

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

N682362654

FACILITY: Fritz Enterprises of Flint		SRN / ID: N6823
LOCATION: 5032 N Dort Hwy, FLINT		DISTRICT: Lansing
CITY: FLINT		COUNTY: GENESEE
CONTACT: U. Sam Amer , Corporate Environmental Manager		ACTIVITY DATE: 04/20/2022
STAFF: Daniel McGeen	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: Unannounced joint inspection by EPA Region 5 Air Enforcement and Compliance Assurance Branch and AQD.		
RESOLVED COMPLAINTS:		

On 4/20/2022, the United States Environmental Protection Agency (EPA) Region 5 Air Enforcement and Compliance Assurance Branch, and the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), conducted an unannounced, scheduled inspection of Fritz Enterprises of Flint. This was done as part of EPA's initiative to inspect facilities in the community of Flint.

Note: *Scheduled* does not mean a pre-arranged inspection, but rather an inspection which AQD committed to in advance, as part of its compliance monitoring strategy with the EPA.

Facility environmental contacts:

- U. Sam Amer; Corporate Environmental Manager; 734-362-3228; amers@fritzinc.com
- Brian Fultz, Plant Manager; fultz@fritzinc.com

EPA Region 5 Air Enforcement and Compliance Assurance Branch contacts:

- Emma Leeds; Environmental Engineer; 312-886-7436; leeds.emma@epa.gov
- Joshua Hufferd, Environmental Scientist; no longer with EPA, as of the date of this report

AQD Lansing District Office contacts:

- Dan McGeen (myself), inspector; 517-648-7547; mcgeend@michigan.gov
- Samantha Davis, inspector; no longer with EGLE, as of the date of this report

Facility description:

This is a metal recycling facility, which specializes in autos and auto-related scrap.

Emission units:

Emission Unit or Flexible Group	Description	Permit to Install No.	Compliance Status
EU-SHREDDER	A scrap metal shredder equipped with a Smart Water Injection System	92-00B	Compliance

EU-ZBOX	"Picker shack," a metal separation process with a cyclone and wet scrubber	92-00B	Noncompliance
FG-SHREDDEROP	EU-SHREDDER, EU-ZBOX, magnetic drum and material handling and storage	92-00B	Noncompliance

* An *emission unit* is any part of a stationary source which emits, or has the potential to emit, an air contaminant.

Flexible Groups:

Flexible Group** ID	Flexible Group Description	Associated Emission Unit IDs
FG-SHREDDEROP	Shredding Operation - Scrap metal shredder to a feed shaker, discharge conveyor, magnetic drum separator, a material separation system with a z-box separation process controlled by a cyclone and wet scrubber system, associated conveyors, material storage, and all associated process activities including but not limited to management of materials from the shredding operations.	EU-SHREDDER; EU-ZBOX

**A *flexible group* is used in a permit to install (PTI) or Renewable Operating Permit (ROP) to combine two or more emission units that have common or identical requirements.

Regulatory overview:

This facility is considered a true minor source. A *major source* has the potential to emit (PTE) of 100 tons per year (TPY) or more, of one of the criteria pollutants. *Criteria pollutants* are those for which a National Ambient Air Quality Standard exists, and include carbon monoxide, nitrogen oxides, sulfur dioxide, volatile organic compounds, lead, particulate matter smaller than 10 microns, and particulate matter smaller than 2.5 microns.

This facility is considered a minor or *area source* for Hazardous Air Pollutants (HAPs), because it is not considered to have a PTE of 10 TPY or more for a single HAP, nor to have a PTE of 25 TPY or more for combined HAPs.

This facility is regulated by Permit to Install (PTI) No. 92-00B. The criteria pollutants of concern are particulate matter, and to a lesser degree, lead. The air toxics of concern are mercury, chromium VI, manganese, cadmium, copper, and nickel.

The original PTI No. 92-00, issued to S & S Metal Processing in 2000, was considered controversial, and both public comment periods and a public hearing were held. An Environmental Justice complaint was filed with the EPA Office of Civil Rights on 6/25/2001, by the Sugar Law Center. On 6/23/2006, the complaint was finalized. The Michigan Department of Environmental Quality (DEQ) was found to have taken the appropriate steps.

The current PTI, No. 92-00B, was issued on 2/15/2011. This permit revision allowed for replacement controls, following an explosion which damaged the scrubber.

Fee status:

This facility is not considered fee-subject, because it is not a major source for criteria pollutants, nor a major source for Hazardous Air Pollutants (HAPs), nor subject to federal New Source Performance Standards, nor it subject to federal Maximum Achievable Control Technology standards.

The facility is not required to submit an annual air emissions report via the Michigan Air Emissions Reporting System (MAERS). Criteria for those facilities which must report to MAERS on an annual basis are identified in *AQD-013: Criteria Pollutant Threshold Levels for the Point Source Emissions Inventory*.

