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

B198267358

FACILITY: Padnos Manufacturing		**SRN / ID:** B1982
LOCATION: 185 W 8TH ST, HOLLAND		**DISTRICT:** Grand Rapids
CITY: HOLLAND		**COUNTY:** OTTAWA
CONTACT: kyle Daneff , Environmental Manager		**ACTIVITY DATE:** 04/21/2023
STAFF: Chris Robinson	**COMPLIANCE STATUS:** Non Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Self initiated inspection to determine compliance with PTI 365-98A, PTI 182-80C, and other applicable air quality rules and regulations.		
RESOLVED COMPLAINTS:		

A) Introduction

On April 21, 2023, staff Chris Robinson (CR) from Michigan's Department of Environment, Great Lakes, and Energy (EGLE) Air Quality Division (AQD) conducted an inspection at Padnos Manufacturing (SRN B1982) located at 185 West 8th Street in Holland, Michigan. Staff from the United States Environmental Protection Agency (USEPA) Emma Leeds and David Sutlin were also onsite conducting an inspection. The purpose of this inspection was 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 of the Natural Resources and Environmental Protection Act (NREPA); and the requirements established in Permits to Install (PTI) No. 365-98A and PTI No. 182-80C.

Weather conditions were approximately 47^{o}F, cloudy with westerly winds at approximately 9 mph (www.weatherunderground.com). No odors or visible emissions were observed.

Prior to entering the facility CR met with EPA staff and discussed the facility including permits and emission units/processes. Afterwards, EPA and EGLE staff entered the facility's offices and met with Kyle Daneff, Environmental Manager, Todd Jousma, Production Manager, and Tim Driesenga. The purpose of the visit was explained, and all processes and emission units were discussed along with sources of freon such as automobiles and appliances.

B) Facility Description

Padnos is a scrap metal recycling facility that collects and recycles various metals including general metal scrap (cast iron, steel, aluminum etc.), machine shop turnings, automobiles, and appliances. The miscellaneous general scrap is sent through the shredder, covered under PTI 365-98A), sorted with a magnet then stockpiled and sold. Only the machine shop turnings and mill scale are processed in the Briquetter covered under PTI 182-80C. The briquetter's hammermill (EUTURNINGSCRUSHER) is used to crush the mill scale and turnings to an appropriate size. From here the material is sent through either EUROTARYDRYER (direct heating) or EUCORECODRYER (indirect heating) for drying off any moister and/or residual machine oil/lubricants. Emissions from both are controlled by a cyclone and afterburner. Since EUROTARYDRYER is direct heating, emissions of Hydrochloric acid (HCL) and Sulfuric Acid (H2SO4) are controlled by dry sorbent injection. The dry absorbent being injected is Trona. Once dried, the mill scale/machine turnings are heated and compressed (EUBRIQUETTER) to form a brick that is stock piled and eventually shipped by barge, truck, or rail to a buyer. Particulate emissions (PM) generated by EUBRIQUETTER are controlled by a baghouse.

There have been no changes or additional equipment added or modified since the last inspection conducted on March 25, 2021.

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 appeared to meet the specified requirements.

1) PTI No. 365-98A

This PTI covers 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 Padnos staff, no asbestos, or asbestos containing materials are processed through the shredder and all refrigerants are drained prior to entering the shredder. The facility's water truck was present but not in use. Staff indicated that it is used as needed 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

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

EUROTARYDRYER consists of a Prab Engineering Model Pyrotech 400 Continuous Rotary De-Oiling Furnace with a maximum production capacity of 18 tons per hour (tpy). The 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. Trona is received in 2,000-pound sack totes and fed into a hopper where it is dispensed 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 injection rate is being tracked. Records are attached, and the feed rate is 21.25 lbs. per hour as required in the facility's Malfunction Abatement Plan (MAP).

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 pollution control and monitoring equipment is installed. Records for May 2022 through April 2023 were provided and based on this information the maximum daily stormwater used was 3,231,449 gallons. EUROTARYDRYER operated for 4,683 hours over this time period. Temperature data is being recorded and maintained. Based on a review of the circle charts operating temperature is kept above 1,200^{o}F as specified in the MAP.

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 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 proper operation and maintenance. A Maintenance log and differential pressure records are monitored and recorded to demonstrate compliance. During the inspection baghouse DP's ("w.c) were observed (BH1 =0.2, BG2 = 3.4, BG3= 3.0, BG4 = 1.8, and BH5 = 3.5). Per the MAP DPs should be between 0.4 and 6.0" w.c. Baghouse 1 was slightly under, but no visible emissions were observed, and the facility has been made aware.

