

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

N127161259

FACILITY: FIBER CHAR CORP		SRN / ID: N1271
LOCATION: 3336 PIPER RD, ALPENA		DISTRICT: Gaylord
CITY: ALPENA		COUNTY: ALPENA
CONTACT: Ned Goodburne , Plant Engineer		ACTIVITY DATE: 12/21/2021
STAFF: Sharon LeBlanc	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: FY2022 Scheduled site inspection- No compliance issues were noted at the time of the site inspection. Report includes summary of onsite records reviewed.sgl		
RESOLVED COMPLAINTS:		

INTRODUCTION

On Monday, December 21, 2021, AQD District Staff conducted a scheduled site inspection of the Fiber Char Corporation Facility located at 3336 Piper Road, Alpena, Michigan (N1271). The facility produces finished and raw wood moldings for frames, as well as other millwork products. The referenced facility operates under Permit to Install (PTI) numbers 354-88 (wood fired boiler) and 268-88A (paint spray booths).

Staff met with Mr. Ned Goodburne, Plant Engineer, who answered questions and provided a walkthrough of the facility.

The last site inspection was conducted on March 1, 2018 and September 20, 2012, compliance issues were noted at the time of the 2012 inspection included failure to track particulate emissions of the wood-fired boiler.

FACILITY

The FiberChar Corporation has operated at their present location of 3336 Piper Road, Alpena, Michigan (N1271) since 1978, and at one time shared the space with Timm Construction, who though still on the business sign has since moved to another location. The unfenced and ungated facility is in a wooded area, with residential neighbors along Piper Road.

A review of historical aerials readily available indicate that prior to 1995, three buildings existed onsite. These buildings consisted of the mill or production building (northern), the finish building (midway on western property line) and the warehouse (SW corner of the property). The original mill/production building burned down in approximately 1994 and was replaced with the present mill/production building which has since added a 10,000 square foot addition to the northside. In addition, the warehouse footprint has been extended in recent years. The company website reports a 40,000 square foot facility.

The facility produces architectural millwork, picture frame moldings and wood components. Wood particulate/ dust is collected by the facility's dust collection system and bag-house and is used as fuel in the facilities wood-fired boiler. The boiler provides heat to the production area and offices. Raw wood is processed using wood saws and lathes. At the time of the inspection approximately 10 workstations with dust collection systems were present. Staining and coating activities if required are completed in the facilities two spray booths. Ash generated by the wood-fired boiler and waste coatings are containerized onsite and disposed of by contracted disposal companies.

The Facility is located on the south end of the City of Alpena, Michigan. Approximately 0.66 miles south of the intersection of Werth Road and Piper Roads. The property is bounded to the west by railway property and beyond that State land. In the other directions the facility is bounded by residential properties. District Files indicate that issues with neighbors regarding odors and noise occurred following replacement of the burned production building. The Facility in response switched to a lower VOC finish for their product.

Weather conditions at the time of the inspection were just at freezing, with completely overcast skies and little to no wind. As the facility was operating upon arrival.

EQUIPMENT

Permitted equipment on site include:

- One Wood-fired Boiler (EU-BOILER)

In 1988, the Facility was issued a PTI (354-88) for a Kewanee saw dust-fired boiler. The referenced unit was rated at 2.01 Million BTU and replaced a smaller boiler onsite. The EU is used to generate heat and is operated predominantly during the winter months. Feed rates into the unit are reported by the facility to vary based on type of wood being fired. They further indicated that they tried to keep various types of sawdust in stock to be able to feed the boiler a mix of woods and operate at a consistent rate to get the heat required for the season.

At the time of the December 21, 2021, site inspection, three sawdust trailers were onsite to store waste wood materials (saw dust) for disposal or future use as boiler fuel. The control panel contains an hour meter (82590.1 hrs), and a temperature set point (162 degrees F).