Location:

Fritz Enterprises of Flint is located in a known Environmental Justice (EJ) area, on the north side of Flint. The facility is situated along N. Dort Highway, about 3.5 miles north of I-69, and about 1.1 miles south of the intersection of E. Carpenter Road with N. Dort, as measured by me in Google Maps. It is several hundred feet east of I-475.

The land use is industrial to the immediate north, south, and west. The car storage facility to the immediate north is said to be owned by Fritz Enterprises. There are some single family homes to the east and northeast, at a distance of about 750 feet, as measured by me in Google Maps. A trailer park is about 1,700 feet to the northeast, and another residential area is about 2,500 feet to the east. The nearest residence to the north is about 1,000 feet from the site. The nearest residence to the west is about 1,900 feet. The Flint River is to the east, at a distance of approximately 1,300 feet.

History:

As previously mentioned, under "Regulatory overview," the original PTI No. 92-00, issued to S & S Metal Processing in 2000, was considered controversial. Both public comment periods and a public hearing were held. An EJ complaint was filed with the EPA Office of Civil Rights on 6/25/2001, by the Sugar Law Center. On 6/23/2006, the complaint was finalized. The Michigan Department of Environmental Quality was found to have taken the appropriate steps.

S & S Metals Processing became known as Spooner Metals, LLC, some years ago. Fritz Enterprises, Inc. (FEI) subsequently purchased the site on 11/15/2006, as I understand it. Fritz Enterprises of Flint is a wholly owned subsidiary of FEI, according to their website.

Other than the 2001 EJ complaint and associated documentation, there have been no records of AQD receiving air pollution complaints about this facility, since a 4/9/1997 complaint of a fire at the site. That complaint was primarily concerned with surface water impacts, from water run-off. AQD has not received any complaints, while Fritz Enterprises of Flint has been operating here, i.e. from 11/15/2006 on up.

Prior AQD inspections identified in the Michigan Air Compliance Enforcement System (MACES) database, which dates back to approximately 2007:

- 8/30/2021
- 7/8/2020
- 7/16/2015
- 6/13/2013
- 11/17/2009

4/12/2022 EGLE inspection:

On 4/12/2022, EGLE Materials Management Division (MMD) inspectors Bryan Grochowski and Evin Maguire conducted an inspection of Fritz Enterprises. During their inspection, they observed numerous pieces of paper emitted by the wet scrubber which, along with a cyclone, is the air pollution control device for EU-ZBOX. E. Maguire noted that some of the papers appeared to leave the site. MMD staff also noted brownish opacity from the scrubber stack. A photo and video recording from MMD show a backlit plume of brownish opacity, as well as papers exiting the scrubber stack. Please refer to attached photo No. 1, taken by MMD on 4/12, of papers visible exiting the scrubber exhaust stack, with a faint, backlit plume of brown opacity.

On 4/27/2022, MMD sent a Compliance Communication (CC) to Fritz Enterprises of Flint, to document violations of the Michigan Natural Resources and Environmental Protection Act (NREPA), Part 121, Section 12103(1)(b) for labels which did not provide sufficient detail, and were faded in some cases to the point of being almost illegible. The CC also referred to several other issues, including ones related to air and water. A Return to Compliance letter was sent by MMD to the company on 6/9, after the MMD and Water Resources Division (WRD) concerns were corrected.

Note: The results of the MMD findings on the facility's compliance status with air requirements are discussed later in this report.

Most recent stack testing:

A stack test was required and conducted on 7/5-6/2011. The test results are listed in the table below:

Pollutant	Limit in PTI No. 92-00B	Test results	Results below limit?
PM	0.05 lbs/1,000 lbs of exhaust gases, calculated on a dry gas basis	0.0006 lbs/1,000 lbs of exhaust gas, calculated on a dry gas basis	Yes
PM10	4.5 lbs/hr	0.098 lbs/hr	Yes
Mercury	0.0022 lbs/hr	0.000007 lbs/hr	Yes
Chromium VI	0.00029 lbs/hr	0.000007 lbs/hr	Yes
Lead	0.003 lbs/hr	0.0002 lbs/hr	Yes

Manganese	0.0023 lbs/hr	0.0002 lbs/hr	Yes
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Safety equipment required:

As of the date of the writing of this report, the required personal protective equipment (PPE) required by the company for visiting this site is all of the following:

1. Steel-toe boots
2. Hard hat
3. Eye protection
4. Ear protection
5. Mouth & nose protection (standard surgical masks worn during the COVID pandemic are acceptable)
6. Hand protection ("any type of synthetic material glove, which affords protection from sharp objects for hand protection will be accepted")

Operating schedule:

They are said to run 1 shift per day, from 8:00-4:30, with a break between 12:00-1:00 PM. Guards, however, work 2 shifts, 7 days/week.

Odor evaluation:

Prior to arrival on 4/20/2022, AQD staff met with EPA Region 5 Air Enforcement and Compliance Assurance Branch Environmental Engineer Emma Leeds and Environmental Scientist Joshua Huffered, nearby. We then caravanned northward on N. Dort Highway.

