

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

B324069105

FACILITY: FRITZ ENTERPRISES INC		SRN / ID: B3240
LOCATION: 23550 PENNSYLVANIA RD, TAYLOR		DISTRICT: Detroit
CITY: TAYLOR		COUNTY: WAYNE
CONTACT: Sam Amer , Environmental Engineer		ACTIVITY DATE: 09/21/2023
STAFF: Jonathan Lamb	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled inspection, FY 2023		
RESOLVED COMPLAINTS:		

INSPECTED BY: Jonathan Lamb, EGLE-AQD

PERSONNEL PRESENT: Sam Amer, Environmental Manager, FEI; Tony Cox, Plant Manager, FEI Taylor facility

FACILITY PHONE NUMBER: (734) 283-7857

CONTACT PHONE NUMBER: Sam Amer, (734) 362-3200

FACILITY FAX NUMBER: (734) 283-6810

FACILITY WEBSITE: www.fritzinc.om

FACILITY BACKGROUND:

Fritz Enterprises, Inc. (FEI) is a metal recycling/reclaiming company based in Trenton, Michigan, with facilities in Michigan, Alabama, and Indiana. At its Taylor facility, FEI operates an automobile and miscellaneous metal shredding process located on a 30-acre parcel of property and has operated at this location since the early 1970s.

The facility normally operates 7:00 AM to 3:00 PM, Monday through Friday, with occasional weekends. There are around 20 employees at this site.

COMPLAINT/COMPLIANCE HISTORY:

There has not been a history of complaints associated with this facility.

PROCESS DESCRIPTION AND EQUIPMENT:

FEI Taylor processes scrap automobiles, appliances, and other miscellaneous metal for use as a recycled raw material at other facilities, mainly steel mills. The facility receives most of its scrap from commercial or industrial sources but will also buy scrap appliances from the general public. The facility also receives material from FEI's Detroit scrap yard. Approximately 75% of the scrap accepted comes from automobiles, which are drained of all fluids prior to shredding. The facility no longer accepts appliances with refrigerants, such as refrigerators and air conditioners.

Processing of the automobiles and other materials is done through a hammer mill shredder. Scrap automobiles are placed on an inclined conveyor which carries the cars up to the hammer mill, which pulverizes the materials into "fist-sized" pieces. Water sprays are used on the incline conveyor and hammer mill to control fugitive particulate emissions; this also creates steam emissions from the hammer mill. Once the material passes through the hammer mill, the shredded pieces are then screened through grates with 4"x6" openings, which allow the material to drop onto another conveyor which carries the material through two drum magnets to separate the ferrous material from the non-ferrous material. The screening grates are replaced approximately every six months due to wear.

The ferrous material is conveyed to the "Super Z Box", which is the first step of the cyclone system, which helps break up the materials that are clumped together, including non-ferrous materials which may have been stuck on the metal. Approximately 65-70% of the shredded material goes through the Super Z Box. After passing through the Super Z Box, the material is dropped into the picking station, where non-ferrous materials (such as rubber and plastic) are removed from the ferrous material. The ferrous material is then loaded onto

the frag stacker conveyor and dropped into piles, where they are stored until loaded into haulers to take to customers, primarily steel mills, including Cleveland-Cliffs Steel, US Steel, Gerdau Steel, and Delta Steel.

The non-ferrous material separated by the drum magnets is diverted to a conveyor which heads west, passing through an eddy current magnet sorting system to remove aluminum. The remaining non-ferrous material, consisting of some aluminum and copper in addition to non-metal materials like rubber, plastic, and other materials designated as “auto fluff”, are stored in a three-sided enclosure before being transported to Huron Valley Steel (also owned by FEI) in Belleville, where it is further processed to remove metals. The remaining auto fluff material is sent to landfill (currently, Carleton Farms) for use as daily cover.

There are two mobile shears on site for cutting large pieces of metal, if necessary; only one shear is currently operational.

- There is one 10,000-gallon underground tank and 1,000-gallon above ground tank used for the storage/dispensing of diesel fuel and one 1,000 gallon above-ground tank used for the storage/dispensing of gasoline. These tanks are used to fuel vehicles and equipment on site. and are exempt per R.284(2)(g)(ii).
- There are two above-ground 500-gallon tanks, one used to store reclaimed fluids and one for reclaimed fuel. These tanks are exempt per R.284(2)(i).