A review of the permit application indicate that total particulate was limited to 1.1 pounds per hour (pph) based on Rule 331.

- Two paint spray booths

The facility utilizes two paint spray booths (EU-P-01 and EU-P-02) for application of stains and lacquers. The first of the two units and a curing oven was permitted in August 1988 (268-88). The curing oven was reported to be lost in the 1994 fire. The second spray booth was permitted and added in 2008. (266-88A) The units at the time of permitting were housed in a smaller building located midway along the western property boundary. This building is presently being rented by "Well Connect", a small company that assembles heat pumps. The company is reported to be relocating to a new location in Spring of 2022.

Each booth consists of four automatic HVLP applicators and PLC monitors to apply the coatings and use dry filters to control particulate emissions from overspray. At the time of the March 1, 2018, inspection, only one of the two booths were in use, and the unit had been relocated to the recently completed building extension.

The second unit was undergoing maintenance activities prior to being installed across from the other unit. Since the March 2018 inspection, the second paint booth has been installed. Both units and are ducted through a shared stack that is located at the western end of the building. Enclosed conveyors had been proposed as part of the relocation of paint booths, but were

reported to have been removed, as the enclosure and vapor capture system associated with the enclosed conveyors impacted the coating quality.

Mr. Goodburne indicated that prior to the relocation he had discussed the issue with other District Staff and had been informed that a permit modification was not required. A review indicated that Rule 285(2)(a) exempted from permitting the relocation of process equipment within the same geographical site and not involving any appreciable change in the quality, nature, quality, or impact of the emission of an air contaminant. The new location of the stack is on the west side of the mill building extension recently completed.

Record keeping and emissions calculations are based on daily use logs filled out by staff, the data of which is input into electronic spreadsheets. Per Mr. Goodburne, the spreadsheets were provided by MDEQ and are submitted annually as part of the annual MAERS emissions for the emission units, which reports both spray booths under a single reporting group.

Unpermitted equipment onsite included:

- 200 KW (apx. 268 BHP) backup generator

District files include a copy of electronic correspondence dated February 9, 1999, from FiberChar, indicating the intent to install a stand-alone diesel-powered emergency backup generator. The documentation includes a handwritten notation indicating the unit would be exempt under what was then Rule 285 (g), which exempted < 10 million BTU/HR heat input engines.

The Facility reports keeping hourly use records required to verify emergency use.

- Baghouse filter control system

A request to void PTI 715-87 for the facility's cyclone system was received on October 1, 2012. The referenced system was replaced with a bag-house dust collection system for the mill working equipment. The wood dust collected via the unit and is used as fuel for the wood-fired boiler. Airflow through the unit is vented back into the working environment and does not discharge to the outside atmosphere. The baghouse is located such that it extends above the mill building roof line.

AQD permit database shows that the permit is still listed as active. An electronic request for voidance was submitted by District and the document was voided on March 21, 2018.

- Mill working Equipment

The production building houses a limited number of mill working stations. The referenced equipment appears to be exempt from permitting based on Rule 285(2)(l)(vi)(B) which exempts "equipment used for carving, cutting, routing, turning, drilling, machining, sawing, surface grinding, sanding, planing, buffing,...wood, wood products....which has emissions that are released only into the general in-plant environment."

PERMITTING

Four PTIs are of record for the facility. These include:

PTI NO.	APPROVAL DATE	EU	VOID DATE
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68-86	Application voided 3/14/1989	Boiler	NA
354-88**	6/30/1988	Boiler	NA
268-88	8/12/1988	Paint Spray Booth	5/23/2008 and cure oven
268-88A	5/23/2008	Paint Spray Booth	NA
715-87	7/21/1988	Cyclone- Baghouse*	3/21/2018
166-91	4/26/1991	Incinerator	5/6/2008

*The referenced permit for a cyclone system was replaced by a bag-house control that does not discharge into the environment. Formal notification from the company is on file.

