

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

B147669254

|  |                                      |                                  |
|--|--------------------------------------|----------------------------------|
| <b>FACILITY:</b> Decorative Panels International                         |                                      | <b>SRN / ID:</b> B1476           |
| <b>LOCATION:</b> 416 Ford Ave., ALPENA                                   |                                      | <b>DISTRICT:</b> Gaylord         |
| <b>CITY:</b> ALPENA  |                                      | <b>COUNTY:</b> ALPENA            |
| <b>CONTACT:</b> Tim Rombach (as of Oct 2020) , Sr Environmental Engineer |                                      | <b>ACTIVITY DATE:</b> 08/24/2023 |
| <b>STAFF:</b> Becky Radulski   | <b>COMPLIANCE STATUS:</b> Compliance | <b>SOURCE CLASS:</b> MAJOR       |
| <b>SUBJECT:</b> Onsite inspection and records review                     |                                      |                                  |
| <b>RESOLVED COMPLAINTS:</b>  |                                      |                                  |

**AQD Staff traveled to B1476 Decorative Panels International (DPI) on August 24, 2023 to conduct a FY23 scheduled inspection to determine compliance with MI-ROP-B1476-2015a. Present for the inspection were Tim Rombach (Senior Compliance Manager, DPI), Tammi VanTil (Consultant for DPI) and Becky Radulski (EGLE AQD Gaylord District Inspector).**

Decorative Panels International manufactures hardboard. Their facility includes an outdoor raw material storage area, a storage silo area, and four digesters where wood is cooked and ground to make pulp. The pulp goes to a forming machine where it is made into mats. The mats pass through a dryer, trimmer and panel brush, followed by one of two hardboard press lines known as Line 1 and Line 3. Each hardboard line includes a predryer, press, board cooler and tempering area. Line 3 also includes a bake oven. Line 1 press line emissions are controlled by Biofilter 1. Emissions for Line 3 press line are controlled by Biofilter 3 while a regenerative catalytic oxidizer controls emissions from the Line 3 bake oven and predryer. DPI operates an onsite powerhouse to provide steam for the main plant. The powerhouse includes two natural gas boilers and one biomass boiler which is controlled by an electrostatic precipitator (ESP). Wastewater is collected and processed in an onsite wastewater treatment plant (WTP) and lagoon.

DPI employs approximately 180 staff. Operations are currently run daily in two 12-hour shifts. Starting next week, DPI will be changing to a 10 days on, 4 days off configuration. The plant will be shut down September 2<sup>nd</sup> through 5<sup>th</sup>, followed by 10 days of operation. It is unknown how long the operational change will be maintained. The 10/4 is useful for production reasons however it offers some challenges from the environmental side, as reducing or eliminating flow to the biofilters and lagoons can result in potential for upsets to bug life.

## LOCATION

**B1476 Decorative Panels International (DPI) is located at 412 Ford Avenue. The site is located directly on the shore of Lake Huron at the mouth of the Thunder Bay River. Across the river is the municipal waste water treatment facility, and a large salt storage pile. Downtown Alpena is south and west. Heavy residential areas are located to the north, west and south. Other industry is located to the north, including Holcim LaFarge Cement Plant.**

## REGULATORY DISCUSSION

MI-ROP-B1476-2015a is a sectioned permit with two sections – Section 1 is DPI, Section 2 is American Process Incorporated (API). API is no longer in business and all buildings and tanks associated with API have been removed. EUSLUDGEDRYER which is an emission unit in the API section of the ROP, is now operated by DPI and will be incorporated into DPI's ROP during renewal.

B1476 is Major for CO, NO<sub>x</sub>, PM, SO<sub>2</sub> and VOCs because the potential to emit for each exceeds 100 tons per year.

B1476 is Major for HAPs because the potential to emit of any single HAP regulated by the federal Clean Air Act, Section 112, is equal to or more than 10 tons per year.

B1476 is not subject to Prevention of Significant Deterioration (PSD) regulations.

