DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

B287346376

FACILITY: Michigan Sugar Company - Sebewaing Factory		**SRN / ID:** B2873
LOCATION: 763 N Beck St, SEBEWAING		**DISTRICT:** Saginaw Bay
CITY: SEBEWAING		**COUNTY:** HURON
CONTACT: Kelly Scheffler , Facility Manager		**ACTIVITY DATE:** 09/13/2018
STAFF: Matthew Karl	**COMPLIANCE STATUS:** Non Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Inspection for compliance with ROP conditions. NOV sent for VE and Fugitive dust plan non compliance. Discussions w/company re: CAM/MAPs/MACT implementation are ongoing.		
RESOLVED COMPLAINTS:		

On Thursday (9/13/18) Kathy Brewer and I (Matt Karl) conducted an unannounced compliance inspection at the Michigan Sugar Company – Sebewaing (MSC-Sebewaing) factory located at 763 North Beck Street, Sebewaing, Michigan. The purpose of the inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD) Administrative Rules and Renewable Operating Permit (ROP) No. MI-ROP-B2873-2012. Mr. Kelly Scheffler, Factory Manager; Mr. Kerry Grifka, Process Engineer and Mr. Adam Gennrich, Factory Chemist all assisted us during the inspection.

Facility Description:

The facility manufactures table quality sugar and powdered sugar. The basic raw ingredient used in the manufacture of these sugar products is sugar beets. Filters and milk of lime are used to remove impurities with agricultural lime being produced as a by-product. Other by-products produced as a result of the process include pressed pulp and pellets for animal feed. The primary manufacturing steps include diffusion, juice purification, evaporation/concentration, crystallization, granulation drying and cooling, sugar packaging and pulp manufacture.

Site Inspection:

The facility was operating at the time of our inspection. We began our inspection by driving around the MSC-Sebewaing factory on N. Miller Street to the west of the factory, Pine Street to the south of the factory and S. Unionville Road to the east of the factory. We noted no nuisance odors at that time. We did notice the presence of fugitive dust coming from the piling grounds and unpaved roadway area due to the truck traffic brining in sugar beets. We also observed black smoke coming from the stack SVCEBOILERSTACK associated with the emission unit EUCEPACKAGEBOIL which is a natural gas or fuel oil boiler with an economizer.

We then announced our presence at the Agricultural Office and Factory Office. We then met with Adam Gennrich and Kerry Grifka. We discussed records that we wanted to see on-site and the records that we wanted to collect that day with Adam Gennrich. Kerry Grifka took us on a tour of the facility while Adam Gennrich put together the records we requested.

First, we went to check on the boilers (EU-CEPACKAGEBOIL, EU-WICKESWESTBOIL, EU-WICKESEASTBOIL). We met with the boiler operator and reviewed the control screen information for the boilers at approximately 12:05. We discussed how the once-per-shift visible emissions (VE) surveys were conducted with the boiler operator and Kerry Grifka. VE is used by the site a basis for demonstrating compliance with several ROP conditions. The VEs are not being conducted properly. The VE readings are taken in the same location no matter the sun location. The operators appear to lack adequate training to correlating the VE observation sheet recording options to % VE. We recommended that they review their visible emission survey location and process based on the black smoke that was coming from the CE Package Boiler stack during our inspection. Additional training and periodic checks by staff with VE certifications should be incorporated into any VE based compliance demonstration activity. The boiler operator also stated that the CE Package Boiler was currently using natural gas and hadn't burned fuel oil in several years.

Next, we proceeded to the lime kiln (EU-LIMEKILN). We met with the lime kiln operator and reviewed the lime kiln inspection sheet. We discussed how the once-per-shift visible emissions survey was conducted with the lime kiln operator and Kerry Grifka. We recommended that they review their visible emission survey process for the lime kiln based on what the operator was inspecting, which may have been more to due with the flame height in the lime kiln based on the loading of lime and coal rather than observing visible emissions from the lime kiln stacks (SVLIMEKILN1 and SVLIMEKILN2). Additional training and periodic checks by staff with VE

certifications should be incorporated into any VE based compliance demonstration activity. Kerry Grifka informed us that the lime kiln is being fired with anthracite coal for the 2018/2019 campaign instead of coke.

Finally, we inspected the pulp dryers (EU-DRYER#1, EU-DRYER#2; EU-DRYER#3) which were not operating at the time of our inspection, due to the company filling wet pulp orders. EU-DRYER#3 was down for maintenance to repair a gear box. We met with the pulp dryer operator and reviewed the pulp dryer monitoring panels.

We then reconvened at the Factory Office. We asked for and received a sample of coal. Analytical results are pending.

