

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

N750854605

FACILITY: A & L IRON AND METAL INC.		SRN / ID: N7508
LOCATION: 2000 MILBOCKER RD., GAYLORD		DISTRICT: Gaylord
CITY: GAYLORD		COUNTY: OTSEGO
CONTACT: Brian Miller ,		ACTIVITY DATE: 08/10/2020
STAFF: Sharon LeBlanc	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled inspection of potential synthetic minor source- Facility is in process of submitting application for permit modification for EUGENERATOR.. sgl		
RESOLVED COMPLAINTS:		

INTRODUCTION

On August 10, 2020 AQD District Staff conducted a scheduled site inspection of the A&L Iron and Metal, Inc. Facility (AKA A&L) located at 2000 Milbocker Road, Gaylord, Otsego County, Michigan. (N7508). The A&L Facility is a metal recycler.

The referenced Facility operates under two Permits to Install (173-08A and 176-05B).

The last site inspection for the purposes of general compliance with respect to permit conditions was conducted on September 2, 2010.

FACILITY

Reported to have been incorporated in 1978, the Gaylord Facility is the oldest of the five A&L locations in the state. (the other locations being in Ishpeming, Kincheloe, Alpena and Escanaba, Michigan)

The A&L Facility is located at the NE corner of the intersection of S. Townline Road and Milbocker Road, Gaylord, Michigan. An odd shaped property totaling approximately 30 acres, the Facility is fenced, gated and has vegetative barriers blocking most of the view of the Facility on all sides. The vegetative barriers along the eastern property line are located on the adjacent properties. Two gates exist, the northern gate is located on the east side of S. Townline Road and is the gate closest to the permitted equipment. The main entrance and offices are located on the south end of the property, on Milbocker Road. The Facility appears to be larger than it actually is, there is a wooded 10-acre parcel (planted pine) located along S. Townline Road, that is owned by Wolverine Power, that breaks the Facility into a northern and southern portion, which are joined by a strip of property to the east of the wooded parcel.

A railroad line is located on the eastern side of the property and based on aerials did not appear onsite until August of 2006.

Adjacent properties of note include undeveloped acreages owned by the State of Michigan (with both a power line and a Consumers right-of-way/easement) on the west side of S. Townline Road as well as SE of the Facility at the intersection of Milbocker and S. Townline Roads. Adjacent at the SE corner of the Facility is the Wolverine Power Company Facility (SRN N6833). Additional smaller zoned industrial parcels bounding the property to the east are part of an industrial park developed by the City of Gaylord and vacant at the time of the site inspection. Immediately adjacent to the Facility on the NW corner is a small parcel owned by Patriot Steel and Fabrication, as well as a small parcel of land located immediately behind Patriot Steel and Fabrication that is identified on the Otsego County property search as being owned by A&L Real Estate Development LLC.

To reach the Facility from the MDEQ Office, travel west on M-32 past the Meijers shopping center to the intersection with S. Townline Road. Turn left (south) and travel approximately 1.5-miles. The paved road turns to the left and the south/main gate located on the left-hand side of the road. The office is located immediately at the gate. There is parking immediately inside the gate as well as outside the gate.

Weather conditions at the time of the August 10, 2020, site inspection included overcast skies and temperatures in the low-mid 70's.

PERMITTING

Active Permits – Active permits associated with the Facility include 176-05B (EU-SHREDDER) and 173-08A (EUGENERATOR).

Permit No	Application Date	Issuance Date	Comment
176-05	7/27/2005	8/17/2005	void 7/22/2008
176-05A	6/12/2008	7/22/2008	void 7/17/2009
173-08	5/9/2008	8/12/2008	combustion source
176-05B	5/8/2009	7/17/2009	Programable water injection system in shredder
173-08A*	5/20/2019	11/26/2019	addition of Subpart ZZZZ RICE regulations

*An application to modify PTI 173-08A is anticipated to be submitted August 17, 2020.

