

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

B546568368

FACILITY: DRAYTON IRON AND METAL CO		SRN / ID: B5465
LOCATION: 5229 WILLIAMS LAKE RD, DRAYTON PLNS		DISTRICT: Warren
CITY: DRAYTON PLNS		COUNTY: OAKLAND
CONTACT: Tom J. Spurgeon , Administrative Director		ACTIVITY DATE: 07/10/2023
STAFF: Adam Bognar	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

On July 10, 2022, Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) staff, I, Adam Bognar conducted a scheduled inspection of Drayton Iron & Metal (the “facility”) located at 5229 Williams Lake Rd, Waterford Twp, MI 48329 . The purpose of this inspection was to determine the facility’s compliance status 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 Environment, Great Lakes, and Energy, Air Quality Division (EGLE-AQD) rules; 40 CFR Part 60, Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants (NSPS OOO); and Permit to Install No. 398-75A.

I arrived at Drayton Iron & Metal at around 11 am. I met with Larry Throesch, Manager. I identified myself and stated the purpose of the inspection. Larry gave me a tour of the facility.

Drayton Iron & Metal operates a metal scrapyard and a concrete crusher at this location. At the metal scrapyard, the facility receives metal pieces from various sources, sorts them, cuts/sheer/crushes them to reduce size, then ships them to a foundry that purchases the recycled metal.

Additionally, the facility receives concrete chunks from various demolition/construction projects. These chunks are fed to a concrete crusher that reduces the size of the chunks to uniform size (approximately 4 inch and 1 inch diameter chunks).

The facility also receives extra wet concrete leftover from other projects. This wet concrete is allowed to dry on-site where it is then crushed with a wrecking ball, picked up by a loader, and loaded into the crusher.

In a previous inspection of this facility, I observed torch cutting being performed outdoors. Since the torch cutting is/was performed outdoors with no emission control, torch cutting at Drayton Iron & Metal was not exempt from the AQD Rule 201 requirement to obtain a permit to install. A violation notice was sent to Drayton Iron & Metal on June 19, 2019 seeking compliance with Rule 201.

Rather than apply for a permit to install or cease torch cutting, Drayton Iron & Metal decided to construct an enclosure/filtration system to capture torch cutting emissions. Torch cutting is exempt from the requirement to obtain a permit to install under Rule 285(2)(j) if it does not adversely affect the surrounding area and has 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.

Larry showed me the torch cutting enclosure. The enclosure is a three-sided structure built from shipping containers ("Connex boxes"). The walls are each two containers tall. A heavy-duty tarp is draped over the top of the structure to create a roof. There are several fan inlets located in the back wall of the structure which are designed to draw air from the torch cutting and push it through a filter system. The filter system is constructed from an industrial air conditioning unit with additional filters stuck inside it. The air conditioning unit also has fans that pull air through the fabric filters. The enclosure is relatively large since this facility needs to be able to torch cut large materials such as "I" beams.

Staff at Drayton Iron & Metal demonstrated torch cutting in this enclosure during a previous inspection on August 26, 2020. After this demonstration, I informed Larry that the enclosure is not adequately capturing the torch cutting emissions. I told Larry that I have never seen a dust collector system equipped with fans instead of blowers. Fans are generally not designed to blow against resistance, such as a filter. I also questioned whether the fans would ever be powerful enough to draw torch cutting emissions 10-15 feet upwards.

Larry said he would attempt to improve the structure. He procured a powerful blower to replace the fans in the enclosure; however, the blower proved to be too powerful. The amount of suction created by the new blower nearly blew the doors off the enclosure.

Larry purchased an additional shear for the facility to further reduce the need for torch cutting. The new shear attaches to a backhoe. The other shear, used for smaller items, is located inside the Quonset hut. No emissions are expected from the shearing process.

Larry stated during my previous inspection that Drayton Iron & Metal no longer torch cuts any materials. Larry stated during my previous inspection that all materials are either sheered or broken apart with a large wrecking ball. During that inspection, I observed a large 7,000 lb steel wrecking ball near the torching area. Larry stated during that inspection that he will not torch cut any materials unless the fabric filter/enclosure system is functioning properly.

Also during my previous inspection, I re-iterated to Larry that Drayton Iron & Metal is not allowed to torch cut in that enclosure unless it is capturing all torching smoke and filtering it through a properly designed and operated fabric filter system pursuant to Rule 285(2)(j).

During this inspection, I observed staff at Drayton Iron & Metal torch cutting metal beams in the torch cutting enclosure. None of the blowers/fans were on during this torch cutting. I observed heavy smoke coming out of the torch cutting area and entering the surrounding environment. I explained to Larry that Drayton Iron & Metal is not allowed to torch cut outdoors with no enclosure. I explained that since Drayton Iron & Metal was made fully aware of the EGLE-AQD requirements for torch cutting during previous inspections, this issue may be referred to escalated enforcement. A violation notice was issued to Drayton Iron & Metal for torch cutting outdoors without a Permit to Install.