We had our post-inspection meeting with Kelly Scheffler, Kerry Grifka and Adam Gennrich. Kelly Scheffler and Adam Gennrich were able to provide most of the records we had requested to view on site and take with us. They were unable to provide adequate records for the fugitive dust plan for the site. No one we spoke with appeared aware of a current Fugitive Dust Plan requirement. They brought in Tommy Bignal from the Agricultural Office and he and Kelly Scheffler were able to provide purchase orders for calcium chloride and water truck rentals for dust suppression. On September 14, 2018, we provided the site with a copy of the Fugitive Dust Plan from MDEQ files that had been submitted by MSC for the site. A violation notice will follow for non-compliance with the recordkeeping requirements of the fugitive dust plan.

Records Review:

EU-CEPACKAGEBOIL: Compliant

SC VI.1. requires that the permittee perform daily visible emissions surveys for opacity. AQD staff received records for visible emissions surveys for 11/1/17, 2/15/18, 9/11/18 and 9/12/18. All visible emissions surveys conducted by the permittee over these dates indicated low (<15%) opacity on these dates. VE observations are usually performed by employees that are not Method 9 certified. Based on observations made on site on 9/13/18 and during the method 9 survey on 9/19/18, MSC employees are conducting VE observations, but, the VE forms and employees training are not adequate to enable the employee to correctly identify when VEs are above 15%. AQD staff recommends the permittee review how their visible emissions surveys are conducted to ensure future compliance. SC VI.2 requires the permittee to calculate the sulfur content of the fuel oil used in the CE package boiler. The factory has not used fuel oil in the CE package boiler in several years.

EU-DRYER#3: Unkown

The dryers were not operating during the inspection. AQD staff received records for pulp dryer #3 (EU-DRYER#3) for 11/5/17 and 2/15/18.

SC VI.1 requires that the permittee perform daily visible emissions surveys for opacity. All visible emissions surveys conducted by the permittee over these dates indicated low (<15%) opacity on these dates.

SC VI.2 requires that the permittee continuously monitor the air flow through the flue gas recirculation system. The malfunction abatement plan (MAP) indicates that the acceptable flow rate range is 5,000-19,000 SCFM and the normal range is generally 7,000-13,000 SCFM. The flow rate ranged from 10,080-13,640 over the period of records received. At 04:00 on 11/5/17 there was one hour of missed flow rate recording due to work being done on the pitot tube.

SC VI.3 requires that the permittee continuously monitor the pressure drop across the multiclone. The MAP indicates that the normal operating parameters are between 3 to 12" W.C. with average between 4-5.5" W.C. The differential pressure across the multiclone over the periods of the records received ranged from 3.8-4.2" W.C.

SC VI.4 requires that the permittee keep a written log of hours of operation. The permittee keeps records of the shifts that EU-DRYER#3 operates as well as the hours of operation each shift.

SC VI.5 requires that the permittee monitor and record the gallons of fuel oil burned on a monthly basis. Over the period of records received, EU-DRYER#3 only operated on natural gas.

SC VI.6 requires the permittee to calculate the sulfur content of the fuel oil used in EU-DRYER#3. Over the period of records received, EU-DRYER#3 only operated on natural gas.

SC VI.7 The permittee shall keep monthly and previous 12-month rolling time period records of VOC and CO emissions for EU-DRYER#3. EU-DRYER#3 has emission limits of 245 TPY VOC per 12 month rolling time period and 442 TPY CO per 12 month rolling time period.

Date	VOC TPY 12 month Rolling	CO TPY 12 month Rolling	Compliant

Records were not received at the time of the inspection to determine compliance with this requirement. A request for additional information was sent to Mr. Steven Smock via a permit records request letter on 9/27/18. A compliance evaluation report will follow receipt of those records.

SC VI.8 The permittee shall initiate the MAP if the monitored pressure drop across the multiclones is less than 3.0 or greater than 12.0 inches of water or the air flow through the flue gas recirculation system is less than the 5,000 SCFM or greater than 19,000 SCFM. During the Second Semi-Annual Deviation Report from July 1- December 31, 2017 there were no deviations identified for EU-DRYER#3. During the Semi-Annual Deviation Report from January 1- June 30, 2018 there were no deviations identified for EU-DRYER#3.

EU-LIMEKILN: Non-compliant

SC VI.1. requires that the permittee perform daily visible emissions surveys for opacity. AQD staff received records for visible emissions surveys for 10/30/17 through 11/6/17; 2/9/18 through 2/18/18 and 9/8/18 through 9/12/18. All visible emissions surveys conducted by the permittee over these dates indicated low or normal opacity on these dates. VE observations are usually performed by employees that are not Method 9 certified. Based on observations made on site on 9/13/18 and during the method 9 survey on 9/19/18, MSC employees are conducting VE observations, but, the VE forms and employees training are not adequate to enable the employee to correctly identify when VEs are above 15%. AQD staff recommends the permittee review how their visible emissions surveys are conducted to ensure future compliance.