EUCORECODRYER

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 3,242 hours from May 2022 through April 2023. The 2023 circle charts were reviewed, and they indicate that the afterburner is being operated above the 1,450^{o}F requirement. Per staff the afterburner's operational set point is 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 May 2022 through April 2023 were 482 lbs. (0.242 tons, for both PM10 and PM2.5 with the most being emitted per month 59 lbs. (0.03 tons) in May 2023. Records are attached.

Maintenance is being conducted as needed in order to keep the equipment in good operating condition, a log is being maintained. If there is a malfunction at any time the conveyors will shut

down and the employees will be notified, preventing the system from operating without proper emission controls. 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 both onsite and offsite. Charts reviewed offsite are attached.

Per the facility's 2015 MAP the baghouse for EUCORECODRYER should be operating within a differential pressure range of 2.0 - 8.0 "w.c. Per DP data the facility is frequently operating at approximately 0.5-1.0" over the 8.0"w.c. limit. This was discussed with Mr. Daneff who indicated in an email on 6/23/2023 that it had been determined that the alarm limits that trigger the baghouse pulse/clean have different operating ranges than what was provided in the facility's MAP. Padnos is in the process of working with the baghouse manufacturer to determine proper operating parameters. Once determined the MAP will be updated accordingly. The baghouse for EUBRIQUETTER and EUTURNINGSCRUSHER was also operating outside of the specified differential pressure.

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 the process is in operation and the pressure drop across the baghouse is required to be monitored and recorded to ensure that the baghouse is operating properly. Baghouse differential pressure was observed in the control room and historical records were provided upon request. Hours of operation are being tracked as required by SC VI.2. Based on the records provided the Briquetter operated for 4,765 hours from May 2022 through April 2023, 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. Records are attached. See discussion above in EUCORECODRYER regarding differential pressures above MAP requirements.

EUTURNINGCRUSHER
Particulate emissions generated by EUTURNINGCRUSHER 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. Records were provided and are attached. See discussion above in EUCORECODRYER regarding differential pressures above MAP requirements.

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 the rolling 12-month total for May 2022, through April 2023, was 13.28 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. Monthly records are being maintained. From April 2022 through April 2023 590 gallons of paint were used with the highest monthly usage being 70 gallons in July 2022.

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 past 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, which is installed. During the 2021 inspection Mr. McCormick provided the engine specification sheet from the manufacturer which states that it is an EPA Certified Stationary Engine. Therefore, it appears that the unit is in compliance with applicable requirements.

Torch cutting
This facility utilizes a torch for cutting scrap metal to a certain size. This is conducted outside with no enclosure. Per exemption Rule 285(2)(j) portable torch cutting is only allowed without a PTI as long as the following are met:

i. Activities performed on a non-production basis, such as maintenance, repair, and dismantling.

ii. Scrap metal recycling and/or demolition activities that have emissions that are released only into the general in-plant environment and/or that have externally vented emissions equipped with an appropriately designed and operated enclosure and fabric filter.

On May 19, 2021, a Rule 278a request letter was sent to Mr. Rob McCormick notifying him that CR had observed uncontrolled emissions from the portable torch cutting operations at their Grand Rapids Turner Street location. Information was requested for both the Holland and Grand Rapids Locations. Padnos is in the process of designing an appropriate system.

4) MAERS

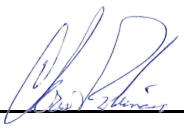
The facility's 2022 emissions data was submitted on time through MAERS on February 28, 2023. The facility is using "other" for the basis of their emissions which includes stack test results. Material content is also being used for the coating used in the spray booth. Attachments were provided as required. Emissions reported are summarized below.

Pollutant	Amount (Tons)
NOx	6.24
PM10, FLTRBLE	2.48
PM10, PRIMARY	10.86
SO2	0.03
VOC	1.33

B) Compliance Determination

Based on a review of this facility's records, observations and discussions, Padnos Manufacturing is not in compliance with applicable air quality rules and regulations. Specifically, for not maintaining the Malfunction Abatement Plan as specified in PTI 182-80C under EUCORECODRYER Special Condition III.2, EUBRIQUETTER Special Condition III.2, and EUTURNINGSCRUSHER Special Condition III.1.

This compliance determination does not take into consideration torch cutting operations since the facility is currently working on an appropriate enclosure.

NAME  DATE 7/7/2023 SUPERVISOR Eric Grinstern
For Heidi Hollenbach