EUPRESS2S, EU3PRESS-AREA, and EU3BAKEOVEN are subject to the National Emission Standard for Hazardous Air Pollutants for Plywood and Composite Wood Products promulgated in 40 CFR Part 63, Subparts A and DDDD. Subpart DDDD was recently updated, resulting in additional testing required for the RCO associated with the EU3BAKEOVEN.

EUBOILER#1, EUBOILER#2, and EUBOILER#3 are subject to the National Emission Standard for Hazardous Air Pollutants for Industrial Boilers and Process Heaters promulgated in 40 CFR Part 63, Subparts A and DDDDD.

EUFIREPUMP is subject to the National Emission Standard for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines promulgated in 40 CFR Part 63, Subparts A and ZZZZ.

PTI 54-20 was issued June 2, 2020 and will be rolled into the ROP during renewal. The ESP Stack was blown over in spring of 2020. Exhaust from Boilers 1 and 2 (only burn natural gas) were temporarily routed to the old stack while the ESP stack was rebuilt, via a PTI 54-20. Boiler 3 was shut down until the new stack could be in place, as Boiler 3 requires the ESP to operate. The new stack was completed in fall of 2021.

## INSPECTION NOTES

DPI was operating during the inspection. All aspects of the plant were operating except for Press Line 1, which was down temporarily. No visible emissions were noted from the boilers, biofilter

1, biofilter 3 or the RCO. The stack from the wet end was emitting a steam plume. Wind direction was from the east, blowing into town. A level one burnt wood odor was detected at Ford Ave and Miller St.

The inspection began with the records review in DPI's office conference room. Records were viewed electronically on a large screen as well as in paper record books, as needed. The new computer program for observing the lagoon aerators usage was viewed in Mr. Rombach's office. At the time of the inspection, all aerators were shown as operating, putting the current horsepower in the lagoon at 2100 hp.

The walkthrough inside the plant included press line 1 area, the digesters, both biofilter and RCO monitors, ducon scrubbers, the trimming area, cold cleaners and general plant floor. We then proceeded outside to the WTP where the sludge dryer, waste treatment system and control room were observed. The group proceeded to the Powerhouse, where all 3 boilers were operating, as well as the ESP. Opacity and ESP monitor screens are attached. We then went inside the firepump house to view the non-resettable hours meter. While in the yard, the area where API building had been was viewed – only remaining structures are concrete slabs.

Lastly, Mr. Rombach, Ms. Vantil and I traveled by vehicle along Ford Avenue to the north entrance for a larger view of the yard and to tour the lagoon area. The yard where the legacy piles had been remains mostly clear, with only some piles of scrap board. There was some minor puddling in the dirt area from recent rain. The drainage ditch for the yard was observed with no odors noted – this was a potential source of odors identified in a recent odor complaint. A small pile of lime is also in that area, which is applied when part of the earthy area is found to have an odor. The tour continued to travel the perimeter of the lagoon. All aerators appeared to be operating. There was substantially less foam than observed on August 8, 2023. No odors were detected along the perimeter of the lagoon including the area downwind.

DO measured 4 x per day.

## **RECORDS**

**EUTRIMMER/PBRUSH – double trimmer and panel brush controlled with Ducon dual scrubbers.**

### **Emission Limits:**

**EUTRIMMER/PBRUSH has a PM limit of 0.10 pounds per 1000 pounds exhaust gasses, dry basis. Compliance with this limit is determined during testing. Testing took place in August of 2019 demonstrating compliance with this limit.**

**Material Limits:**

None.

**Process/Operational Restrictions:**

EUTRIMMER/PBRUSH cannot operate without the Ducon scrubbers operating properly. The facility is required to monitor flow rate and pressure drop across the scrubbers. The facility tracks both as required.

**Design/Equipment Parameters:**

The facility must equip the scrubbers with a flow rate monitor, alarm and pressure drop instrument. The facility has this equipment in place and meets this condition.

**Testing:**

PM testing is required every 5 years. Testing was performed most recently in 2019 to demonstrate compliance with this condition.