Background -AQD District interaction with the Facility was initiated in December 2004 as a referral from MDEQ RRD Staff. At the time of the December 16, 2004, inspection, the Facility operated what was believed to be Rule 201-exempt equipment onsite but were anticipating purchase of an automobile shredder (176-05) and extension of a railcar spur onto the property.

Electronic correspondence dated March 6, 2006, indicated that power would not be available from nearby electrical providers, and that they would be required to obtain their own power source for the automobile shredder. Documents in District files dated December 2007-January 2008 indicated:

- the dry fabric filter scrubber associated with the automobile shredder was damaged in an explosion (April 20, 2007),
- the electrical transformer onsite malfunctioned in August 2007, and
- the existing GE Reciprocating Internal Combustion Engine (RICE) was damaged beyond repair (November 2, 2007) and had been temporarily replaced by a train engine to supply power to the shredder.

Permit applications (173-08) for a rebuilt engine, and a change in pollution control for the shredder (176-05A) were submitted as a result of the documented events.

It should be noted per December 19 and 20, 2007, notes of discussions with EPA and General Electric (manufacturer/vendor) representatives found in the District Files indicate the following:

- The rebuilt engine could not be modified such that it met Tier II requirements (i.e. 40 CFR Part 60, Subpart IIII CI RICE regulations) and
- The rebuild (less than 50% of replacement costs) was such that upgrades must comply with the Tier I regulations as the age of the engine is older than 2007.

In a March 28, 2019, conference call discussions between AQD District Staff, AQD Permits Staff, A&L Vendors and A&L owners, various options to resolve ongoing opacity violation were discussed. At the end of the meeting, the Facility indicated that they were also in the process of investigating electric and had been conducting ongoing discussions to that goal. AQD agreed to allow the company additional time to pursue that route, which included some onsite evaluation by the power providers as well as release/transfer from Consumers to another electrical service provider. On November 26, 2019, the Facility notified District Staff that due to total cost of the project (one million-plus dollars) that the Facility had decided to go with NG conversion. It should be noted that though permitted to burn diesel or diesel/NG mix, the EU was at permitting utilizing a fuel mix. Facility staff report that following permitting and some interval of operation the decision was made to continue future operations utilizing 100% diesel which has continued to date.

April 1, 2020, Impact submitted an Air Permit Exemption Determination for Changes to Natural Gas Fuel Process Controls for EUGENERATOR. The referenced document outlined the proposed installation of an Altronic GTI bi-fuel system manufactured by Sulzer Turbo Services New Orleans Inc. (AKA Sulzer). Supplemental documents were provided. A review of the document as well as supplemental data indicated based on evaluation of meaningful change that the proposed changes would not meet Rule 201 permitting exemptions under Rules 285(2)(b) and Rule 285(2)(c). The Facility has contracted Impact to prepare and submit a permit modification application to incorporate the proposed changes as well as

correct for the three existing stacks of EUGENERATOR. The referenced application is anticipated to be submitted tentatively August 17, 2020.

REGULATORY

Classifications based on Potential to Emit (PTE) include:

PARAMETER	CLASSIFICATION	COMMENT
NOx	Synthetic Minor*	EUGENERATOR
SO2	Minor	EUGENERATOR
CO	Synthetic Minor*	EUGENERATOR
Pb	Minor	EUGENERATOR
PM	Minor	EUGENERATOR & EUSHREDDER
VOC	Minor	EUGENERATOR
HAPs	Area	EUGENERATOR

*Based on PTE for EUGENERATOR as presented in permit application 173-08.

Applicable Federal Requirements:

EMISSION UNIT	40 CFR SUBPART	TITLE
Source	Part 70	State Operating Permit Program
EUGENERATOR	Part 63, Subpart A and ZZZZ*	National Emission Standards for HAPs for Stationary Reciprocating Internal Combustion Engines (RICE)

*Note at the time of permitting, the EU had been determined to not be subject to the referenced Federal Regulations based on an installation date prior to June 12, 2006, and the fact that it was not a reconstruction.