We conducted an odor evaluation. The windows of the State car were rolled down, per normal practice. Weather conditions were sunny and 36 degrees F, with winds out of the southeast at 1 mile per hour.

We attempted to get east and north, i.e. downwind, of Fritz Enterprises. We first drove east on W. Boulevard Drive, until we reached a dead end. We then drove north on N. Dort Highway, and east on Webster Road for about 1,800 feet, before turning around and returning to N. Dort Highway. We then drove south until we turned east on Groveland. We proceeded to a dead end on Groveland. At no time were any odors detected.

Arrival:

We arrived at the site of Fritz Enterprises of Flint, unannounced, at 9:10 AM. We checked in with the security guard, and met with the new Plant Manager, Brian Fultz.

During the introductory meeting, EPA staff explained their goals and objectives, as did AQD.

AQD mentioned the EGLE MMD inspection of 4/12/2022, when papers and some opacity were recorded exiting the wet scrubber exhaust stack. AQD asked B. Fultz where the Z-Box pressure drop gauge and water flow gauge were located, noting that a prior AQD inspector, Brian Culham, mentioned a catwalk as the location, in his 2013 inspection. B. Fultz indicated he was not familiar with these gauges, as he had not been plant manager very long, but he agreed to look for them with us.

EPA asked questions to get an overview of the plant operations. B. Fultz explained that most of their incoming scrap metal is automotive, but occasionally they get an appliance. Contaminants are required to be removed from incoming materials. Sometimes people try to sneak in propane cylinders

in scraploads they bring in to sell, we were told. We were given a copy of a document identifying the company's unacceptable materials policy for incoming scrap, please see attached.

EPA asked if the company keeps an inventory of appliances received. B. Fultz said no inventory was kept, but he would start keeping one.

EPA staff asked about refrigerant removal and recovery. Fritz staff said if appliances are smashed prior to coming onsite, they assume freon has been released, but have no documentation for it. EPA subsequently issued a Finding of Violation (FOV) for violating the regulations for the Protection of Stratospheric Ozone at 40 CFR Part 82, Subpart F.

Collected freon from cars or appliances goes into tanks at their Taylor site, we were told, and Buck's Oil collects oil, antifreeze, oily rags, and used "floor dry" material. These were said to go into 55 gallon drums with locked lids. We were told antifreeze had just been removed from the site.

They do keep an inventory of cars that are brought in, we were informed, which is kept for 5-7 years. Vehicles are brought in mostly from vendors, but occasionally from a peddler, we were told. Yesterday, they were said to have received 6 loads of 10 cars each, but that number can go down, depending on the market. Fritz staff said that paperwork for cars must match, and the title transfer must be done appropriately, or they will reject incoming cars. There is a car storage facility to the north, across the fence line, we were told, but Fritz Enterprises owns both sites.

Per AQD procedure at this time, AQD asked if there were any recent positive confirmed cases of COVID at the site, and was told there had been none.

Inspection:

EU-SHREDDER, PTI 92-00B:

The shredder was not operating right now, it was explained, because yesterday a chain had broken on the shredder. Repairs were reported to be taking place, although the plant would not likely be running until tomorrow, 4/21.

From the original PTI application, the shredder has an electric motor, and the following specifications:

- 80 X 104 Texas shredder
- 2500 horsepower
- 600 rpm
- 4160 volts
- 285 amps

B. Fultz explained the shredder operations, as follows: They run Monday-Friday, 8:00-4:30. The shredder usually runs 4.5-5 hours per day. After cars are run through the shredder, non-automotive scrap is done, to allow the shredder to cool down. He said that it takes more amps to process the cars, which creates more heat. Therefore, when they stage a car on the chute leading into the shredder, they follow it with non-automotive scrap. The Smart Water Injection (SWI) system applies water to suppress particulate emissions. AQD was told it really does not serve to cool the shredder. AQD was told that they never run the shredder without water, even in winter.

AQD was informed that B. Fultz is certified as Method 9 visible emission reader, and takes opacity readings of the scrubber exhaust stack around 1:30-2:00 PM, from the scale house. AQD was also told that this is done on most days, although if results are less than 10% opacity, they do not keep a written record.

While discussing the photo and video recorded by MMD on 4/12/2022, B. Fultz mentioned that automobiles are sometimes brought onsite that peddlers have filled with telephone books or dirt, in order to add weight to the vehicle, and to try to increase the value. The company can reportedly deduct from what they pay a customer, when a load has a large volume of dirt or trash. B. Fultz advised that they flip scrap cars over, to try to remove dirt or trash from the interiors, prior to shredding them.

Although the shredder was not operating, we went into the building serving the shredder, and observed the gauge for amp readings, and a digital display for the shredder.