SC VI.2 requires that the permittee keep daily records about the amount of coke and anthracite coal used in the lime kiln. The material limit for coke and anthracite coal is 5,000 tons per 12 month rolling time period.

Date	Antracite Coal usage TPY 12 month Rolling	Coke usage TPY 12 month Rolling	Compliant

Records were not received at the time of the inspection to determine compliance with this requirement. A request for additional information was sent to Mr. Steven Smock via a permit records request letter on 9/27/18. A compliance evaluation report will follow receipt of those records.

SC VI.3 requires that the permittee monitor the sulfur content by weight of the coke and anthracite coal according to the ROP Fuel Sampling Plan. A purchase order record was provided from Atlantic Carbon Group PLC dated 7/19/18 for the purchase of 500 ton of anthracite coal with sulfur 0.70% max.

FG-BOILERS: Compliant

AQD staff received records for the boilers for 11/1/17, 2/15/18, 9/11/18 and 9/12/18.

SC VI.1 requires that the permittee perform daily visible emissions surveys for opacity. All visible emissions surveys conducted by the permittee over these dates indicated low (<15%) opacity on these dates.

SC VI.2. requires that the permittee continuously monitor the pressure drop across the multiclones. The compliance assurance monitoring (CAM) plan specifies an excursion is defined as any continuous reading during normal boiler operation outside of 1-12" W.C. Over the period of the records received the pressure drops ranged from 2.0-6.3" W.C.

SC VI.3 requires that the permittee continuously monitor the pressure drop and liquid flow across the wet scrubber. The CAM plan specifies excursions are defined as any continuous readings during normal boiler operation below 15" W.C or below 100 gpm respectively. Over the period of the records received the pressure drop across the wet scrubber ranged from 11-28" W.C. There was one excursion where the hourly pressure drop reading was 11" W.C at 05:00 on 9/11/18. There were no comments or maintenance performed recorded. The liquid flow in the "center" ranged from 411-479 gpm and liquid flow in the "ring" ranged from 68-110 gpm over the period of the records received.

SC VI.4 requires the permittee calculate the sulfur content of the coal. A purchase order record was provided

from C Reiss Coal Company dated 7/19/18 for the purchase of 25,000 ton of coal with sulfur 1% max.

SC VI.5 requires the permittee take to initiate the MAP if the monitored pressure drop across the multiclones exceeds the parameters established in the MAP. The 2017 Annual CAM Excursion/Exceedance and Downtime Summary Report dated 3/15/18 indicated there were no excursions reported for the pressure drop across the multiclones.

SC VI.6 requires the permittee take to initiate the MAP if the monitored pressure drop or liquid flow across the wet scrubber are below the minimum parameters established in the MAP. The 2017 Annual CAM Excursion/Exceedance and Downtime Summary Report dated 3/15/18 indicated that there were 10 days were pressure drop was below the 15" W.C. specified in the CAM plan. The report indicated that the low pressure drop readings were due to plugging due to dirt or ice in the pressure gauge lines. Corrective action taken involved cleaning the pressure gauge lines.

FG-NATGASBOILERS-5D: Compliant

SC VI.1 The permittee must keep a copy of each notification and report submitted to comply with 40 CFR Part 63, Subpart DDDDD. An Initial Notification of Compliance Status is on file in the District records and is dated 5/29/2013.

SC VI.2. 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.

FG-STOKERBLRS-5D: Unknown

AQD staff reviewed the following records to determine compliance with the requirements of this section:

- Boiler MACT Status Report dated 9/14/17 for 1/1/17-6/30/17
- 2017 Boiler MACT Compliance Report dated 3/2/18 for 1/31/17-12/31/17
- Boiler MACT Compliance Report dated 9/10/18 for 1/1/18-6/30/18

From the Boiler MACT Status Report dated 9/14/17, the Operating Parameter Limits for Boilers #2 & 3:

- Maintain oxygen above 7.4%
- Maintain WESP power above 2.56 KW
- Maintain scrubber flow above 501 gpm
- Maintain scrubber pressure drop above 18.7 inches of waterMaintain 30-day rolling average operating load at or below 110% of the highest hourly average operating load recorded during the performance test or 145,189 lbs/hr steam output (sum of boilers #2 & 3)

Records were not received at the time of the inspection to determine compliance with this requirement. A request for additional information was sent to Mr. Steven Smock via a permit records request letter on 9/27/18. A compliance evaluation report will follow receipt of those records.