**It should be noted that the PTI identified above was replaced by the subsequent Permit to Operate dated March 14, 1989. This later permit was used when determining compliance.

REGULATORY

A review of District files indicated that the facility has historically been proactive with respect to changes at the Facility.

Classifications based on Potential to Emit (PTE) and other significant comments:

PARAMETER	CLASSIFICATION	COMMENT
NOx	Minor	
SO2	Minor	
CO	Minor	
Pb	Minor	
PM	Minor	
VOC	Minor	

HAPs Synthetic Minor Federally Enforceable Limit

With respect to Federal requirements, the Facility has accepted enforceable limits Hazardous Air Pollutants (HAPs) to restrict the facilities potential to emit to less than major source thresholds. The enforceable limits exempted the Facility from the 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart JJ for Wood Furniture Manufacturing Operations and the Title V, Renewable Operating Permit Program, both of which apply to Major Sources.

In addition, 40 CFR Part 60 Subpart IIII for New Source Performance Standards (NSPS) Compression Ignition (CI), RICE do not appear to apply to the existing emergency generator, as its installation was prior to 2005.

Applicable Federal Requirements:

EMISSION UNIT	40 CFR SUBPART	TITLE
Saw Dust Boiler	Fired Part 63, Subpart A and NESHAP for Industrial, Commercial and Industrial Boilers (AKA BOILER JJJJJ (6J))	
Diesel-fired Emergency Generator	Part 63, Subpart A and NESHAP for Stationary Reciprocating ZZZZ (4Z)	Internal Combustion Engines (RICE) (AKA RICE MACT)

40 CFR Part 63 Subpart JJJJJ (Subpart 6J), promulgated on March 21, 2011 for area source boilers. The existing 2.1 MMBTU, saw-dust fired boiler was installed in 1988. The unit represents an existing small (<10 MMBTU/hour) biomass-fueled boiler used for heating. The facility is considered a minor source based on actual emissions of <10 tons of any single or <25 tons of any combination of HAPs.

The Facility reports that the boiler is used for building heat and may depending on the actual operations be considered a seasonal boiler if not operated for more than 210 consecutive days. Initial notification date for Subpart 6J Boilers was January 20, 2014. Based on the type and size of the boiler, requirements under the subpart appear to be limited to engine tune ups and any associated compliance reporting. However, at the time of the site inspection and report preparation delegated authority for Subpart 6J has not been received by the AQD except through the Title V program and no compliance determination made. Information regarding the subpart and requirements were provided to the Facility as part of the 2018 site inspection. Information regarding the requirements of the subpart have previously been provided to the Facility for review.

With respect to Federal requirements for diesel-fired RICE under 40 CFR Part 63, Subpart ZZZZ (Subpart 4Z), the existing emergency generator was installed in 1999, and is considered an existing area source. RICE MACT requirements for existing emergency generators at an area

source include maintenance activities and a maximum of 100 hours per calendar year of non-emergency operation per year for maintenance and testing activities, 50 hours/calendar year of which may be for non-emergency operation. Documentation of operating hours and required maintenance activities are required under the RICE MACT. The compliance date for Subpart 4Z was May 3, 2013. Information regarding the requirements of the subpart have previously been provided to the Facility for review, and at the time of the December 2, 2021, site inspection, documentation per calendar year of operating times was shown to the inspectors. Though AQD has received delegation for the subpart, no compliance determinations for area sources have been made at this time.

COMPLIANCE

Since the March 1, 2018, site inspection, no complaints, Violation Notices (VNs) or consent orders are of record for the facility.

The Facility reports annually as part of the Michigan Air Emissions Reporting System (MAERS). A review of the recent submittals indicated that the facility submits in a timely manner. The most recent MAERs was received on January 7, 2021.

Compliance status for the facility had been based on information provided during the December 21, 2021, site inspection, as well as on supplemental data and reports submitted upon request or to meet permit requirements. Compliance Status has not been identified with respect to Federal requirements 40 CFR, Part 63, Subpart JJJJJ or ZZZZ.