EU-ZBOX, PTI 92-00B:

On days when the shredder operates, after scrap metal is shredded, a hydrostatic magnet is used to remove metal from the flow of material. I was told some fluff is still entrapped within the metal. This mix of metal and fluff then goes to EU-ZBOX, including the picker shack. The material is said to be spread out, and 2 employees remove non-magnetic materials, such as copper, rubber, rags, and fluff. The Z-Box is described as a Z-shaped, metal structure, which functions to knock heavier particulates out of the air. The air is then exhausted to the cyclone and wet scrubber for EU-ZBOX. The magnetic metal is stockpiled at the east end of the process, in what is called the frag pile.

The fluff materials which were sorted out in the picker shack are then conveyed to a storage pile, to be picked up with a front end loader, and put into the eddy current recirculation (ECR) metal separation system. In the ECR, a high-powered magnet with ceramic tile shield is used to pull out pieces of aluminum from the fluff. These are brokered, and sent offsite. It is my understanding that 15-20% of the fluff is still aluminum, and is called zorba. Zorba mixed with fluff goes offsite to a separator. Fluff material which has been separated from aluminum is stored until it is removed from the site, to be used as daily cover at a landfill.

Per AQD's request, B. Fultz led us up onto the catwalk by the wet scrubber. AQD observed that the pressure drop gauge on the catwalk was missing its needle, and was therefore inoperable. Additionally, the clear glass face of the gauge was very difficult to see through, because of staining or fogging. Please refer to the attached photo No. 2, by AQD. This gauge was said to be for the cyclone, although it appears to have been referenced in B. Culham's 6/13/2013 inspection report as being for the wet scrubber.

The inoperable pressure drop gauge violated PTI 92-00B, EU-ZBOX Special Condition (SC) IV. 1, which requires that the scrubber be installed, maintained, and operated in satisfactory manner. In addition, it violated PTI 92-00B, EU-ZBOX SC VI. 1, which requires the permittee to install, maintain and operate a pressure drop gauge and a liquid flow indicator on the wet scrubber portion of EU-ZBOX. Lastly, it violated MAPC Rule 910, which requires that an air-cleaning device be installed, maintained, and operated in a satisfactory manner.

Back at ground level, B. Fultz showed EPA staff the liquid flow indicator for the wet scrubber which controls EU-ZBOX. As EPA's E. Leeds noted, it was damaged to the point of being inoperable, along with an adjacent gauge. Please see the attached photo 3, by AQD, of the two damaged gauges on water lines. The broken liquid flow indicator violated PTI 92-00B, EU-ZBOX SC IV. 1, and VI. 1, as well as MAPC Rule 910.

There was some confusion on the day of the inspection, as to the two broken gauges on the water lines leading to or from the wet scrubber. One of them, and it was uncertain which, was believed to be the water flow indicator mentioned in the permit. The purpose of the second one was unclear.

AQD was told that when they remove sludge from the wet scrubber, it goes into a nearby box or bin for disposal.

FG-SHEDDEROP:

As previously described, in the ECR system, a high-powered magnet with a ceramic tile shield is used to pull out pieces of aluminum from the fluff. These are brokered, and sent offsite. It is my understanding that 15-20% of the fluff is still aluminum, and is called zorba. Zorba mixed with fluff goes offsite to a separator. Fluff material which has been separated from aluminum is stored until it is removed from the site, to be used as daily cover at a landfill.

We were able to see the ECR system running. There were no visible emissions from any of the following

- the conveyor (with its own magnet) feeding into the ECR magnet
- a bin of zorba (15-20% aluminum)
- the conveyor drop off point into the zorba bin
- the conveyor drop off point for fluff to go to a landfill

We discussed the company's proposal to re-run some of the fluff material that has been through the ECR system previously. This would be put through the ECR a second time to remove more steel. AQD indicated we would follow up to see if a permit revision would be needed to process this.

We saw that there was a very large volume of fluff materials onsite, more than could be stored in the 3-sided bunkers. An EPA photo documented the fluff materials which were stored outside of them. This is a violation of PTI 92-00B, FG-SHREDDEROP SC III.6, which requires that the permittee shall store all non-ferrous, non-metal, and waste materials (i.e., fluff) generated by FG-SHREDDEROP in 3-sided bunkers.

AQD asked if piles of fluff were ever watered in summer, for dust control. AQD was informed by the company staff that this would be illegal, and they would have to let water drain off trucks, if they were loaded with fluff. The meaning of this was unclear. Follow up by AQD is needed, as PTI 92-00B, FGSHREDDEROP SC III. 11 requires that the permittee prevent fires from starting in the pile of non-metal and automotive shredder residue (e.g., fluff) through regular and frequent applications of water as needed. Also, PTI 92-00B, Appendix A, condition IV.b requires the watering of storage piles on an as needed basis, in order to meet an opacity limit of 5%, as determined by Method 9D.

Torch cutting: MAPC Rule 285(2)(j):

Fritz staff indicated they do a little bit of torch cutting on occasion, maybe two or three times per month, which I had not previously been aware of.