A review of the permit application for the GE 7FDL16, Compression Ignition (CI) RICE indicated that the unit was not subject to 40 CFR Part 63, Subpart III, for CI RICE, as the original manufacture date was in 1978, and prior to July 11, 2005. The document also indicated that it had not undergone construction, modification or reconstruction prior to those dates. The rebuild not constituting a reconstruction.

EQUIPMENT

Permitted equipment onsite includes:

EU-SHREDDER - A scrap metal shredder equipped with a programmable water pumping wet suppression system and associated separators, shakers, oscillators, feeders, conveyors, material storage and all associated process activities permitted under 176-05B (2009). Discussions with Facility staff indicate that the previous shredder had a stack associated with it. The stack and skeletal structure of that previous shredder remain onsite. The present system has no stack.

MAKE	American Pulverizer
MODEL	NA
SIZE	60 x 85
FUEL	Electric (provided by EUGENERATOR)
CONTROLS	programable water pumping wet suppression system
MONITORING EQUIPMENT	water injection rate and EU-SHREDDER motor current
STACK HEIGHT*	No stack is associated with the existing shredder.

* maximum stack diameter of 36-inches, minimum height of 65 ft above ground level (SC VIII.1)

EUGENERATOR – The engine-generator combo provides power to EU-SHREDDER, and makes use of the following RICE:

MAKE/MODEL	General Electric Model 7FDL16 locomotive engine
Other	Non-Black Start, CI
MANUFACTURE DATE	1978
SIZE	Output rating of 2.6 MW, 3506 HP, maximum diesel fuel consumption of 158 gallon/hr
FUEL	Diesel and/or Natural Gas
CONTROLS	Diesel Oxidation Catalyst (DOC)/VOC Catalyst
MONITORING EQUIPMENT	pre and post-catalyst temperature and differential pressure monitors
STACK HEIGHT**	

** maximum stack diameter of 48-inches, minimum height of 48 ft above ground level (SC 1.6)

Three stacks are associated with the existing EUENGINE. Facility Staff report that the three stacks are the result of the original stack falling over. No documentation regarding the change from a single stack to three stacks was noted in District Files. At the time of the August 10, 2020, inspection, the Facility is in the process of submitting a permit modification for 173-08A, which will include corrections to stack requirements.

At the time of permitting, the CI RICE was identified as a rebuilt engine (following major failure on November 3, 2007), and had been determined not be subject to Subpart ZZZZ, based on an installation date prior to June 12, 2006.

Malfunction Abatement Plan (MAP)– The Facility is required to operate EU-SHREDDER (176-05B) and EUGENERATOR(173-08A) per approved MAPs. District Files contain copies of the following documents:

Document	Submittal Date	Approval Date
MAP EU-SHREDDER	June 15, 2010	July 8, 2010
MAP EUGENERATOR		
MAP EUGENERATOR (Revised)	February 14, 2019	

Note that PTI 173-08A requires a site specific monitoring plan be prepared for the Facilities Continuous Parameter Monitoring System (CPMS) associated with the EUGENERATOR CATALYST. The referenced plan required under SC VI.2(a) is incorporated into the revised MAP for EUGENERATOR. Evaluation of the documents and what is reported to be general practices at the facility, indicate general compliance with the MAP, however, the documents should be evaluated by the Facility and updated where necessary to correct any inconsistencies between the MAP and operational practices.

COMPLIANCE

Compliance status for the purpose of this report has been based on observations and information provided as part of the August 10, 2020, site inspection. The Facility is not required to submit annual emission estimates or other reporting.

Since 2011 no complaints have been received for the Facility.

Violations - Two Violation Notices (VNs) are of record for the Facility and are summarized below:

VN issued	VN Resolved	Violation/EU
1/9/2008	11/6/2008	Opacity, permit required/EUSHREDDER
5/10/2016	unresolved	Opacity/EUGENERATOR

AQD District Staff and Facility Staff believe that the existing opacity issues associated with EUGENERATOR may be resolved through activities associated with the permit modification application anticipated to be submitted on August 17, 2020. The Facility has been responsive to AQD to date to resolve issues as encountered.

