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

A428525825

FACILITY: LORIN INDUSTRIES		**SRN / ID:** A4285
LOCATION: 1960 S ROBERTS ST, MUSKEGON		**DISTRICT:** Grand Rapids
CITY: MUSKEGON		**COUNTY:** MUSKEGON
CONTACT: Rick DeCair , Environmental and Safety Manager		**ACTIVITY DATE:** 06/17/2014
STAFF: Jenifer Dixon	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: The purpose of this inspection was to complete a scheduled inspection and to determine the facility's compliance with Permit No.'s 886-84, 589-93, 86-74, 127-85, 590-93, 363-95, Opt-out Permit No. 111-97 and all other applicable Air Quality Rules and Regulations.		
RESOLVED COMPLAINTS:		

This was an unannounced inspection. An "Environmental Inspections" brochure was provided at the time of the inspection.

The purpose of this inspection was to complete a scheduled inspection and to determine the facility's compliance with Permit No.'s 886-84, 589-93, 86-74, 127-85, 590-93, 363-95, Opt-out Permit No. 111-97 and all other applicable Air Quality Rules and Regulations.

JD and Prudence Blue (PB), arrived in the area of the facility at approximately 10:45AM and left the area 12:30PM on June 17, 2014. No excess odors or opacity were observed in the area of the facility. JD and PB met with Mr. Rick DeCair, Environmental and Safety Manager, who provided pertinent information about the facility and the operations contained therein.

Lorin Industries (Lorin) is an aluminum coil anodizing facility. The main process involves taking large coils (rolls) of aluminum sheeting and pulling it through a series of chemical tanks to treat the metal. The metal is treated in a variety of ways depending on the request of the customer. The facility currently has 6 treatment lines. Different products are manufactured on each line. The deciding factors are the gage of the metal required for the product and the pulling power of the line, along with what particular chemicals are necessary to treat the metal. The aluminum can also be slit into smaller sizes.

Lorin has four reciprocating engines that are used to provide power to the facility. These engines, along with the anodizing lines are covered by various permits. These permits are further detailed below.

PERMIT NO. 886-84 - Anodizing Line 1 and Line 4
This permit covers Line #1 and Line #4 because the two lines share control equipment. In this case the control equipment consists of two wet scrubbers, one for the anodizing portion of the lines and one for the bright dip portion of the lines. Line 1 was not in operation at the time of the inspection.

Special Condition 14 - This condition requires that no more than 20% opacity is emitted from the scrubbers.

No opacity was observed.

Special Condition 15 - Wet scrubbers must be installed and operating properly.

The scrubbers appeared to be installed and the liquid flow meter was reading flow to the scrubbers. The scrubber for Line 1 averages 108 gallons per minute (gpm). The reading for Line 4 was 45.9 gpm, average is 40. The pH for the control scrubber was 8.42, average is 8.5. All of these readings were in normal operating range.

Special Condition 16 - The scrubbers must have liquid flow indicators.

Both scrubbers had liquid flow indicators. The scrubbers have all been evaluated to determine proper operating ranges. These ranges are posted right at the liquid flow meter LCD. The readings are checked and documented once per day when the line is in operation.

Special Condition 17 and 18 - This lists the requirements for stack heights on the two scrubbers.

Based on visual observations, these appeared to be accurate.

Special Condition 19 - The facility can not substitute raw materials in the line unless they qualify as exempt under Rule 285(b).

Mr. DeCair was not aware of any chemical changes on the line.

PERMIT NO. 589-93 - Additional Scrubber for Anodizing Line 1
This permit is only for an additional scrubber to be installed on Line 1. The additional scrubber was to improve the flow through the system and the capture of pollutants. This line was not in operation at the time of the inspection.

Special Condition 15 - This condition requires that no more than 20% opacity is emitted from the scrubbers.

No opacity was observed.

Special Condition 16 - Wet scrubber must be installed and operating properly.

JD observed that the wet scrubber was installed.

The normal flow rate for line 1, when running an anodized product is about 30 gpm.

