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

B198257534

FACILITY: Padnos Manufacturing		**SRN / ID:** B1982
LOCATION: 185 W 8TH ST, HOLLAND		**DISTRICT:** Grand Rapids
CITY: HOLLAND		**COUNTY:** OTTAWA
CONTACT: Robert McCormick , Environmental Manger		**ACTIVITY DATE:** 03/25/2021
STAFF: Chris Robinson	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: FY'21 inspection to determine the facility's compliance status with respect to PTI no. 365-98A and 182-80C and any other applicable air quality rules and regulations.		
RESOLVED COMPLAINTS:		

The purpose of this report is to document the findings of an onsite scheduled inspection of Padnos Manufacturing (SRN B1982) located at 185 West 8th Street in Holland, Michigan. The inspection was conducted by AQD staff Chris Robinson (CR) on March 25, 2021 to determine the facility's compliance status with the requirements of the federal Clean Air Act; Part 55 (Michigan's Air Pollution Control Rules) of Act 451 (Natural Resources and Environmental Protection Act (NREPA); and the requirements established in Permits to Install (PTI) No. 365-98A and PTI No. 182-80C.

CR contacted Rob McCormick, Environmental Manager, and requested records, which were received on March 18, 2021. Once the records were reviewed an onsite inspection was scheduled with Mr. McCormick. COVID19 safety precautions were also discussed. Following current field work guidance, the inspection was scheduled in order to properly prepare for any Covid19 related entry procedures. Proper PPE, including facial coverings, and social distancing were maintained throughout the entire onsite portion of the inspection. Upon arrival to the facility CR met with Mr. McCormick and informed him of the purpose of the inspection.

Weather conditions were approximately 44°F, cloudy with northerly winds at approximately 3 mph (www.weatherunderground.com). No odors were observed and other than water spray from the Dust Boss's there were no fugitive emissions observed from the yard or visible emissions from the equipment.

A) Facility Description

Padnos Manufacturing (Padnos) is a scrap metal recycling facility that collects and recycles various metals including general metal scrap (cast iron, steel, aluminum etc.) and machine shop turnings. The miscellaneous general scrap is sent through the shredder and sorted by use of a magnet. The metallic material sorted out is then stockpiled and sold as is. The machine shop turnings are loaded into a hopper and sorted and crushed to meet the size requirements for the briquetter. Once the material is to the appropriate size it is sent to one of two dryers to remove any cutting oil used by the machine shops. A water boss is used to control particulate emissions and to help with any odors. The Rotary drier is a non-contact style drum dryer and the Coreco is a direct fire dryer. Both accomplish the same task and once the material passes through one of these dryers it is then sent to the briquetter where it is compressed into small metal bricks. The bricks are then stockpiled and sold. Emissions of Hydrogen Chloride (HCl) and Sulfuric acid (H2SO4) are controlled by use of dry sorbent.

Per Mr. McCormick there have been no changes or additional equipment added since the last inspection conducted on September 13, 2017.

B) Compliance Evaluation

Padnos is currently operating under two (2) permits; PTI No. 365-98A for the shredder and PTI No. 182-80C, which is for the remaining equipment but also contains the facility-wide limits allowing Padnos to Opt-Out of Title V. There are also some various exempt pieces of equipment located on site.

None of the stacks identified in the permits below were explicitly measured but visually they did appear to meet the specified requirements.

1) PTI No. 365-98A

This PTI covers emission unit EUSHREDDER which is for the scrap metal shredder, ferrous separating system with a magnetic drum separator and associated ferrous wind cyclone, non-ferrous cyclone separation process and associated system conveyors. The shredder and water feed spray system, used to keep dust down, were operating at the time of the inspection. Per Mr. McCormick, no asbestos, or asbestos containing materials are processed through the shredder and all refrigerants are drained from refrigerators prior to entering the shredder. The grounds were wet, and Mr. McCormick noted that they have been operating their water truck in accordance with the fugitive dust plan. No fugitive dust was observed from the storage piles or from the material handling activities.

2) PTI No. 182-80C

The equipment used to process the turnings are covered under this PTI. A Malfunction Abatement Plan (MAP) is being maintained as required for all emission units required to have one in the PTI. Per discussions and observations all control devices were operating and appeared to be maintained properly.

EUROTARYDRYER

Emission unit EUROTARYDRYER consists of a Prab Engineering Model Pyrotech 400 Continuous Rotary De-Oiling Furnace; maximum production capacity 18 tons per hour. Heat source is one natural gas/oil-fired burner, North American #6514-8B (8.15 MMBtu/hr). Control train is a 54-inch diameter cyclone collector, an afterburner (Prab Engineering, 10.5 feet diameter x 22 feet, natural gas-fired, North American #6514-8A (4.89 MMBtu/hr, 1200°F),) a vertical cooling tower, dry sorbent (Trona) injection, and a 5-module reverse-air with shaker assist high temperature baghouse. The DSI (Trona) is received in 2,000-pound sack totes and is fed into a hopper where it dispenses the Trona into the air stream. Since the Rotary Drier was in operation at the time of this inspection the facility was injecting Trona. No visible emissions were observed. The DSI injection rate is being tracked. Example records are attached, and the feed rate is approximately 21.25 lbs. per hour.