EPA- EPA Region 5 Staff conducted an onsite inspection of the referenced facility on October 4, 2017. As a result of the site visit EPA determined that the existing Reciprocating Internal Combustion Engine (RICE) which drives the Facilities electric generator (EUGENERATOR), was subject to Federal Regulation under 40 CFR Part 63, Subpart ZZZZ (AKA the RICE MACT). The findings were summarized in an EPA Finding of Violation dated March 28, 2018.

Administrative Compliance Order (ACO) EPA-5-18-113(a)-MI-04, was issued on April 26, 2019. Corrective actions required under the referenced document included but is not limited to:

- installation of a catalyst to control emissions (initial engineering evaluation and testing by Dorenzo in May 2018);
- verification testing of the catalyst emissions (completed October 24, 2018); and
- modification of the existing PTI to include subpart ZZZZ requirements (completed under PTI 176-08A).

EU-SHREDDER - (PTI 176-05B)

This emission unit consisted of a scrap metal shredder equipped with a programmable water pumping wet suppression system and associated separators, shakers, oscillators, feeders, conveyors, material storage and all associated process activities. The programmable water pumping wet suppression system acts as a pollution control for the process equipment.

With the exception of SC IX.1 which requires notification of the District Office within 7 days of completing the installation of the stack and control device, no reporting requirements are associated with the emission unit. Notification would have been received prior to the 2010 site inspection, no documentation was found indicating that the facility failed to meet the requirement. No other reporting requirements are associated with EU-SHREDDER.

DESIGN/EQUIPMENT REQUIREMENTS – Prior to operation of EU-SHREDDER the permittee is required to install, operate and maintain in a satisfactory manner the programmable water pumping wet suppression system (SC IV.1) and a calibrated device to monitor the water injection rate and the shredder motor current on a continuous basis. (SC IV.2). The shredder operator onsite has a continuous digital readout monitors for not only generator output and shredder currents, (engine RPMs, motor RPMs, DC amps and DC volts) but also water injection rates for both the feed roller and the rotor.

Water injection rates at the time of the site inspection was reported to be 5 gpm each. Discussions with the shredder operator indicated that the water injection rate set points are adjusted based on nature of material as well as on weather conditions

The permittee is required to cover the dry, non-metal fluff conveyor and a chute installed at the discharge end of the conveyor (SC IV.3). Conveyor and chute covers were noted to be present during the August 10, 2020, site inspection.

OPERATION LIMITS - EU-SHREDDER operations are limited to a total of 4,576 hours per 12-month

rolling time period as determined at the end of each calendar month (SC III.1). This equates to 24 business days at 15.8 hours a day or 30 days at 12.7 hours a day. Records reviewed as part of the August 10, 2020 site visit indicated that the Facility does not customarily operate EUSHREDDER over 20 days per month.

A review of monthly totals for 2018 and 2019, indicated total hours of operation for EUSHREDDER and EUGENERATOR as :

CALENDAR YEAR	Hours of Operation (Monthly High)	Hours of Operation (Monthly Low)	Total Hours of Operation (12-Month Rolling)	Average Runtime for Year
2018	82 (April 2018)	163.25 (June 2018)	1479.25	78%
2019	85.75 (Feb 2019)	144.25 (Sept. 2019)	1427.75	77%
Limit	NA	NA	4576 (SC III.1)	NA

12-month rolling total hours of operation for the Facility are reported well below permit limits. Select data reviewed was consistent with values reported for 2018 and 2019 above.