**Monitoring/Recordkeeping:**

The facility is required to monitor and record water flow rate and pressure drop. An alarm must sound if the flow rate falls below 10 gpm. The facility has this equipment in place and meets this condition. The log book was reviewed and photo of one page is attached to this report. During the inspection, the monitoring bank for the Ducon scrubbers was viewed. The #1 Ducon Sprays were at 22.81, 20.47 and 23.32 gpm, while the #2 Ducon Sprays were at 25.04, 28.29 and 17.68 gpm; the sprays were all above 10 gpm, which is in compliance with the permit condition.

**Reporting:**

The facility completes semi and annual reporting as required.

**Stacks:**

The stacks were viewed and appear to meet the requirements based on visual observation.

EUBOILER#3 – spreader-stoker boiler fueled by wood chips, natural gas, hardboard dust, waste oil, clarifier oil and sludge. The boiler is rated at 60,000 pounds of steam per hour.

**Emission Limits:**

The facility must test to demonstrate compliance with the following emissions: HCL, Mercury, PM, CO. The emissions were tested March 9, 2021, demonstrating compliance with those limits.

The facility must utilize a COMS to monitor and record opacity from the stack. The boiler has the following opacity limits: six minute average of 20% (except 1 6 minute average of not more than 27%) and a 10% daily average (except during start up and shut down). During the inspection, the 6 minute average was 0.3% opacity, which meets the condition limit. DPI provided electronically the opacity for the first week in August, which will be attached to this report. Documents provided demonstrate compliance with the opacity limits.

**Material Limits:**

The boiler is limited to: 2000 lb/hr Wastewater treatment sludge, 1000 lb/hr clarifier oil, 55 lb/hr Misc. waste oil, 2500 lb/hr hardboard dust. Material usage is reported quarterly. Currently waste oil is not being used as a fuel. Sludge has also not been used as a fuel since the Greenway pellet plant burned down. Reported materials demonstrate compliance with this condition.

**Process/Operational Restrictions:**

Materials are limited to those in the Material Limit section. The cyclone and ESP must be operating properly for EUBOILER#3 to operate. During the inspection Boiler#3 was operating, along with EUBOILER#1 and EUBOILER#2. The ESP was operating as they share a common exhaust stack.

**Design/Equipment Parameters:**

The stack for EUBOILER#3 must have a COMS installed and operated properly.

**Testing/Sampling:**

Emissions from the stack must be tested to demonstrate compliance – a passing test took place in March 2021. Testing is required every 3 years for the Boiler MACT. Testing is scheduled with APEX for March of 2024.

**Results for the March 9 and 10, 2021 stack test are as follows:**

| Parameter          | Unit     | Ave Result           | Permit Limit         | Pass/Fail |
|--------------------|----------|----------------------|----------------------|-----------|
| Particulate Matter | Lb/mmbtu | $4.8 \times 10^{-3}$ | $3.7 \times 10^{-2}$ | Pass      |

|                   |               |                      |                      |      |
|-------------------|---------------|----------------------|----------------------|------|
|                   | Lb/1,000 lb   | 0.0042               | 0.50                 | Pass |
| Mercury           | Lb/mmbtu      | $2.9 \times 10^{-7}$ | $5.7 \times 10^{-6}$ | Pass |
| Carbon Monoxide   | Ppmvd @ 3% O2 | 1,051                | 1,500                | Pass |
| Hydrogen chloride | Lb/mmbtu      | $5.6 \times 10^{-4}$ | $2.2 \times 10^{-2}$ | Pass |

#### Monitoring/Recordkeeping:

COMS, daily fuel rate and total hours, and mercury emissions must be kept for EUBOILER#3. COMS is being monitored and recorded. As mentioned above, COMS displays were available to see during the powerhouse inspection and are attached. Daily fuel and hour rates are provided in the quarterly reports. These reports are reviewed each quarter.

#### Reporting:

The facility completes quarterly, semi and annual reporting as required.

#### Stacks:

SVBOIL123-STK58 is shared with EUBOILER1 and EUBOILER2. The stack was recently rebuilt as the old stack had blown over. The stack was viewed and appears to meet the requirements based on visual observation.

EUFIREPUMP – Diesel-fired (compression, ignition) reciprocating internal combustion engine rated at less than 500 horsepower, powering a fire pump which is for emergency use only.