Saw Dust Fired Boiler (PTO-354-88) – Special Conditions (SC) associated with permit to operate no. 345-88 restricts the permittee from substituting any fuel for those approved (SC.14). The facility reports that the wood fuel for the emission unit (EU) is collected via the mill building dust collection system (baghouse). In compliance with SC .15, the facility collects ash from the EU and stores it in a covered storage container for disposal by a contractor at a landfill.

In compliance with SC 13 stack construction requirements, the existing vertical boiler stack does not exceed the maximum diameter of 12-inches, nor is it less than 22 feet above land surface. The stack is oxidized, but no signs of holes were noted during the site inspection. The boiler and it's associated stack are located immediately adjacent to the mill building dust collection system. It has no cap.

A steam plume was noted at the time of the site inspection, no tail off was visible and the steam plume dissipated quickly suggested that VEs would not exceed the 6-minute average of 20% of SC.12.

SC .10 consists of particulate emission limits of 1.1 pounds per hour (pph) and 4.8 tons per year (tpy). A review of facility emission records submitted as backup MAERS data for the EU indicated the following:

CALENDAR YEAR	PM (PPH)	PM (TPY)
2019	0.295	0.28

2020	0.295	0.30
2021 to date	0.295	0.30
Limit (SC.10)	1.1	4.8

Compliance with particulate emissions identified under SC .11, would require stack testing. As the testing has not been requested compliance with the limit can not be determined.

No limits are associated with fuel usage, waste wood products used for fuel for 2019 and 2020 were reported to be 157 ton and 152 ton respectively.

EU-P-01 and EU-P-02 (PTI 268-88A) – As previously discussed, coating operations at the referenced facility are conducted using two permitted spray booths. Both were operable at the time of the inspection. One is reported to be used for stains, and the other for lacquer coatings.

The spray booths are reported to utilize HVLP sprayers (SC 1.6 and 2.6). Test caps for the sprayers are kept onsite (SC 1.6 and 2.6) and the booths are not operated without the required exhaust filters. (SC 1.5 and 2.5)

No material limits are associated with the EUs. Though permit engineer notes indicate that the limits were based on 3,400 gallons/year (equates to approximately 13 gallon/day, 5 day/ week, 52 week/year). However, under PTI 268-88A process and operational limits include the handling of all VOC and/or HAP materials (including waste materials). In compliance with the permit, the Facility:

- Captures waste materials and stores them in closed containers (SC 1.2 and 2.2)
- Keeps material containers covered to minimize fugitive emissions (SC1.4 and 2.4)
- Disposes of spent dry filters in bags to minimize release of fugitive emissions (SC 1.3 and 2.3)

Emission limits associated with EU-P-01 and EU-P-02 are for 12.3 tpy VOCs and Acetone combined for each EU (SC 1.1a). A review of emissions spreadsheets provided by the Facility reported the following emissions.

DATE	VOC & ACETONE 12-MONTH ROLLING TOTAL EU-P-01 (TPY)	VOC & ACETONE 12-MONTH ROLLING TOTAL EU-P-02 (TPY)	VOC 12-MONTH ROLLING TOTAL COMBINED (TPY)
2019	6.18	6.93	13.11
2020	5.48	6.64	12.12
2021 to date	NR*	NR*	8.12

PERMIT 12.3 TPY (SC 1.1) 13.3 TPY (SC 2.1) NA
 LIMIT

***Total for individual line not recorded at time of inspection, only combined total for both lines.**

Emissions are calculated based on volume used and the VOC and/or HAP content of the coating. Coating content (SC1.10) may be determined using either Manufacturer data or Federal Reference Test Method 24 analysis. (SC 1.7 and 2.7). Coatings being used were reported to have been tested in December of 2008. Mr. Goodburne reports that no changes in coatings has occurred since that date. The facility maintains copies of documentation of the chemical composition for coatings, solvents and reducers used onsite (SC 1.9 and 2.9)

Staff document daily usage on log sheets which are input daily or weekly depending on workloads. As previously indicated, the facility uses a spreadsheet provided by AQD staff at the time of permitting to record data required by permit. (SC1.10 and 2.10) The facility maintains the following monthly totals:

- Total gallons of each material used,
- VOC and acetone emissions for the month, and
- 12-month rolling total VOC and acetone emissions.