This unit is restricted to using no more than 28,800 gallons of stormwater per day and 5,000,000 gallons per any given 12-month rolling time period for cooling per Special Condition (SC) II.1. It is also subject to an operational limit of no more than 8,200 hours per any given 12-month rolling time period (SC III.1); the requirement to maintain a proper MAP (SC III.2); the requirement to satisfactorily maintain and operate the cyclone collector, afterburner, vertical cooling tower, dry sorbent injection system, and a 5-module baghouse (SC IV.1); the requirement to install, calibrate, maintain and operate the following to monitor: a temperature recorder for the afterburner (SC

IV.2); the pressure drop across each baghouse (SC IV.3), the amount of stormwater used (SC IV.4) and amount of dry sorbent used (IV.5).

All control equipment is installed as is the equipment used to monitor and record operating parameters. The facility is maintaining appropriate records. Records were provided for the time period of March 2020 through February 2021. Based on a review of these records the maximum daily stormwater used from March 1, 2020 through February 28, 2021 was 27,026 gallons (10/16/2020) with a max 12-month rolling total of 2,200,199 gallons. EUROTARYDRYER operated for 3,073 hours.

EUROTARYDRYER is also subject to several emission limits based on Test Protocol. Total PM is limited to 0.06 lbs. per 1,000 lbs. of exhaust gas, PM10 and PM2.5 are both limited to 5.4 pph, HCL is emissions are limited to 0.056 pph and H2SO4 emissions are limited to 1.05 pph. Testing was conducted for HCL and H2SO4 on September 11, 2012. The PM emissions are based on requested testing (General Condition 13 of the PTI) and at this time testing has not been requested by the AQD.

EUCORECODRYER

Emission Unit EUCORECODRYER Consists of a CORECO Boring Dryer Model 2350; natural gas-fired, 8 MMBtu/hr heat input; maximum production capacity 7 tons per hour. Control is a high efficiency cyclone, hot cyclone collector afterburner (1,450°F, 1.25 sec retention time, 6 MMBtu/hr), heat exchanger, and baghouse.

This unit is only allowed to operate 8,200 hours per any given 12-month rolling time period (SC III.1), must maintain a proper MAP (SC III.2), satisfactorily maintain and operate the afterburner at a temperature of 1,450^{o}F and monitor and continuously record the afterburner temperature and baghouse differential pressure (SC IV.2 & IV.3). EUCORECODYRER operated for 3,405 hours. The circle charts for the EUCORECODRYER's afterburner indicated that it is being operated above the 1,475^{o}F requirements. Per staff the afterburner's operational set point is set to 1,500^{o}F.

EUCORECODRYER is also subject to several emission limits based on Test Protocol. Total PM is limited to 0.5 lbs. per 1,000 lbs. of exhaust gas, PM10 and PM2.5 are both limited to 2.7 pph, HCL emissions are limited to 0.056 pph and H2SO4 emissions are limited to 0.21 pph. Testing was conducted for HCL and H2SO4 on September 11, 2012. The PM emissions are based on requested testing (General Condition 13 of the PTI) and at this time testing has not been requested by the AQD. Emissions of PM10 and PM2.5 are also restricted to 8.9 tpy (each) based on a rolling 12-month period. Based on the records provided PM emissions for EUCORECODRYER from March 2020 through February 2021 were 0.05 tons, for both PM10 and PM2.5 with the most being emitted per month being 13 lbs. (0.007 tons) in September 2021. Records are attached.

Per discussions with Mr. McCormick maintenance is being conducted as needed in order to keep the equipment in good operating condition. A maintenance log is being maintained. If there is a malfunction at any time the conveyors will shut down and the employees will be notified, which prevents the system from operating without proper control of emissions. All monitors are installed, and the required data is being recorded. Records as required by sections VI of the PTI have been either provided or reviewed onsite. Temperature records (circle charts) were reviewed onsite.

EUBRIQUETTER

Once the turnings have been reduced to the proper size, sorted, and then dried by either the Coreco or Rotary Drier they are then sent to the Briquetter (EUBRIQUETTER) which is a K-G Industries Model 720 MSS hot roll briquetter with baghouse control (Lynx Model Pulseflo) for particulate emissions.

The Briquetter is subject to a total PM emission limit of 0.08 lbs./1,000 lbs. of exhaust gas and a PM10 emission limit of 3.4 pph. Both are based on "Test Protocol" which is demonstrated by operating and maintaining the equipment in a satisfactory manner and by requested testing as noted in General Condition 13 of the PTI. However, the AQD has not requested such testing.