PERMIT NO. 86-74 – Scrubber for Anodizing Line 5
This line is also used for anodizing aluminum. This permit addresses in particular, the requirements for the scrubber on the line. There is no pH requirement for this line. This line was not in operation at the time of the inspection.

Special Condition 14 - This condition requires that no more than 20% opacity is emitted from the scrubbers.

No opacity was observed from this or any other stack.

Special Condition 15 - Wet scrubbers must be installed and operating properly.

JD observed that the wet scrubber was installed. The scrubber was installed on the line.

Special Condition 16 - The scrubbers must have liquid flow indicators.

The average for this scrubber is 11 gpm. Based on a records review, this line appears to keep the liquid flow rate right around that number.

Special Condition 17 - The facility can not substitute raw materials in the line unless they qualify as exempt under Rule 285(b).

Mr. DeCair was not aware of any chemical changes on the line.

PERMIT NO. 127-85 - Anodizing Line 6
This line is also used for anodizing the aluminum. The line has a scrubber on both the anodizing and

the bright dip section of the line. The bright dip scrubber is covered under another permit. This line was not in operation at the time of the inspection.

Special Condition 10 - This condition requires that no more than 20% opacity is emitted from the scrubber.

No opacity was observed.

Special Condition 11 - Wet scrubber must be installed and operating properly.

JD observed that the wet scrubber was installed.

Special Condition 12 - The scrubber must have liquid flow indicators.

The normal flow rate through the system is 42 gpm.

Special Condition 13 - The facility can not substitute raw materials in the line unless they qualify as exempt under Rule 285(b).

Mr. DeCair was not aware of any chemical changes on the line.

PERMIT NO. 590-93 - Additional Scrubber for Anodizing Line 6 (Bright Dip)
This permit is only for an additional scrubber to be installed on Line 6. The additional scrubber was put on the bright dip portion of the line to improve flow through the system and capture of pollutants. As stated above, this line was not in operation at the time of the inspection.

Special Condition 15 - This condition requires that no more than 20%- opacity is emitted from the scrubbers.

No opacity was observed.

Special Condition 16 - Wet scrubber must be installed and operating properly.

This scrubber does have a liquid flow indicator. JD observed that the wet scrubber was installed. The normal flow rate through the system is 250 gpm for the bright dip process.

PERMIT NO. 363-95 - Anodizing Line 8
This line is a bit newer than the other 5 lines. The permit requires that the line have 2 wet scrubbers and 10 demisting units. At the time of the inspection the line was not in operation. According to Mr. DeCair this line is rarely used because the type of finishing is not requested too often. The line has not been used in several years. This is noted on record keeping and maintenance logs.

Special Condition 13, 14, 15, and 16 - the permit requires that hourly and annual emission limits are complied with in pounds per hour (pph) and tons per year (tpy).

Sulfuric Acid 0.113 pph and 0.49 tpy
Phosphoric Acid 0.33 pph and 1.45 tpy
Nitric Acid 1.6 pph and 7.01 tpy
Sodium hydroxide 0.1 pph and 0.44 tpy

Records state that this line is shutdown. This is acceptable since the line has not been utilized in so long.

Special Condition 17 - No visible emissions are allowed from this process.

No visible emissions were observed during the inspection.

Special Condition 18 - Allows the Air Quality Division to request stack testing.

No stack testing is required at this time.

Special Condition 19 - Line may not be operated unless controls (scrubbers and demisters) are installed and operating properly.

Because the line was not in operation at the time of the inspection, JD could only look for installation of controls. All demisters appeared to be installed on the line. All scrubbers were also identified for the line.

Special Condition 20 - This condition requires that the demisters are turned off and washed for at least one minute once a day.

Because the lines were not in operation at the time of the inspection, this condition was not relevant at the time of the inspection.

Special Condition 21 - At least once a month, the controls are to be visually inspected and any necessary repairs made.

Because the line has not been run in so long, this has not been done for a while. Before the line is started again, all needed repairs will be completed.

Special Condition 22 - Records are to be maintained detailing daily wash downs and monthly inspections of the controls.

This is completed as required by the permit condition when operating.

Special Condition 23 - Scrubbers must be equipped with pressure drop meters.