DATE	Monthly Operation (Hrs)	% Run Time	Total Cars per Month
May 2020	122.75	78%	117
May 2019	122	78.7%	655
March 2019	124	70.2%	757
May 2018	116.5	77.3%	1053
Feb 2018	117	80.3 %	790
Feb 2017	84.5	72.7 %	385
April 2016	82	82.9%	267
LIMITS	NA	NA	NA

The permittee is required to prepare, maintain and implement an approved written plan, a "Permit to Install Compliance Plan" to demonstrate compliance with special conditions below:

- No processing of asbestos tailing (SC II.2), waste materials containing asbestos (SC II.2) or batteries in EU-SHREDDER (SC II.3).
- Pre-processing activities required by permit include the removal and proper disposal of the following materials:
- Fluids from vehicles, appliances and industrial machinery (SC III.2) including at minimum:
 - o gasoline,
 - o motor oil,
 - o antifreeze,
 - o transmission oil,
 - o brake oil,
 - o power steering fluid, and
 - o hydraulic fluid and differential fluid
- Freon or other chlorofluorocarbon/halogenated chlorofluorocarbons from air conditioning units in vehicles, appliances and industrial machinery. (SC III.3)
- All mercury-containing devices (SC III.4) and
- Other restrictions prior to processing includes flattening or puncturing of gas tanks. (SC III.5)

District Files contain a copy of an April 2008 revised Permit to Install Compliance Plan. The referenced

document was approved by the AQD District Supervisor on May 12, 2008. The referenced document summarizes the material inspection procedures for each load entering the facility. Inspections are conducted on both whole and crushed automobiles, as well as white goods, machinery or other scrap metals prior to shredding. The Facility has developed incoming scrap inspection lists for the various source types, identifying substances/components of concern to be removed prior to shredding. They report that all incoming deliveries are inspected and that they have developed a certification program for what they consider major clients. The Facility trains staff in appropriate material inspection objectives.

Incoming materials requiring supplemental preparations are noted, and the proper measures taken to insure that fluids, mercury switches, tanks and other non-appropriate materials are removed and containerized before processing. The Facility provided copies of transport manifests for Northern A-1 who transports offsite fluids collected/pumped into totes by the Facility for proper disposal. No drains or catch basins are utilized by the Facility.

SC III.9 requires the permittee to implement and maintain a Malfunction Abatement Plan (MAP) for EU-SHREDDER. The permittee is required to amend the MAP within 45-days upon installation of new equipment. District Files contain a copy of a MAP received on June 15, 2010. Under the MAP inspections points for EU-SHREDDER are limited to six conveyors, the hammer mill and the water suppression system.

Under the MAP, the Facility is required to constantly monitor the water suppression system which per the MAP should be running between 10-15 gallons per minute. As part of the August 10, 2020, site inspection District Staff verified that the water suppression system water injection rate is monitored in the operator control room, and the water injection "set point" is adjusted by the operator through out the day based on equipment operation, and material being processed. At the time of the August 10, 2020 inspection, the injection rate was 5 gallons per minute for both sprayers on the system. The Facility had prior to the inspection self-reported, and confirmed at the time of the inspection that they have not been documenting the water injection rate and shredder motor currents, which would be verification of compliance with the MAP. At the time of report preparation, the Facility reports that the documentation for both water injection rates and motor current has been added to the daily log sheet.

The permittee is required to implement and maintain the program for continuous fugitive emission control for plant roadways, the plant yard, material storage piles and all material handling operations of Appendix A of PTI 176-05B. (SC III.11) As part of the August 10, 2020 site inspection, the Facility provided District staff with records of brine applications to the yard, which appears to be conducted as needed (minimum of once per year). The most recent brine application was conducted on June 25, 2020. Control of fugitive emissions from movement offsite for the facility are further controlled by the buffer of trees that extends along most all of the property boundary. In addition, application of water is used by the Facility to control dust in work areas and material storage piles.

Storage of all non-metal and automotive shredder residue (AKA fluff) generated by EU-SHREDDER in a 3-sided bunker with a total volume of no greater than 500 cubic yards. (SC III.6) In addition, the permittee is required to prevent fires from starting through regular and frequent applications of water. (SC III.10) Observations made at the time of the inspection indicated general compliance with permit conditions.

MATERIAL LIMITS - The permittee is restricted to a limit of 183,040 tons of material per 12-month rolling (SC II.1). A review of records for the Facility indicated the following totals for the referenced calendar months.