MAPC Rule 285(2)(j) exempts the following from the requirement of MAPC Rule 201 to obtain a PTI:

- (j) Portable torch cutting equipment that does not cause a nuisance or adversely impact surrounding areas and is used for either of the following:
- (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.

Miscellaneous:

They have a crusher onsite, but don't use it, AQD was told. They use their permitted shredder. AQD asked about balers, but was told they do not have one.

Compliance check with the special conditions of PTI No. 92-00B:

EU-SHREDDER I: EMISSION LIMITS

- Special Conditions (SC) 1-9 are emission limits which would require a stack test to check. *Please refer to 7/5-62011 stack test, discussed earlier in this activity report.* Compliance status: Compliance.
- SC 10 limits opacity to a single 6-minute average of 10% opacity, except for uncombined water vapor. *There was 0% opacity, however, the shredder was not running.* Compliance status: Compliance.

EU-SHREDDER II. MATERIAL LIMITS

- SC 1 prohibits processing more than 60 TPH, 750 TPD, and 195,000 tons per 12-month rolling time period through the shredder: Please see attached records, which were emailed to EPA and AQD on 4/28/2022.
 - *In January, February, and March of 2022, hourly production by monthly average was listed as 41.73, 40.06, and 41.32 TPH, respectively, below the 60 TPH maximum. Compliance status: Compliance.*
 - *In January, February, and March of 2022, tons produced per day were averaged by month as 182.06, 186.30, and 206.07, respectively, below the 750 TPD maximum. Compliance status: Compliance.*
 - *For January, February, and March 2022, tons per 12-month rolling time period were 46,243, 44,432, and 43,324 TPY, respectively. Compliance status: Compliance.*

EU-SHREDDER III. PROCESS/OPERATIONAL RESTRICTIONS:

- NA

EU-SHREDDER IV. DESIGN PARAMETERS:

- SC 1 prohibits the permittee from operating the shredder unless the Smart Water Injection (SWI) system is operating properly. *The shredder was not operating today. Compliance status: Compliance.*

EU-SHREDDER V. TESTING/SAMPLING:

- SC 1 requires verification of PM, PM10, chromium VI, lead, manganese, and mercury emission rates at maximum operating conditions from EU-SHREDDER, by testing. *Testing was done on 7/5-6/2011, with all results within the permitted limits. Compliance status: Compliance.*

EU-SHREDDER VI. MONITORING/RECORDKEEPING:

- SC 1 requires all required records be kept in a format acceptable to the AQD District Supervisor and made available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified. *The records for the shredder were kept in an acceptable format. The records for January-March 2022 were received on 4/28/2022 by EPA and AQD, pursuant to the 4/20 inspection. The format was acceptable, although it is not known if the records would have been available had they been requested on 4/15. Compliance status: Compliance.*
- SC 2 requires the permittee to install, calibrate, maintain and operate in a satisfactory manner devices to monitor the water injection rate and the shredder motor current on a continuous basis for the Smart Water Injection System on EU-SHREDDER. Compliance status: Compliance.
- SC 3 requires the permittee to record (when operating) and keep, in a satisfactory manner, records of the water injection rate and the shredder motor current from the Smart Water Injection System on EU-SHREDDER. The permittee shall keep all records on file and make them available to the Department upon request. *On 4/28/2022, EPA and AQD received records documenting water injection rate for the SWI system and shredder motor current amps, please see attached. Compliance status: Compliance.*

EU-SHREDDER VII. REPORTING:

- SC 1 requires that within 30 days after completion of the installation, construction, reconstruction, relocation, or modification of EU-SHREDDER authorized by this Permit to Install, the permittee or the authorized agent pursuant to MAPC Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. *AQD was not able to verify compliance, as AQD Lansing District hardcopy records prior to 2020 in the plant correspondence file cannot be located in the Lansing District Office (LDO), and efforts to retrieve them from the State records center were unsuccessful. There are no violations in the MACES database system for failing to meet this requirement, however. Compliance status: Unknown, but noncompliance is not suspected.*

EU-SHREDDER VII. STACK/VENT RESTRICTIONS:

- NA

EU-SHREDDER IX. OTHER REQUIREMENTS:

- NA

EU-ZBOX I. EMISSION LIMITS

- SC 1 sets a PM limit of 0.05 lb/1,000 lb of exhaust gases on a dry gas basis. *This would require stack testing to determine compliance. Compliance status: Unknown.*
- SC 2 sets a PM limit of 1.6 lbs/hr. *This would require stack tack testing to determine compliance. Compliance status: Unknown.*
- SC 3 limits visible emissions from EU-ZBOX to a 6-minute average of no more than 10% opacity. *There were no visible emissions, but, EU-ZBOX was not running. Compliance status: Compliance.*

EU-ZBOX II. MATERIAL LIMITS:

- NA

EU-ZBOX III. PROCESS/OPERATIONAL RESTRICTIONS:

- NA

EU-ZBOX IV. DESIGN/EQUIPMENT PARAMETERS:

- SC 1 requires that the permittee shall not operate EU-ZBOX unless the cyclone and wet scrubber are installed, maintained, and operated in a satisfactory manner. *AQD observed that the pressure drop gauge on the catwalk was missing a needle and was inoperable, per the attached photo No. 2, by AQD. This pressure drop gauge was said to be for the cyclone, although it appears to have been referenced in B. Culham's 6/13/2013 inspection report as being for the wet scrubber. In addition, EPA noted that the liquid flow indicator for the wet scrubber which controls EU-ZBOX was damaged to the point of being inoperable Please see the attached photo No. 3, by AQD. Compliance status: Noncompliance.*

EU-ZBOX V. TESTING/SAMPLING:

- NA

EU-ZBOX VI. MONITORING/RECORDKEEPING:

- SC 1 requires the permittee to install, calibrate, maintain and operate a pressure drop gauge and a liquid flow indicator on the wet scrubber portion of EU-ZBOX. *As discussed above, the pressure drop gauge and liquid flow indicator were damaged to the point of being inoperable. Please see the attached photos Nos. 2 and 3, by AQD. Compliance status: Noncompliance.*

EU-ZBOX VII. REPORTING:

- NA

EU-ZBOX VIII. STACK RESTRICTIONS:

- SC 1 requires maximum exhaust diameter of 53.3 inches, and a minimum height above ground level of 70.5 feet. *The company's S. Amer emailed AQD on 8/26/2022, with a copy of the 11/17/2009 inspection report by AQD's B. Culham, which referenced a 6/9/2009 letter from the company documenting that the stack height was 71.0 feet. Compliance status: Compliance.*

EU-ZBOX IX. OTHER REQUIREMENTS

- NA

FG-SHREDDEROP:**FG-SHREDDEROP SC I. EMISSION LIMITS**

- SC 1 limits visible emissions from transfer points and conveyors to a 6-minute average of no more than 10% opacity. *There were no visible emissions. However, the conveyors were not operating, at this time. Compliance status: Compliance.*

FG-SHREDDEROP SC II. MATERIAL LIMITS:

- NA

FG-SHREDDEROP SC III. PROCESS/OPERATIONAL RESTRICTIONS:

- SC 1 requires that the permittee shall remove and properly dispose of fluids from materials to be shredded as specified in the plan in SC III.8. Materials include but are not limited to vehicles, appliances, and industrial machinery (or inspect and/or document that removal has been performed). Fluids shall include, at a minimum, gasoline, motor oil, antifreeze, transmission oil, brake oil, power steering fluid, hydraulic fluid, and differential fluid. *As described by the company, this condition has been met, but I did not personally confirm the removal and proper disposal. MMD's 4/12/2022 inspection identified two insufficiently detailed and almost illegibly faded labels on what appeared to be totes of gasoline, which were cited as a violation of NREPA's Part 121, but there was no finding that this material was disposed of improperly. Compliance status: Compliance.*
- SC 2 requires that the permittee shall remove and properly dispose of freon or other chlorofluorocarbons/halogenated chlorofluorocarbons (CFCs/HCFCs) from materials to be shredded as specified in the plan in SC III.8. Materials include but are not limited to air conditioning units in vehicles, appliances, and industrial machinery (or inspect and/or document that removal has been performed). *AQD did not focus on this during the inspection, but EPA staff subsequently determined that the facility did not properly address refrigerants, and violated federal requirements of 40 CFR, Part 82, Subpart F. Compliance status: Unknown, at time of inspection.*
- SC 3 requires that the permittee shall remove and properly dispose of mercury-containing devices from materials to be shredded as specified in the plan in SC III.8. Materials include but are not limited to vehicles, appliances, and industrial machinery (or inspect and/or document that removal has been performed). *As described by the company, they appeared to be removing contaminants. AQD staff did not personally verify this during this inspection, and will follow up on it during a future inspection. Compliance status: Compliance.*
- SC 4 requires the permittee to not process any asbestos tailing or waste materials containing asbestos in FG-SHREDDEROP pursuant to the National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 61, Subpart M. *AQD did not focus on this during this inspection and will follow up on it during a future inspection. Compliance status: Unknown.*
- SC 5 states that the permittee shall not process batteries, and gas tanks shall only be processed if they are flattened or punctured. *As described by the company, they appeared to comply, but I did not personally verify this, during the inspection. Compliance status: Compliance.*
- SC 6 requires the permittee to store all non-ferrous, non-metal, and waste materials (i.e., fluff) generated by FG-SHREDDEROP in 3-sided bunkers, the total volume of which shall not exceed 3,300 cubic yards. *Today, there were large volumes of fluff material stored outside of the 3-sided bunkers. Compliance status: Noncompliance.*
- SC 7 requires that all fluids, non-metal, and waste materials generated by the FG-SHREDDEROP shall be contained and disposed of or recycled in an acceptable manner in compliance with all applicable state and federal rules and regulations. *As stated by the company during the inspection, they were removing contaminants from incoming scrap as required. However, the 4/12/2022 observation by MMD of waste papers leaving the wet scrubber also demonstrates that waste materials were not being contained and disposed of in an acceptable manner. Compliance status: Noncompliance.*
- SC 8 requires that prior to commencement of operations, the permittee shall submit to the AQD District Supervisor an acceptable written plan demonstrating compliance with SCs III.1, III.2, III.3, III.4, and III.5. *The written plan was not maintained, as the plan identified "Excessive Trash" being unacceptable in received items to be processed, yet a large quantity of paper entered the shredder on 4/12/2022 and exited the wet scrubber stack, as documented by MMD. Compliance status: Noncompliance.*
- SC 9 requires that the permittee not operate FG-SHREDDEROP unless a malfunction abatement plan (MAP) as described in Rule 911(2), is implemented and maintained. The MAP shall, at a minimum, specify the following:

- a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement. *AQD has requested an electronic copy of the MAP from the company. Compliance status: Unknown.*
- b. An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures. *AQD has requested an electronic copy of the MAP from the company. Compliance status: Unknown.*
- c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits. *AQD has requested an electronic copy of the MAP from the company. Compliance status: Unknown.*
- It should be noted that there is no SC 10 under FG-SHREDDEROP, but there is a paragraph which reads as follows: "If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits." *AQD was not aware of any new equipment that had been added, as of the time of the 4/20/2022 inspection. Compliance status: Compliance.*
- SC 11 states that the permittee shall prevent fires from starting in the pile of non-metal and automotive shredder residue (e.g., fluff) through regular and frequent applications of water as needed. *During the inspection, AQD was told by B. Fultz that it would be illegal to add water to piles, and they would have to let water drain from trucks, after loading them with fluff. The meaning of this was unclear. Follow up by AQD is needed. Water was not being added today, although at this time, there were no fires starting. Compliance status: Unknown.*
- SC 12 states that the permittee shall not operate FG-SHREDDEROP unless the program for continuous fugitive emissions control for all plant roadways, the plant yard, all material storage piles, and all material handling operations specified in APPENDIX A has been implemented and is maintained. *My impression today was that water is not added to the fluff storage piles, per discussion with B. Fultz, as described above. Condition IV.b in APPENDIX A requires that water be added on an as needed basis, in order to comply with an opacity limit of 5%. Today, there was no need for water to be added, as opacity was 0%, but it is unknown if the company is able to comply with the 5% opacity limit, in the absence of water applications, at other times of the year. Compliance status: Unknown.*

IV. DESIGN/EQUIPMENT PARAMETERS

- SC 1 states that the permittee shall not operate FG-SHREDDEROP unless the conveyor(s), which carries the dry non-metal and automotive shredder residue, is covered and a chute at the discharge end of the conveyor is in place. *AQD was informed that a sock is used at the end of a conveyor belt to reduce the likelihood of fugitive dust from fluff. Compliance status: Compliance.*

V. TESTING/SAMPLING

- NA

VI. MONITORING/RECORDKEEPING

- SC 1 requires that the permittee complete all required records in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. *All records received were in an acceptable format, but it is not known if they were completed by the 15th day of the calendar month, for the previous calendar month. Compliance status: Compliance.*
- SC 2 requires that the permittee shall keep, in a satisfactory manner, records of material throughput on an hourly, daily, monthly, and 12-month rolling time period as determined at the end of each calendar month. All records shall be kept on file at the facility and made available to the Department upon

request. *Records were being kept in an acceptable manner of throughput on an hourly, daily, month, and 12-month rolling basis. Compliance status: Compliance.*

VII. REPORTING

- NA

VIII. STACK/VENT RESTRICTIONS:

- NA

IX. OTHER REQUIREMENTS:

- NA

APPENDIX A

Fugitive Dust Control Plan

I. Plant

- This condition requires that the drop distance at each transfer point throughout the plant be reduced to the minimum the equipment can achieve. *AQD did not focus on this during this inspection, but will during a future inspection. Compliance status: Unknown.*

II. Truck Traffic

- This condition requires on-site vehicles to be loaded to prevent their contents from dropping, leaking, blowing or otherwise escaping. This shall be accomplished by loading so that no part of the load shall come in contact within six inches of the top of any sideboard, side panel or tailgate, otherwise, the truck shall be tarped. *AQD did not witness any trucks being loaded during this inspection. Compliance status: Unknown.*