Permit to Operate No. 398-75A

PTI No. 398-75 was issued in 1988 for a jaw crusher, conveyor belt, screens, and magnetic separators. The original crushing plant was designed to process foundry slag which contained a high amount of iron. Currently this equipment is still operated, but it is now only used as a concrete crusher – no foundry slag is processed. Because this feedstock has changed, I requested that Drayton Iron & Metal update their permit to install. PTI No. 398-75A was issued to this facility on March 3, 2021.

EUPROCESS

This emission unit consists of crushing process equipment including screens, crushers, feeders, conveyers, ect. Emissions from crushing and drop points and controlled using water sprays.

Section I – SC 1: Limits opacity from drop points and transfer points to a six-minute average of 10%. I did not observe any opacity from EUPROCESS during this inspection. The crusher was not operating during my inspection. Larry stated that staff were on their lunch break.

Section II – SC 1: States that the permittee shall not process any asbestos tailing or waste materials containing asbestos in EUPROCESS. Larry stated that no asbestos materials are processed. Only concrete material is crushed. I did not see any evidence of crushed materials other than concrete. Occasionally, a piece of metal or debris makes it into the crusher, but Drayton Iron & Metal does their best to remove any metal/scrap from the concrete prior to crushing. Customers do not want metal in their gravel.

Section II – SC 2: States that the permittee shall not process more than 25,000 tons of material through EUPROCESS per 12-month rolling time period. This facility began operating the crusher under this new permit on June 24th, 2021.

Records of the amount of concrete brought into the facility were made available to me; however, the data was raw and not aggregated into any monthly/annual totals. Additionally, Larry was not sure if Drayton Iron & Metal accounted for concrete which is brought in wet from concrete mix trucks, dried on-site, and loaded into the crusher using loaders. Larry stated that the majority of what they crush is from wet concrete coming into the facility. Larry stated that he believes this material is accounted for, but he does not have any access to the computer where these records are kept. Larry stated that he believes 12-month rolling usage records are kept, but again, he does not know how to access them on the computer.

Larry called Stacey Spurgeon to see if she could come on-site to show us the records. Stacey was not available to come on-site during my inspection. I spoke with Stacey on the phone during my inspection. Stacey stated that she has all of the required records as raw data, but they have not all been aggregated into their spreadsheets yet. I requested that Drayton Iron & Metal provide these records to me by the end of the week (by July 14, 2023).

Stacey sent me records on July 15, 2023 at 10:30 am. These records contain a column which is labeled “Rolling Totals Crushed”; however, the column does not include rolling totals. For example, the facility reported that 15,280 tons was crushed in the 12-month period ending in October 2022 and 16,880 during the 12-month rolling period ending in November 2022 (highest monthly total). 0 tons was reported for the 12-month period ending in December 2022. I am not sure what is going

on here. It appears that Drayton Iron & Metal started a new rolling total at the beginning of each calendar year instead of rolling data over year-over-year. Also, Drayton Iron & Metal wrote "0" for any month where no crushing took place, even if crushing took place in the preceding months. I reached out to Drayton Iron & Metal for clarification and explained how these records need to be kept. Monthly totals were not provided in the records submitted. I did not request daily records, but I did see that a log was kept on-site that appeared to contain records of daily throughput.

A violation notice was sent to Drayton Iron & Metal for failing to maintain monthly and 12-month rolling records of the amount of material processed in EU-PROCESS.

Additionally, a violation notice was sent to Drayton Iron & Metal for exceeding their annual throughput limit on EUPROCESS of 25,000 tons per year (see Section IV – SC 2).

Section III – SC 1: States that the permittee shall not operate any portion of EUPROCESS unless each portion of EUPROCESS meets the specific opacity limit from Appendix A of this permit. EUPROCESS was not operating during my inspection. I did not notice any opacity from EUPROCESS during this inspection.

Section III – SC 2: States that the permittee shall not operate EUPROCESS unless the fugitive dust plan for all plant roadways, the plant yard, all material storage piles, and all material handling operations specified in Appendix B of this permit has been implemented and maintained.

I did not notice any opacity from the storage piles or crushing process. There was not significant track-out onto the road outside the facility exit. According to Larry, the facility grounds are wet three times per day. I observed facility staff wet the grounds after their lunch break.

According to the records I reviewed, no water has been applied to the material storage piles during the period I reviewed (June 2021 through June 2023).

Drayton Iron & Metal noted that the crusher/water sprays are inspected for 2 hours per week and 10 hours monthly. This inspection and associated recordkeeping is required by NSPS OOO and is not included in the conditions of PTI 398-75a.