Calendar Month	Monthly Total Processed (Tons)	12-Month Rolling Total Processed (Tons/Year) (SC VI.4)
June 2020	3397	34,631
June 2019	3928	44,875
June 2018	5445	49,320
June 2017	5240	40,710
June 2016	3702	29,428
Limit (SC II.1)	NA	183,040 Tons/Year

Annual processing totals for the select months indicate that 12-month rolling totals are less than half of the permit limits. Discussions with Facility Staff indicated that the COVID stay at home order did impact the volume of materials coming into the Facility for processing, and is reflected in the 12-month rolling total for 2020, which is lower than the previous 4 years.

EMISSION LIMITS - Emission restrictions for EU-SHREDDER include both Visible Emission (VE) limits as well as pollutant specific limits requiring verification testing. With respect to VEs, opacity limits include a 6-minute average of 10% from around the enclosure hood (SC I.6), stack (SC I.6) and conveyor/transfer points (SC I.7). VE observations by certified observers were taken at the time of the June 15-17, 2010 verification testing and confirmed visible emissions below limits. At the time of the August 10, 2020 site inspection, no visible emissions were noted with respect to EUSHREDDER and its associated components.

Pollutant specific limits as well as verification test results for testing conducted on June 15-17, 2010 by Dorenzo are summarized below.

PARAMETER	TEST RESULTS (June 15-17, 2010)	EMISSION LIMIT
PM	0.0155 lbs per 1000 lbs exhaust gases	0.050 lbs per 1000 lbs exhaust gases (calculated on dry gas basis) (SC I.1)
PM19	1.67 pph	5.30 pph (SC I.2)
Chromium, hexavalent	0.000036 pph	0.0005 pph (SC I.3)
Lead	0.025 pph	0.025 pph (SC I.4)
Mercury	0.00217 pph	0.0027 pph (SC I.5)

TESTING ACTIVITIES – Verification testing activities were conducted for the required parameters for EU-SHREDDER (SC V.1) on June 15-17, 2010. No compliance issues were noted in the September 3, 2010, site inspection report with respect to timely submittal of test plans, notifications and reporting.

MONITORING/RECORDKEEPING –Under PTI 176-05B the permittee is required to keep the following written records:

- All required calculations by the 15th day of the month for the previous month, (SC VI.1)
- Water injection rate for programmable water pumping wet suppression system, (SC VI.2)
- Shredder motor current for EU-SHREDDER, (SC VI.2)
- Operating hours per 12-month rolling time period, (SC VI.3) and
- Total amount of material processed in EU-SHREDDER in tons per 12-month rolling time period as calculated monthly. (SC VI.4)

As previously indicated, AQD District Staff received notification that monitoring and record keeping requirements with respect to the water injection rate for the wet suppression system (SC VI.2) and EUSHREDDER motor current (SC VI.2) has not been documented though the digital monitoring equipment is present in the Operators work space located at the top of EUSHREDDER. The Facility has indicated that this deficiency will be corrected by modifying the existing daily log to include the required data.

Records are maintained by the Facility in three ring binders onsite. Data is summarized on a monthly basis, and is easily accessible. Data reviewed at the time of the August 10, 2020, site inspection confirmed that with the exception of the shredder motor current and water injection rates, that the monitoring and recordkeeping requirements under PTI 176-05B were being met by the Facility.

EUGENERATOR – (173-08A)

EUGENERATOR consists of one GE Model 7FDL16, Locomotive Diesel RICE. The engine is dual fueled and may operate on diesel and natural gas. The engine drives and electric generator with an output rating of approximately 2.6 megawatts (MW). A catalyst and continuous parameter monitoring system (CPMS) was added in 2018 in response to requirements under Subpart ZZZZ and compliance with SC IV.1. The CPMS provides continuous monitoring of pre and post catalyst gas temperatures, as well as pressures and meets the requirements of SC VI 2 (a)-(d) and VI.3.