III. Site Roadways and the Plant Yard

- Condition III.a requires that dust on the site roadways and the plant yard be controlled by applications of water, calcium chloride or other acceptable and approved fugitive dust control compounds. Applications of dust suppressants shall be done as often as necessary to meet an opacity limit of five percent as determined by reference test method 9D. *The company has a water truck for the site, AQD was informed. No fugitive dust was observed today, but there had been recent precipitation. Compliance status: Compliance.*
- Condition III.b requires that all paved roadways/plant yard shall be swept, as needed, between applications of dust suppressants. *The company appears to be sweeping paved areas, such as their parking lot and entrance/exit to the site. They have their own wet sweeper, AQD was informed. Compliance status: Compliance.*
- Condition III.c requires a record of all applications of dust suppressants, and roadway and the plant yard sweepings shall be kept on file for the most recent five-year period and be made available to the AQD upon request. *This has been done by the company, as demonstrated by records received by AQD for the 8/30/2021 inspection here by AQD. Compliance status: Compliance.*

IV. Storage Piles

- Condition IV.a states that stockpiling of all nonmetallic materials shall be performed to minimize drop distance and control potential dust problems. *AQD did not examine conveyors to see if their heights were adjustable, and will follow up during the next inspection. Compliance status: Unknown.*
- Condition IV.b requires that stockpiles shall be watered on an as needed basis in order to meet an opacity limit of five percent as determined by reference test method 9D. Equipment to apply water or dust suppressant shall be available at the site, or on call for use at the site, within a given operating day. *As described earlier in this report, the company does not appear to be adding water to storage*

piles of fluff, for reasons that were not fully understood by AQD. Follow up is needed. Today, there was no opacity, but it is not clear if compliance could be achieved on other days without use of water or other dust suppressant. Compliance status: Unknown.

- Condition IV.c requires that a record of all watering shall be kept on file for the most recent five-year period and be made available to the AQD upon request. *The company has done this, as demonstrated by the records received by AQD for the 8/30/2021 inspection here by AQD. Compliance status: Compliance.*

V. AQD/MDEQ Inspection

- The provisions and procedures of this plan are subject to adjustment by written notification from the AQD, if following an inspection, the AQD finds the fugitive dust requirements and/or the permitted opacity limits are not being met. *No fugitive dust was seen onsite today. Compliance status: Compliance.*

End of compliance check with permit special conditions.

EPA compliance issues:

EPA subsequently issued a FOV for violating the regulations for the Protection of Stratospheric Ozone under 40 CFR Part 82, Subpart F.

EGLE AQD compliance issues:

1. The waste papers landing offsite were sufficient to constitute a violation of Rule 901(b) of the administrative rules promulgated under Act 451, which prohibits unreasonable interference with the comfortable enjoyment of life and property.
2. The large number of papers passing through the scrubber uncontrolled also indicate a violation of Rule 910 of the administrative rules promulgated under Act 451, which requires that an air-cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the administrative rules and existing law.
3. The April 12, 2022, observation of waste papers leaving the wet scrubber also demonstrates that waste materials were not being contained and disposed of in an acceptable manner. This is a violation of PTI No. 92-00B, FG-SHREDDEROP, SC III.7, which requires in part that all waste materials generated by FG-SHREDDEROP shall be contained and disposed of or recycled in an acceptable manner in compliance with all applicable state and federal rules and regulations.
4. The written plan demonstrating compliance with SCs III.1 through III.5 was not maintained, as plan identifies "Excessive Trash" being unacceptable in received items to be processed, yet a large quantity of paper entered the shredder on April 12, 2022. This violated PTI No. 92-00B, FGSHREDDEROP, SC III.8.
5. During the April 20, 2022, joint inspection by EPA and AQD, it was observed that the pressure drop gauge and liquid flow indicator for the wet scrubber which controls EU-ZBOX were damaged to the point of being inoperable, per the attached photos. This is a violation of PTI No. 92-00B, EU-ZBOX SC IV.1, which requires that the wet scrubber be installed, maintained, and operated in a satisfactory manner, as well as a violation of EU-ZBOX SC VI.1, which requires the permittee to install, maintain and operate a pressure drop gauge and a liquid flow indicator on the wet scrubber portion of EU-ZBOX.
6. The above issue is also a violation of Rule 910, which, as previously noted, requires that an air-cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the administrative rules and existing law.
7. Lastly, on April 20, 2022, it was noted that some fluff materials were not stored in 3- sided bunkers. This is a violation of PTI No. 92-00B, FG-SHREDDEROP SC III.6, which requires that the permittee shall store all non-ferrous, non-metal, and waste materials (i.e., fluff) generated by FG-SHREDDEROP in 3-sided bunkers.

Conclusion:

There were several instances of noncompliance identified with PTI No. 92-00B, as well as two instances of noncompliance with MAPC Rule 910. A Violation Notice was sent by AQD on 8/29/2022.



Image 1(1) : 4/12/2022 MMD photo of papers and backlit brown opacity from scrubber stack.



Image 2(2) : Inoperable pressure drop gauge for cyclone and/or wet scrubber.



Image 3(3) : Broken water flow indicator and another broken gauge, the purpose of which was unknown.

NAME 

DATE 3/29/2023

SUPERVISOR 