The other permitted equipment at the facility is for two stationary diesel engines. These engines were grandfathered but the company received a permit to limit their potential NOx emissions below the major source threshold, allowing the facility to opt out of Title V permitting requirements. These engines ceased operation approximately 15 years ago; one engine has been removed from the site, the other has been disconnected and put into storage on site.

APPLICABLE RULES/ PERMIT CONDITIONS:

FEI Taylor is considered a synthetic minor source operating under two active Wayne County permits:

- Wayne County Permit Nos. C-9509 and C-9510, issued December 4, 1991, for installation of a Super Z box and cyclone separator;
- Wayne County Permit Nos. C-11358 and C-11359, issued May 8, 1997, for two existing stationary diesel engines to limit emission potential. This permit set NOx limits below the major source threshold, allowing the facility to opt out of Title V permitting requirements.

Records from January 2022 through August 2023 were reviewed in determining compliance. Copies any records obtained during the inspection can be found in the facility file.

Wayne County Permit Nos. C-9509 and C-9510, Special Conditions:

16. IN COMPLIANCE. Particulate emissions from the “Super Z Box” controlled by a cyclone separator does not exceed 0.009 grain per dry standard cubic foot, 1.16 pounds per hour, or 1.81 tons per year. Based on results of stack testing performed on May 6, 1993, the emission rates from the cyclone stack were 0.0011 grains per dry standard cubic foot and 0.204 pounds per hour. The facility reported 0.027 tons of particulate emissions in 2022.

17. In COMPLIANCE. Visible emissions from the cyclone separator do not exceed 10%, 6-minute average. During the inspections, no visible emissions were observed from the cyclone stack.

18. There is no Special Condition 18.

19. IN COMPLIANCE. Super Z Box and cyclone separator is a combined unit and is installed and operated properly.

20. IN COMPLIANCE. Solid waste materials generated by the Super Z Box and cyclone separator are sent to a landfill for disposal. Any fluids (oil, antifreeze, transmission fluid, etc.) collected from the automobiles prior to shredding are handled by Buck’s Oil for recycling or disposal.

21. IN COMPLIANCE. Facility implements a fugitive dust plan for the site. A water truck is used multiple times per day on non-paved areas during dry conditions, and a wet sweeper is used daily on paved areas,

including onto Pennsylvania road if there is any sign of track out. Daily records were reviewed during the inspection and no fugitive dust issues were noted during either site visit.

22. IN COMPLIANCE. The Super Z Box process weight rate does not exceed 100 long tons (224,000 pounds) per hour. Records are maintained to demonstrate compliance. The highest hourly throughput rate, based on monthly average, was 79.5 tons per hour in October 2022.

23. IN COMPLIANCE. Stack dimensions from the cyclone separator appear to meet permit requirements of minimum height of 53 feet and maximum stack dimensions of 37 inches by 23 inches.

24. IN COMPLIANCE. Visible emissions from the paved and unpaved areas and material handling piles are maintained below 5% opacity. During the inspection, I did not observe opacity exceeding 5% from these areas.

25. IN COMPLIANCE. Super Z Box does not operate more than 10 hours per day or 3,120 hours per year. Hours of operation at the facility are 7:00 AM to 3:00 PM, so the shredder operates within that 10-hour time frame. Based on records, the shredder usually operates between 4 to 6 hours per day. Highest monthly average was 6.05 hours per day for the month of November 2022. Annual hours of operation were 885 hours in 2022 and 624 hours from January - August 2023.

26. IN COMPLIANCE. AQD does not have a copy of the original permit application, but there does not appear to be any changes in the materials processed in the Super Z Box than what was originally permitted.

27. IN COMPLIANCE. There have not been any complaints nor AQD staff observations of fallout or excess opacity which would require the facility to submit an additional abatement plan.

28. IN COMPLIANCE. Particulate emissions testing was performed on May 6, 1993, by Swanson Environmental. Results are found in the report dated May 17, 1993.

Wayne County Permit Nos. C-11358 and C-11359:

These engines are no longer in operation; therefore, this permit was not evaluated. One engine is no longer on site, while the other is disconnected and in storage in the maintenance building.

FINAL COMPLIANCE DETERMINATION:

At the time of inspection, Fritz Enterprises, Inc. Taylor facility was determined to be in substantial compliance with Wayne County Permits C-9509 and C-9510, and other application State and federal regulations.

Sam Amer of FEI has indicated that the company intends to submit a request to void Wayne County Permits C-11358 and C-11359 for two stationary diesel engines since these emission units are no longer in operation. Once voided, the facility will be considered a minor source.

NAME 

DATE 8-9-24

SUPERVISOR JK