Records of water/dust suppressant applications to the facility grounds were not maintained in a satisfactory manner. I requested these records during my on-site inspection but nobody was sure where they were kept. After the inspection on July 15, 2023, Stacey provided me with records showing the "Total Monthly Hours Water Suppressant (yard)". There are approximately 30 hours in each column. I informed Stacey that Drayton Iron & Metal needs to keep records of each date/time water is applied to the yard. Monthly hours of operation is not an acceptable method because it does not tell AQD which days water sprays were applied. A violation notice was sent to Drayton Iron & Metal for failing to maintain records of all watering/dust suppressant applications.

Section III – SC 3: States that 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 OOO (NSPS OOO), as they apply to EUPROCESS.

Drayton Iron & Metal must perform Method 9 visible emission readings on EUPROCESS in accordance with NSPS 000. During my previous inspection, and in the inspection prior to that, I explained this to Larry and in an email to the facility owners. During this inspection, Larry informed me that they did get someone certified in Method 9 visible emissions reading; however, Drayton Iron & Metal has not performed this test. A violation notice was sent to the facility for this non-compliance. Drayton Iron & Metal had until December 21, 2021 to perform this test.

I explained to Larry that since this issue has now been addressed in three separate violations, AQD may recommend that Drayton Iron & Metal be referred to escalated enforcement.

Based on my observations, the facility is in compliance with all other requirements of NSPS 000.

Section IV – SC 1: States that the permittee shall not operate any portion of EUPROCESS unless the equipment's specified control device is installed, maintained, and operated in a satisfactory manner as listed in Appendix A. The crushing process was not operating during my inspection, so the water sprays were turned off. There is a water spray before and after the crushing process. In previous inspections, I observed that the water sprays did an adequate job of controlling dust from the crushing process and drop points.

Section IV – SC 2: States that the permittee shall install and maintain a scale on the loader that feeds the crusher which continuously shows the daily throughput rate for the conveyor. There is no scale on the loader at this facility. Drayton Iron & Metal has a scale installed at the entrance of their facility.

During my previous inspection, Larry explained that, to weigh the raw materials, the loader driver weighs the empty loader, picks up a load of raw concrete, then re-weighs the loader. The difference between these two weights is the throughput of the crusher. At the time, I considered this to be an acceptable way for materials to be weighed at this facility although it differs from permit language slightly.

During this inspection, Stacey informed me that they estimate daily throughput based on the number of loads put into the crusher. Stacey stated that the loader has a 3.5 cubic yard bucket, and that bucket is equivalent to approximately 1 ton of material. Based on my research, this is not an accurate estimation of material weight per bucket.

According to Wikipedia, the density of pure concrete is 4045 lbs/cubic yard (~2 tons/yard). According to multiple internet sources, the density of crushed concrete aggregate is somewhere between 2000 lbs/cubic yard and 3000 lbs/cubic yard. The density of crushed aggregate is dependent on average size of the concrete chunks. Since the raw, uncrushed, concrete will generally be very large chunks, it is conceivable that the raw concrete will be less dense than the crushed concrete; nonetheless, Drayton Iron & Metal must use a conservative approach if they are not actually weighing the material.

Drayton Iron & Metal currently estimates daily throughput using a density of 571lbs/cubic yard (2000 lbs/3.5 yard bucket). I told Stacey that this is not an accurate estimation of material weight per bucket. I told Stacey that the lowest density of concrete I would accept is 3000 lbs/cubic yard

because the daily throughput calculations need to be conservative if the material is not actually weighed. A violation notice was sent to Drayton Iron & Metal for failing to track daily material throughput in an acceptable manner.

If a raw material density of 3000lbs/cubic yard was used, Drayton Iron & Metal would exceed their annual throughput limits on EUPROCESS during every 12-month period I reviewed (12-month periods ending between June 2022 and June 2023). Using 3000lbs/cubic yard, annual throughputs would range from 73,458 tons/year (August 2022) to 101,955 tons/year (June 2023)

Even if a raw material density of 1000lbs/cubic yard was used, Drayton Iron & Metal would exceed their annual throughput limits on EUPROCESS during all but one 12-month period I reviewed. Using 1000lbs/cubic yard, annual throughputs would range from 24,486 tons/year (August 2022) to 33,985 tons/year (June 2023).

A violation notice was sent to Drayton Iron & Metal for exceeding their 25,000 tons/year throughput limit required by EUPROCESS Section II – Special Condition 2.