#### Emission Limits:

None

#### Material Limits:

None

**Process/Operational Limits:**

The engine may be operated as follows per calendar year: for emergency situations – no time limit; for maintenance checks – 100 hours/year; for non-emergency use – 50 hours/year.

Maintenance and oil program must be completed as required in this section of the ROP.

**Design/Equipment Parameters:**

The engine must be equipped with a non-resettable hour meter. The meter was observed during the inspection, and a photo of the meter is attached to the report. During the inspection the non-resettable meter was at 1650.4 hours.

**Testing/Sampling:**

None

**Monitoring/Recordkeeping:**

The facility is required to track emergency, non-emergency and maintenance/testing. The information was viewed at the facility and is attached. Currently the firepump is at 13.7 hours for maintenance; 8.3 hours for emergency (fire); 26.3 hours for non-emergency. These hours meet the conditions of the permit.

The non-resettable hours as mentioned above, are being recorded and were observed onsite; this meets the condition of the permit.

Maintenance and oil changes are being completed as required. Maintenance records are attached.

**Reporting:**

The facility completes semi and annual reporting as required.

**Stack/Vent Restrictions:**

None

**Other Requirements:**

Comply with 40 CFR Part 63 Subpart A and Subpart ZZZZ.

**FGMACTDDDD - All equipment on site subject to 40 CFR Part 63 Subpart DDDD, Plywood and Composite Wood Products. Some emission units controlled by one of two biofilters and/or a Regenerative Catalytic Oxidizer (RCO), others uncontrolled. Emission Units include EUPRESS2S, EU3PRESS-AREA, EU3PREDRYER and EU3BAKEOVEN.**

**Emission Limits:**

**Emissions from the EUPRESS2S, EU3PRESS-AREA and EU3BAKEOVEN must meet one of the following 6 compliance methods:**

**90% reduction, measured as total hydrocarbons (THC)**

**20 ppmvd, measured as THC**

**90% reduction in methanol**

**1 ppmvd methanol (if influent methanol is greater than 10 ppmvd)**

**90% reduction in formaldehyde**

**1 ppmvd formaldehyde (if influent formaldehyde is greater than 10 ppmvd)**

**Material Limits:**

**None**

**Process/Operational Restrictions and Testing:**

**RCO – controls emissions from EU3BAKEOVEN and EU3PREDRYER:**

**Requirements:**

**When the RCO is operating, the 3 hour block average temperature must be above the initial setpoint. The initial setpoint was established via stack testing per MACT Subpart DDDD requirements in December of 2011 as a minimum of 818 degrees F. No further stack tests were required. A representative sample of the RCO catalyst must be tested every 12 months for activity level.**

**Observations:**

**During the inspection, the RCO logging spreadsheet and biofilter 3/RCO maintenance logs were viewed and are attached. At the time of the walk through, the 15 minute average temperature**



was 824 F and the 3 hour average was 825 F. The most recent catalyst sample was provided, dated September 2022. The catalyst testing was completed by Applied Catalysts. The report indicates that at temperatures above DPI's setpoint of 818 F, the catalyst sample was achieving 94% or higher destruction.

As part of the recent Subpart DDDD revision, the RCO will be required to stack test every 5 years with the first stack test required by August 13, 2023. Testing to meet this deadline took place on August 8, 2023. Preliminary results indicate that the RCO did not pass with any of the 6 potential compliance options. The stack test report with final data is due no later than October 8, 2023.

#### **Biofilter 1 – controls emissions from EUPRESS2S:**

##### **Requirements:**

When the press is operating, the 24-hour block biofilter bed temperature must be within the range set during testing, which is currently 73 to 87 F. The biofilter must be retested within 2 years of the previous test and within 180 days of media replacement.

##### **Observations:**

Biofilter 1 was tested on November 30, 2021. The biofilter passed by reducing formaldehyde by 97%, which meets the emission limit requirements. Media was replaced May 2023 and testing is scheduled for October 2023. At the time of my inspection the biofilter bed temperatures were within the appropriate range.