Totals are maintained for each spray booth as previously recorded using a MDEQ generated spreadsheet for the purpose. Daily usages are recorded on handwritten logs and input into the spreadsheet. As previously indicated the spray booths have been relocated to the northern addition to the milling/production building onsite. The emissions from both spray booths will be captured and exhausted from one stack on the west side of the addition. The referenced stack is unobstructed and reported to be less than 18-inches diameter and greater than 14 feet above ground level. (SC1.11 and 2.11).

As the curing ovens are not constructed and being used, emissions for the curing of the coatings is fugitive in the work room, and in part captured by the spray booth hoods. Paint or other coating odors were noted in the general work area, as the products are cured in the open. These fugitive emissions are part of the total emissions determined for the facility using mass balance calculations.

FGFACILITY (PTI 268-88A) – This flexible group consists of all permitted and unpermitted onsite. Permit conditions with reference to the flexible group include 12-month rolling total HAP limits for both individual HAPs (SC 3.1a) as well as Aggregate HAPs (SC 3.1b), determination and verification of HAPS content (SC 3.2) and record keeping requirements (SC 3.4).

As previously indicated, the facility maintains daily and monthly material usage records (SC 3.4). The facility has appropriate records indicating the HAP content of materials used (SC 3.2), and that data is also incorporated into the spreadsheet the facility used to determine monthly and 12-month rolling emissions. Totals reported for the last two calendar years are reported below:

CALENDAR YEAR	INDIVIDUAL HAP (HIGHEST REPORTED) 12-MONTH ROLLING TOTAL	AGGREGATE HAPS 12-MONTH ROLLING TOTAL
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2019	1.50 (toluene)	2.99
2020	1.66 (toluene)	3.03
2021 (to date)	NR*	1.85
LIMIT	<9.0 TPY (SC 3.1a)	< 22.5 TPY (SC 3.1b)

*Not recorded by inspector during December 21, 2021, site inspection

SUMMARY

On Monday, December 21, 2021, AQD District Staff conducted a scheduled site inspection of the Fiber Char Corporation Facility located at 3336 Piper Road, Alpena, Michigan (N1271). The facility produces finished and raw wood moldings for frames, as well as other millwork products. The referenced facility operates under Permit to Install (PTI) numbers 354-88 (wood fired boiler) and 268-88A (paint spray booths).

Staff met with Mr. Ned Goodburne, Plant Engineer, who answered questions and provided a walkthrough of the facility. Mr. Goodburne also provided copies of records for review as part of the compliance determination.

During the September 20, 2012, compliance inspection failure to track particulate emissions of the wood-fired boiler had been identified. Based on information provided during the March 1, 2018, site inspection, subsequent MAERs submittals and the December 21, 2021, site inspection. it appears that this issue has been corrected.

During the records review associated with the March 1, 2018, inspection, District Staff noted that the facility had incorrectly used transfer efficiency for the paint spray booths for VOC control efficiency in the MDEQ material usage and emissions spreadsheet maintained by the facility. Once brought to the facilities attention, the facility has made the appropriate corrections to bring themselves into compliance. Reviews of supplemental recordkeeping indicates that the correction has been made.

As indicated above, previous compliance issues having been identified were corrected in a timely manner, and at the time of the December 21, 2021, site inspection the facility was found to be in general compliance with permit conditions.

NAME _____

DATE _____

SUPERVISOR _____