

**DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: Scheduled Inspection**

N127143460

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: 03/01/2018
STAFF: Sharon LeBlanc	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: scheduled site inspection for synthetic minor source, fiscal year 2018. Facility has two active permits and request for void of third. An odor evaluation was conducted in conjunction with site visit based on history of odor complaints. sg		
RESOLVED COMPLAINTS:		

**INTRODUCTION**

On Thursday, March 1, 2018, 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 September 20, 2012, compliance issues were noted at the time of the 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. 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 Road. 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 above freezing, with completely overcast skies and winds from the westerly direction. As the facility was operating upon arrival, District Staff conducted an odor evaluation prior to the site inspection. These activities are reported separately.

**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.

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. The curing oven was reported to be lost in the 1994 fire. The second spray booth was permitted and added in 2008. The units at the time of permitting were housed in a smaller building located midway along the western property boundary. 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. Each booth had an independent stack.

At the time of the March 1, 2018, inspection, only one of the two booths were in use. 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. Both units and the associated enclosed conveyors will be ducted through a shared stack that is located at the western end of the recent building extension. 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 appreciably 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. The stack is no closer to residential properties than the previous location in what was operated as a finishing building.

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 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.

- 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 Staff on March 30, 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
354-88**	6/30/1988	Boiler	NA
268-88A	5/23/2008	Paint Spray Booth	NA
715-87	7/21/1988	Cyclone-Baghouse*	Void Requested
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 National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart JJ for Wood Furniture Manufacturing Operations and the Title V, Renewable Operating Permit Program.

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 Fired Boiler	Part 63, Subpart A and JJJJJJ (6J)	NESHAP for Industrial, Commercial and Industrial Boilers (AKA BOILER MACT)
Diesel-fired Emergency Generator	Part 63, Subpart A and ZZZZ (4Z)	NESHAP for Stationary Reciprocating Internal Combustion Engines (RICE) (AKA RICE MACT)

40 CFR Part 63 Subpart JJJJJJ (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 and no compliance determination made. Information regarding the subpart and requirements have been provided to the Facility.

With respect to Federal requirements for diesel-fired RICE (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. However, at the time of the site inspection and report preparation delegated authority for Subpart 6J has not been received by the AQD and no compliance determination made. Information regarding the subpart and requirements have been provided to the Facility.

**COMPLIANCE**

Since September 20, 2012, site inspection, one odor complaint was received and resulted in a self-initiated inspection (odor evaluation) on September 1, 2016. No Violation Notices (VNs) or consent orders are of record for the facility. On that date no odors were identified in the vicinity of the subject site.

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.

Compliance status for the facility had been based on information provided during the March 1, 2018, site inspection, as well as on supplemental data and reports submitted upon request or to meet permit requirements. Compliance Status has not been identified for the former cyclone (715-87) as the equipment is no longer onsite.

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. Due to the heavily overcast skies a visible emission (VE) observation was unable to be conducted.

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)
2016	0.295	0.28
2017	0.295	0.39
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.

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. At the time of the inspection, only one (EU-P-01) of the two were in operation. EU-P-02 was reported to have not operated at all for 2017.

The spray booths are reported to utilize HVLP sprayers (SC 1.6 and 2.6) which the facility reported switching back to from the air assisted sprayers, because they felt they had less waste/overspray. 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)
2016	*	*	15.74 *
2017	15.8 *	0*	NA*
PERMIT LIMIT	12.3 TPY (SC 1.1)	13.3 TPY (SC 2.1)	NA

\*Acetone emissions for the period were reported to be 0.00. Totals reflect VOC only

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.

Upon reviewing the spreadsheet District Staff noted that there was a discrepancy in emissions, as transfer efficiencies and capture efficiencies for particulate in the spray booth had incorrectly been used for VOC emissions. The corrections were made by the Facility staff to the spreadsheet, so as to accurately reflect VOC emissions. Those values are reflected above.

District Staff also noted that there did not appear to be totals for two units, but only a combined total. Mr. Goodburne responded that for the previous year, only one spray booth had operated, however, it had been run two shifts, one with the lacquer application and one with the stain application as the second spray booth was in maintenance. Staff pointed out that the permit has limits per spray booth, and that though the total reported for the period was less than the combined total for the two booths, the

permit as written is per booth, and that if the present practice was to continue, that a permit modification would be required. It should be noted that prior to making the spreadsheet corrections, it appeared that the Facility was under the limits for the single spray booth.

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).

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
2016	1.71 (toluene)	3.4
2017	2 (toluene)	3.3
LIMIT	<9.0 TPY (SC 3.1a)	< 22.5 TPY (SC 3.1b)

**SUMMARY**

On Thursday, March 1, 2018, 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.

The last site inspection was conducted on September 20, 2012, compliance issues were noted at the time of the inspection included failure to track particulate emissions of the wood-fired boiler. Based on information provided 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. Supplemental discussions with the facility regarding volatiles being emitted thru the stack vs the quantity remaining in the work environment as curing occurs outside of the spray booth, may result in further future changes in emissions estimates by the facility.

Upon correcting the referenced spreadsheet, District Staff noted that the Facility had exceeded the limits for the spray booth in operation. Spray booth #1 is allowed 12.3 tons/year (12-month rolling total), however, the facility had been operating the unit for multiple shifts because the second spray booth was down for maintenance, and as a result exceeded the emission limit for the one unit. It was noted that if a combined emission limit existed for the two spray booths, that the emissions would be below the allowed emissions when combined. Based on the present wording of the permit, the company has been notified that if their intent is to continue to operate one unit for a double shift that a permit modification

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will be required. The company has since reported that since the March 1, 2018, site visit that the second spray booth has been put back into operations, correcting the error.

**With the exception of the issues noted above, the facility was found to be in general compliance with permit conditions.**

NAME Shawn Blom

DATE 4/11/2019 SUPERVISOR SN