Section V – SC 1: Requires the permittee to evaluate visible emissions from EUPROCESS within 180 days of commencing trial operation. Trial operation commenced on June 24, 2021. During my previous inspection, and in the inspection prior to that, I explained to Drayton Iron & Metal that they will need to have a staff member get a Method 9 certification or have someone with a certification come out to do readings. I emailed the facility links to the two Method 9 certification businesses that I am aware of (Aeromet and Eastern Technical Associates).

Drayton Iron & Metal never completed this visible emission observation. A violation notice will be sent to the facility for this non-compliance.

Section VI – SC 1,2: Specifies recordkeeping requirements for this facility. The facility is required to keep daily and monthly records of the amount of material processed through EUPROCESS. This data must be used to calculate an annual throughput rate based on a 12-month rolling time period. These records were not maintained in a satisfactory manner (see Section II – SC 2). A violation notice was sent to Drayton Iron & Metal for failing to maintain monthly and 12-month rolling records of the amount of material processed through EUPROCESS.

Section VII – SC 1,2: Specifies reporting requirements. Drayton Iron & Metal must notify the AQD within 30 days after the installation of this crusher. This requirement does not apply to this facility because they have operated the same crusher at this site since 1988. The only modification since then has been a change in feed stock that happened in the 1990's.

Section IX – SC 1: States that within 45 days of this permit, the permittee shall label all equipment using the company ID numbers in Appendix A. I verified that the equipment at this facility is labeled appropriately. The facility notified AQD that this equipment was labeled on June 25, 2021.

EUTRUCKTRAFFIC

Section I – SC 1: Limits opacity from EUTRUCKTRAFFIC to 5%. Compliance with this limit must be demonstrated using Test Method 9D. I didn't notice any opacity from the truck traffic. AQD has not received any complaints about this facility since 2019.

Section III – SC 1: States that the permittee shall not operate EUTRUCKTRAFFIC unless the fugitive dust control plan is implemented and maintained. Based on my observations during this inspection, the fugitive dust control plan has been implemented correctly. During a previous inspection, Stacey Spurgeon showed me records indicating that the grounds are wet three times per day. When it rained, the facility wrote "Rain" instead of documenting their normal water applications. It appears that these records are no longer kept in this manner (see Section III – SC 2). A violation notice was sent to Drayton Iron & Metal for failing to maintain records of all watering/dust suppressant applications in a satisfactory manner.

EUSTORAGE

Section I – SC 1: Limits opacity from EUSTORAGE to 5%. Compliance with this limit must be demonstrated using Test Method 9D. I did not notice any opacity from the storage piles during this inspection. The crushing process was not operating during my inspection.

Section III – SC 1: States that the permittee shall not operate EUSTORAGE unless the fugitive dust control plan is implemented and maintained. Based on my observations during this inspection, the fugitive dust control plan has not been implemented and maintained correctly. Larry stated that the storage piles usually only cause dust after a few days without rain. Larry stated that the piles are wetted as needed according to the fugitive dust plan; however, Drayton Iron & Metal did not note any instances of water/dust suppressant applications to the storage piles during the period I reviewed (June 2021 through June 2023). Additionally, the facility did not record all water/dust suppressant additions to the facility grounds. A violation notice was sent to the facility for failing to maintain records of watering/dust suppressant applications to the storage piles, and failing to correctly implement the fugitive dust control plan.

The drop distance between the conveyor belt exit and the gravel pile is minimized as much as possible. The equipment is not designed to go any lower than its current setup. The piles were not recently wetted during my inspection.

I left the facility at around 12 pm.

Compliance Determination

Based on my findings during my inspection and record review, Drayton Iron & Metal is not operating in 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 Environment, Great Lakes, and Energy, Air Quality Division (EGLE-AQD) rules; 40 CFR Part 60, Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants (NSPS OOO); and Permit to Install No. 398-75A.

As a result of this inspection, Drayton Iron & Metal was issued a violation notice for the following reasons:

- Drayton Iron & Metal conducted torch cutting of metal outside with no emissions control, and without a permit to install.
- Drayton Iron & Metal failed to perform a Method 9 visible emissions reading on EUPROCESS within 180 days after the issuance of PTI No. 398-75A. This is a violation of NSPS OOO and PTI No. 398-75A Section V – Special Condition 1.
- Drayton Iron & Metal failed to keep monthly and 12-month rolling records of the amount of material processed.
- Drayton Iron & Metal failed to maintain records of all watering/dust suppressant applications to the facility grounds in a satisfactory manner.
- Drayton Iron & Metal failed to maintain records of all watering/dust suppressant applications to the storage piles in a satisfactory manner.
- Drayton Iron & Metal exceeded their annual throughput limit of 25,000 tons/year in EUPROCESS.

Based on my observations and record review, Drayton Iron & Metal is in compliance with all other applicable AQD requirements.

NAME Adam Bogner

DATE 7/31/2023

SUPERVISOR K. Kelly