#### **Biofilter 3 – controls emissions from EU3PRESS-AREA:**

##### **Requirements:**

When the press is operating, the 24-hour block biofilter bed temperature must be within the range set during testing, which is currently 74 to 98 F. The biofilter must be retested within 2 years of the previous test and within 180 days of media replacement.

Biofilter 3 was tested on November 29, 2022. The biofilter passed via two methods – 97.9% reduction in formaldehyde, and 95.8% reduction in methanol. As mentioned in the emission limit section above, only 1 method of compliance is required to pass. At the time of my inspection the biofilter bed temperatures were within the appropriate range.

##### **Monitoring/Recordkeeping:**

Press enclosures are required for Lines 1 and 3 hardboard presses. These enclosures were in place.

**Reporting:**

The facility completes quarterly, semi and annual reporting as required.

**Stack/Vent requirements:**

None.

**FGBOILERS1&2 – Two boilers fueled by natural gas. Each boiler is rated at 80,000 pounds per hour of steam production.**

**Permit 54-20 was issued in June of 2020 to allow temporary use of an old stack at the powerhouse. In April of 2020 the existing stack blew over.**

**Emission Limits:**

**The permittee is limited to 0.10 lb/MMBtu NOx and 11.53 lb/hr NOx. Testing took place in March 2020, meeting the condition limits.**

**Material Limits:**

None

**Process/Operational Restrictions:**

**DPI may only combust natural gas and the exhaust from the sludge dryer in Boilers 1 and 2. DPI confirmed the boilers are limited to these combustion sources.**

**Design/Equipment Parameters:**

None

**Testing/Sampling:**

**Testing for the NOx emissions are required every 5 years. As mentioned above, testing took place in 2020 so will be due in 2025.**

**Monitoring/Recordkeeping:**

None

**Reporting:**

The facility completes semi and annual reporting, and testing notifications, as required.

**Stack/Vent Restrictions:**

SVBOIL123-STK58 is a combined stack shared between Boilers 1, 2 and 3. Based on engineering judgement, the stack appears to meet the conditions of the permit (maximum diameter of 86.4 inches, minimum height of 135 feet).

SVBOIL-1&2-stk56 (for temporary use) is a combined stack shared between Boilers 1 and 2. Based on engineering judgement, the stack appears to meet the conditions of the permit (maximum diameter of 96.75 inches, minimum height of 135 feet). This temporary stack is no longer needed as SVBOIL123-STK58 has been repaired.

**Other requirements:**

The permittee must comply with 40 CFR Part 63 Subpart A and Subpart DDDDD, for major sources: Industrial Boiler and Process Heaters.

**FGCOLDCLEANERS**

The facility has 3 cold cleaners, which were viewed during the walkthrough. All lids were closed with signs on them to remain closed. The cold cleaners used crystal clean for a solvent. 1 unit is located in the powerhouse, 2 in the main factory. None of the units are over ten square feet.

**Emission Limits:**

NA

**Material Limits:**

The facility cannot use cleaning solvents which are more than 5% weight of the compounds listed in II.1. The facility provided records to demonstrate compliance with this condition.

**Process/Operational Restrictions:**

Parts must drip no less 15 seconds or until dripping ceases; routine maintenance must be performed. The facility requires parts to drip as needed; an independent company routinely performs maintenance on the units.

**Design/Equipment Parameters:**

The cold cleaner must either be no more than 10square feet surface area, or be used for metal parts emitting to in-plant environment. The units are less than 10 square feet and emit to in-plant environment.

The cold cleaner must be equipped with a device for draining clean parts. The units are designed as required.

The cold cleaner must be equipped with a cover and be closed when parts are not being handled. The units are equipped with covers which were all closed during the inspection. Each unit has a sign indicating the cover must remain closed.

The cold cleaner as requirements if the Reid vapor pressure of the solvent is more than 0.3 psia, or if the solvent is agitated or heated. The solvent meets these requirements (not heated, not agitated, pressure is less 0.3 psia).

**Testing/Sampling:**

NA

**Monitoring/Record Keeping:**

Records are maintained as required and viewed onsite.

Based on the inspection and records review, the facility appears to be in compliance with permit conditions.

NAME Becky Radulski

DATE 1-26-2024

SUPERVISOR Shane Nixon