This emission unit is also subject to an operational restriction of 8,200 hours per any given 12-month rolling time period. Emissions are required to be controlled by the baghouse at all times while it is being operated and the pressure drop across the baghouse is required to be monitored and recorded to ensure that the baghouse is operating properly. Due to social distancing concerns CR did not observe the baghouse pressure drop from the control room. However, records were provided, and the pressure drops were between 0.4 – 3.3"w.c. The only material processed in this unit is the turnings and the facility keeps track of and records the hours of operation as required by SC VI.2. Based on the records provided for the time period of March 2020 through February 2021 the Briquetter has operated for 3,073 hours, which is well under the 8,200-hour limit. Pressure drop across the baghouse is being monitored and recorded as required by SC VI.3. Example records are attached. Maintenance is being conducted as necessary and logged onsite as required by SC VI.4.

EUTURNINGCRUSHER

Once the turnings have been sorted the larger turnings are then sent to the crusher prior to entering either the Coreco or Rotary Drier. Particulate emissions are controlled by a fabric filter (Jet Filter Emtrol Model pulse jet baghouse).

EUTURNINGSCRUSHER is subject to total PM and PM10 emission limits of 0.10 lbs/1,000 lbs of exhaust gas and 0.15 pph. Both are based on "test Protocol" which is demonstrated by operating and maintaining the equipment in a satisfactory manner and by requested testing as noted in General Condition 13 of the PTI. However, the AQD has not requested such testing.

Emissions are required to be controlled by the baghouse at all times (SC IV.1) while it is being operated and the pressure drop across the baghouse is required to be monitored and recorded (SC IV.2 & VI.2) to ensure that the baghouse is operating properly. Due to social distancing concerns CR did not observe the baghouse pressure drop from the control room. However, records were provided, and the pressure drop was approximately 4.7 " wc. Example records are attached. Maintenance is being conducted as necessary and logged onsite as required by SC VI.3.

FGFACILITY

Padnos operates under a Title V opt-out permit which limits the facility-wide PM10 emissions to less than 90 tons per any given 12-month rolling time period. Per monthly and rolling 12-month

records provided by Mr. McCormick the rolling 12-month total for March 1, 2020 through February 28, 2021 was 9.05 tons, which is well under the limit.

3) Exempt Equipment

Cold Cleaners
Padnos maintains a few cold cleaners on site that appear to be exempt from Rule 201 permitting under Rule 281(2)(h) for cold cleaners having an air/vapor interface of no more than 10 square feet.

Coating Booth
The facility also has a maintenance area, the IXL machine shop, and the paint shop. The paint shop has a booth equipped with fabric filters which appears to be exempt from Rule 201 permitting requirements per Rule 287(2)(c). This exemption limits painting to 200 gallons per month. Per Mr. McCormick monthly records are being maintained and 299 gallons were used in 2020 with the highest 2020 monthly usage of 37.5 gallons in October.

Emergency Generator
The facility also has one (1) Generac 130 Kw (0.44 MMBTU) natural gas fired emergency generator. As calculated by the KW rating this generator would have a power rating of approximately 174hp. The exact manufacture and installation dates are unknown but based on discussions with Mr. McCormick the engine was quoted in 2011 which demonstrates that the engine was at least installed after 1/1/2011. This generator appears exempt from Rule 201 permitting under Rule 282 (2)(b)(i). This unit is, however, subject to the Maximum Achievable Control Technology (MACT) Standards of 40 CFR Part 63 Subpart ZZZZ for stationary reciprocating internal combustion engines and to 40 CFR Part 60 Subpart JJJJ the new source performance standards (NSPS) for stationary spark ignition internal combustion engines. While AQD does not have delegation for this area source MACT, the unit is compliant with Subpart ZZZZ by complying with the NSPS, for which AQD has delegation. Per NSPS JJJJ this emission unit is subject to emission standards and the requirements to have a non-resettable hour meter. Per Mr. McCormick a non-resettable hour meter is installed. Mr. McCormick also provided the engine specification sheet from the manufacturer which states that it is an EPA Certified Stationary Engine. It appears that the unit is in compliance with applicable requirements.

4) MAERS
The facility 2021 MAERS submittal (for 2020 emissions) was reviewed by the AQD on April 6, 2021. The facility is using "other" for the basis of their emissions which includes stack test results. Material content is also being used for the coating used in the spray booth. Attachments were provided as required. Emissions reported are summarized below.

Pollutant	Reported 2020 Emissions (Tons)
NOx	5.93
PM10	9.22
SO2	0.03
VOC	0.83

B) Compliance Determination

Based on a review of this facility's records, observations and discussions, Padnos Manufacturing appears to be in compliance with applicable air quality rules and regulations including the requirements established in PTI Nos. 365-98A and PTI 182-80C.

NAME _____ DATE 4/7/2021 SUPERVISOR _____