JD observed the pressure drop indicators. Because the line was not operating, it was impossible to determine proper operation.

Special Condition 24 - This condition details stack heights and diameters for four stacks.

JD did not physically measure the stacks to ensure compliance with this condition. But based on a visual observations these measurements appeared to be correct.

LINE 7
Line 7 was not in operation at the time of the inspection. According to Mr. DeCair, this line operates approximately once per month. Line 7 is exempt under Rule 290. The records are being kept properly.

PERMIT NO. 111-97 - Four Reciprocating Gas-Fired Engines
These four engines are used for electrical generation in the plant. This permit also serves as an Opt-Out permit for the facility.

Special Condition 13 - VOC emissions are limited to 4.8 pounds per hour and 21 tons per year for all four engines combined.

Based on results from a 1997 stack test, the pounds per hour emitted from the co-gen units for VOCs is 0.96. This is well below the permitted limit. Based on records reviewed for the time period of December 2013 - May 2014, the highest emitting time period was in January 2014 at 6.08 tons. This is well below the permitted limit.

Special Condition 14 - CO emissions are limited to 3.8 pounds per hour and 67 tons per year for all four engines combined.

Based on results from a 1997 stack test, the pounds per hour emitted from the co-gen units for CO is 2.90. This is well below the permitted limit. Based on records reviewed for the time period of December 2013 - May 2014, the highest emitting time period was in January 2014 at 20.57 tons. This is well below the permitted limit.

Special Condition 15 - NOx emissions are limited to 10 pounds per hour and 43.8 tons per year for all four engines combined.

Based on results from a 1997 stack test, the pounds per hour emitted from the co-gen units for NOx is 1.53. This is well below the permitted limit. Based on records reviewed for the time period of December 2013 - May 2014, the highest emitting time period was in January 2014 at 10.87 tons. This is well below the permitted limit.

Special Condition 16 - Visible emissions shall not exceed 20% opacity.

No visible emissions besides steam were observed from the engines.

Special Condition 17 - This condition allows the Air Quality Division to request a stack test for the engines. No stack test is required at this time.

Special Condition 18 - This condition requires specific stack heights for all the engine stacks.

Based on a visual observations the stack dimensions appeared to be correct. The stacks were not physically measured.

Special Condition 19 – Co-gen recordkeeping: Gas Usage (weekly) - and monthly were kept.

Maintenance Log (every 750 hours), engines tuned - Maintenance is done by Michigan Cat, have all records. Each co-gen unit has its own meter to read gas. This meter reading is recorded when need to calculate emissions from the units. This is being done as required.

Special Condition 20 - Criteria pollutant recordkeeping must be calculated on a calendar monthly basis and for the most recent 12 month rolling time period.

Based on a review of the records, all records appear to have been accurately kept.

Special Condition 21 - HAPs are limited to 9 tons of any individual HAP and 22.5 tons of aggregate HAPs per 12 month rolling time period.

Based on records review, the highest individual rolling HAP emitted is formaldehyde at 4.12 tons per 12 month rolling time period in January 2014. The total aggregate rolling HAPs emitted in January 2014 was 6.17. These are well below the emission limit.

Special Condition 22 - HAPs recordkeeping

- Monthly individual in tons per month - records kept
- Monthly aggregate in tons per month - records kept
- Individual 12 month rolling in tons per year - records kept
- Aggregate 12 month rolling in tons per year - records kept

NOTE: See attached copies of records. The facility appears to be in compliance with all applicable limits in this permit.

BOILERS

The facility also has two natural gas process heat boilers. One of the boilers has an output of 25,106,000 btu/hr and the other boiler has an output of 20,922,000 btu/hr. Both of these boilers are exempt from permitting under Rule 282(b)(I). Based on the Boiler NESHAP Flow Chart for Area Sources, these boilers are not subject to 6J.

Based on the observations at the time of inspection, Lorin appears to be in compliance with Permit No.'s 886-84, 589-93, 86-74, 127-85, 590-93, 363-95, Opt-out Permit No. 111-97 and all other applicable Air Quality Rules and Regulations.

NAME _____ DATE 7/8/14 SUPERVISOR PAB