,2. These are controlled by an ethanol load-out flare P-50 and P-50_A.

Loadout was not occurring during the time of the inspection. The flare was therefore not operational during the time of the inspection. They are used, as needed, during loadout in happening. There is an interlock "scully" system that prevents any loading out to occur without the flare running. If the flare shuts down to any reason, the system stops the operation to prevent continued loading.

EU-LOADOUT (MI-ROP-B8570-2015B)

This emission unit is the DDGS truck and rail loadout including the conveyors and elevators used for transfer and loading operations. This controlled by baghouse P-90 and P-91.

Differential pressure readings:

- P-90: 0.5" H2O
- P-91: 0.5" H2O

The baghouses differential pressure gauges were replaced on August 24, 2022. All baghouse gauges are calibrated on the same date throughout the facility. Mr. Dankert and I investigated the DDGS storehouse. The dried and spent grains are brought to a large warehouse, via conveyor, and stored until they are loaded out to consumers to process the grains further into animal feed. This was in use during the inspection.

The facility is tracking the monthly pressure drop readings on the magnehelic gauges at the baghouses around the facility. Records were submitted showing these readings are taken as part of the monthly preventative maintenance checks around the facility. Records show this magnehelic typically ranges between 0"-1.8".

EU-COOLINGTWR and EU-COOLINGTWR2 (MI-ROP-B8570-2015B)

These emission units contain four cell cooling towers equipped with drift eliminators. Water is used in a loop at the facility. The water that runs through the system never touches any product and can be recirculated. Mr. Dankert stated they do water testing on site including for chlorine content in compliance with their NPDES permitting.

There are no specific recordkeeping requirements for EU-COOLINGTWR.

EU-DIESELPUMP and EU-DIESELPUMP2 (MI-ROP-B8570-2015B)

EU-DIESELPUMP is a 300 HP diesel fired emergency fire water pump. EU-DIESELPUMP2 is a 322 HP diesel fired emergency fire water pump. These pumps are used as emergency only. The last inspection was in May 2022. The hour readings on the diesel pumps during the inspection were:

- Hours DP1: 1820 hours
- Hours DP2: 395.7 hours

Facility provided the annual maintenance logs which are conducted by a third party, BL Harroun. The pumps are inspected, maintained, and tested. The facility also completes monthly PMs on the pumps. During the previous inspection, manufacturer certifications were sent for the Clark fire pump (PUMP2) showing the specifications of emissions, indicating compliance with 40 CFR Part 60 Subpart IIII. During the inspection in 2016, AQD was provided documentation that engine manufacturer had tested and certified the engine model to comply with applicable emission limits.

The facility is tracking the monthly and 12-month rolling hours of operation for both DIESELPUMP/DIESELPUMP2. Typical operations appear to be around 1-3 hours per month. In October 2021, pump 2 ran for 7.9 hours. Highest 12-month rolling hours were 50 hours for Pump 1 in April 2021 and 53.5 hours for Pump 2 in January 2021. Documentation was provided following the 2018 inspection that the engine manufacturer had tested and certified the engine model to comply with applicable emission limits for engine manufacture date.

The diesel fuel SDS was also provided identifying the fuel as ultra-low sulfur fuel at less than 0.0015% sulfur.

EU-WDGS (MI-ROP-B8570-2015B)

The emission unit is the wet distiller's grains and solubles handling operations. Mr. Dankert stated they are in the process of removing this emission unit and only processing DDGS in the future. The WDGS is processed through the dryer and stored outside in a contained and covered area. A front-end loader was operating at the time of the inspection loading a truck with grain. This is also sold as a secondary product to be used as animal feed.

Pollutant	Limit	Time Period	Records
WDSG	160,000 cubic feet	Daily	Highest Daily 900 tons on February 4, 2022 (approximately 36,000 cubic feet)

FGFACILITY (MI-ROP-B8570-2015B)

Emission unit consists of all process equipment, source-wide, including equipment covered by other permits, grandfathered equipment, and exempt equipment. Emission records were submitted as part of the records request. Facility is tracking the following emissions across the source: NOx, VOC, CO, PM, PM10, PM2.5, SO2, acetaldehyde, acrolein, and total HAPs.

Pollutant	Limit	Time Period	Records
NOx	249 tpy	12-Month Rolling	126.72 tpy in January 2022
VOC	199 tpy	12-Month Rolling	109.27 tpy in July 2022
CO	222 tpy	12-Month Rolling	32.88 tpy in January 2022
HAPs	10 tpy individually	12-Month Rolling	Highest HAP: Acetaldehyde 2.61 tpy in December 2021
HAPs	25 tpy aggregate	12-Month Rolling	3.26 tpy in December 2021
PM	90 tpy	12-Month Rolling	38.60 tpy in January 2022
PM10	65 tpy	12-Month Rolling	38.60 tpy in January 2022
PM 2.5	60 tpy	12-Month Rolling	12.13 tpy in April 2022
SO2	78 tpy	12-Month Rolling	16.86 tpy in January 2022
Total ethanol and denaturant throughput	160 Million Gallons per Year	12-Month Rolling	134,929,554 gallons per year in July 2022

Denaturant Throughput	**7.5 Million Gallons per Year**	**12-Month Rolling**	**504,057 gallons per year in June 202**

EXEMPT EQUIPMENT

PARTS WASHER

The facility has one parts washer on site in the maintenance area. Safety Kleen maintains the cleaner, as needed. The solution in the cleaner is identified as Mirachem M2750 cleaning solution with dilution. The SDS identifies the solution as 0.08 lb/gal VOC and has a vapor pressure of less than 0.1 mm Hg which is a low vapor pressure VOC and it is not listed as a HAP.

If solution is diluted to < 5% VOC by weight, emission unit would not meet the definition of a cold cleaner under Rule 336.1103(aa) and would not be subject to Rule 707. If cleaning solution, as used, has a VOC content of 5% or more, by weight, the emission unit would be subject to Rule 707 and need to be included in the ROP renewal application process.

TANKS

Facility has a sulfuric acid storage tank with concrete secondary containment area. The sulfuric acid storage tank is exempt from air use permitting requirements under Rule 336.1284(2)(h)(i). Facility also has a 35,000-gallon corn oil storage tank. The corn oil storage tank is exempt from air use permitting requirements under Rule 336.1284(2)(i).

The facility appears to be in compliance with all required emissions limits and recordkeeping in MI-ROP-B8570-2015B, permits to install (PTIs) 144-15E, 144-15G and 119-19B, and all other applicable state and federal regulations except for the daily pressure drop requirements for FGC-20 in 119-19B. A violation notice will be sent to the facility for this deficiency.

NAME Annette Cross DATE 8/26/22 SUPERVISOR RJL 8/29/22