FG-PULPDRYERS: Unknown

AQD staff received daily records for pulp dryers #1 and #2 (EU-DRYER#1; EU-DRYER#2) for 11/8/17 or 11/5/17, 2/15/18, 9/11/18 and 9/12/18.

SC VI.1 requires that the permittee perform daily visible emissions surveys for opacity. All visible emissions surveys conducted by the permittee over these dates indicated low (<15%) opacity on these dates.

SC VI.2 requires that the permittee continuously monitor the air flow through the flue gas recirculation system. The malfunction abatement plan (MAP) indicates that the acceptable flow rate range is 5,000-19,000 SCFM and the normal range is generally 7,000-13,000 SCFM. The flow rate ranged from 6,190-9510 SCFM for pulp dryer #1 and from 5,270-9840 SCFM for pulp dryer #2 over the period of records received.

SC VI.3 requires that the permittee continuously monitor the pressure drop across the multiclone. The MAP indicates that the normal operating parameters are between 3 to 12" W.C. with average between 4-5.5" W.C. The differential pressure across the multiclone ranged from 5.59-12.58" W.C. for pulp dryer #1 and from 8.04-11.21" W.C. for pulp dryer #2 over the periods of the records received. Pulp dryer #1 operated with differential pressure across the multiclone above 12" W.C. for approximately an hour on 11/8/18 from approximately 04:30-05:30.

SC VI.4 requires the permittee to calculate the sulfur content of the fuel oil used.

Records were not received at the time of the inspection to determine compliance with this requirement. A request for additional information was sent to Mr. Steven Smock via a permit records request letter on 9/27/18. A compliance evaluation report will follow receipt of those records.

SC VI.5 The permittee shall initiate the MAP if the monitored pressure drop across the multiclones is less than 3.0 or greater than 12.0 inches of water or the air flow through the flue gas recirculation system is less than the 5,000 SCFM or greater than 19,000 SCFM. During the Second Semi-Annual Deviation Report from July 1- December 31, 2017 there were 10 deviations between 8/28-9/30 for EUDRYER#1. These deviations were noted as periods of time where the pressure differential across the multiclone exceeded the upper limit of 12" W.C. The deviation on 11/8/18 for EU-DRYER#1 was not reported. There were 7 deviations between 9/8-9/16 for EUDRYER#2. These deviations were also noted as periods of time where the pressure differential across the multiclone exceeded the upper limit of 12" W.C. During the Semi-Annual Deviation Report from January 1- June 30, 2018 there were no deviations identified for EU-DRYER#1 and EU-DRYER#2.

FG-RULE290: Unknown

SC VI.1 The permittee shall maintain records showing compliance with R 336.1290 Permit to install exemptions; emission limits with limited emissions for EUPELLETCOOLER and EUPULPDUSCOLL.

Records were not received at the time of the inspection to determine compliance with this requirement. A request for additional information was sent to Mr. Steven Smock via a permit records request letter on 9/27/18. A compliance evaluation report will follow receipt of those records.

SC VI.2 The permittee shall maintain an inventory of each emission unit that is exempt pursuant to Rule 290.

Records were not received at the time of the inspection to determine compliance with this requirement. A request for additional information was sent to Mr. Steven Smock via a permit records request letter on 9/27/18. A compliance evaluation report will follow receipt of those records.

SC VI.3 The permittee shall perform a monthly visible emission observation check.

Records were not received at the time of the inspection to determine compliance with this requirement. A request for additional information was sent to Mr. Steven Smock via a permit records request letter on 9/27/18. A compliance evaluation report will follow receipt of those records.

Visible Emissions Method 9 Survey 9/19/18:

On Wednesday (9/19/18) Meg Sheehan and I (Matt Karl) performed a visible emissions method 9 survey at the MSC-Sebewaing Factory. The subjects for this visible emissions survey were the CE Package Boiler (EU-CEPACKAGEBOIL) and the lime kiln (EU-LIMEKILN). The results of the 6-min average for the CE Package Boiler was determined to be 14.6% opacity and the 6-min average for the lime kiln was 17.3% opacity. A violation notice will follow for non-compliance with EU-LIMEKILN VI.1 which requires the permittee to perform at least one 15-minute visible emission reading in accordance with Federal Test Method 9 if visible emissions in excess of 15% opacity are observed for 6 minutes.

Miscellaneous:

ROP renewal:

The facility's ROP is in the midst of a ROP renewal. The MDEQ and the company are reviewing the company's comments on the Working Draft ROP.

CAM:

The MDEQ has notified the site that the plans lack required monitoring and operating range specificity.

NAME Matthew K. Karl DATE 10-9-2018 SUPERVISOR C. Hare