OPERATION LIMITS - Under the previous permit (173-08) the permittee was required to prepare and submit for review and approval a Preventative Maintenance/MAP (PM/MAP) for the emission unit and is restricted from operating the EU unless the PM/MAP is implemented and maintained (SC 1.7). As previously indicated, the Facility has been operating EUGENERATOR per a PM/MAP approved on July 8, 2010.

MATERIAL LIMITS – The EU was permitted to run diesel and/or NG fuels. At the time of the August 10, 2020, site inspection the Facility reported that the engine is being run on No.1 diesel fuel with heat release of 135K-140K MMBTU/gallon. The Facility indicated that they would like to switch to No. 2 diesel fuel, and that the fuel release was 143K MMBTU/gallon. With the exception of sulfur content and total heat release limits, there is no restriction in the permit that would appear to restrict the company from operating EUGENERATOR with No. 2

Total heat release of all natural gas and diesel fuels used in EUGENERATOR determined per instructions in Appendix A of PTI 173-08A are limited with respect to MMBtu per 12-month rolling total (SC II.1) as well as in MMBtu/Hr (SC II.2). The Facility reports that their heat release 12-month rolling total is normally about 20% of their limit. A review of records indicated the following:

DATE	Monthly Fuel Usage (gallons)	Monthly MMBTUs	MMBtu/12-month rolling	MMBtu/Hr
May 2020	5013	701.82	10116.32	7.33
March 2019	6542	915.88	10978.46	10.53
May 2018	7324	1025.36	12542.36	11.39
Feb 2017	5182	752.48	8750.95	11.89
April 2016	3839	537.46	7840.78	7.9
LIMIT	NA	NA	44,524 MMBtu (SC II.1)	21.7 MMBtu/hr (SC II.2)

Material limits for EUGENERATOR also includes a limit of sulfur content for the diesel fuel combusted to 15 ppm (note PTI 173-08 specified 0.05% by weight (SC 1.4)) and a minimum cetane index of 40 or a maximum aromatic content of 35% by volume. (SC II.3) A review of bill of ladings provided by the Facility for diesel fuel used indicated Sulfur contents of less than 15 ppm by weight.

With respect to the cetane index and the maximum aromatic content, the Facilities local distributor reached out to their supplier (Marathon) and received the following response:

It will vary from refinery to refinery but in general:

- The Cetane Index will always be >40 for both and in general 42-45 for ULSD and a little higher (44-46) for #1 (The less aromatic / more paraffin #1 means better cetane)
- Typical aromatic content of #1 is 15-20% while ULSD can range typically from 20-30%, but estimating the value to generally be 20-25% for the #2.

Based on the above information it appears that the diesel fuel used is in compliance with permit requirements based on the cetane index >40 and aromatic contents well below 35%.

EMISSION LIMITS – Emission limits for EUGENERATOR consist of both pollutant specific limits as well as VEs. Emission limits established for PTI 173-08 were based on worst case emission rates between diesel and NG fuels as presented in AP-42. PTI 173-08A includes the following permit limits:

Pollutant	Limit (pph)
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CO	70% reduction or greater or 25 ppmvd@ 15% O2 (SC I.1)
NOx	69.4 (SC I.2)
VOC	17.4 (SC I.3)

VE limits for EUGENERATOR are found in the General Conditions of the PTI (GC 11) and limit the EU to a 6-minute average of 20-percent opacity, except for one six-minute average per hour of not more than 27-percent opacity. Or a visible emission limit specified by an applicable federal New Source Performance Standard (NSPS).

VEs observed for the Facility as part of this compliance evaluation were conducted prior to the site inspection. It should be noted that due to the COVID virus restrictions, that AQD District Inspectors were unable to recertify as VE observers during the normal spring recertification activities. The August 11, 2020 uncertified readings reported the following 6-minute averages:

DATE	Time	Highest 6-Minute Average
August 10, 2020	8:50 – 9:05 AM	4.375

TESTING ACTIVITIES – SC V.1 of the PTI requires verification testing for NOx, VOC and CO upon request of the AQD District Supervisor. To date not documentation exists in the files requesting verification testing of the EU by the Facility. Therefore, the condition is not applicable at this time.

Stack test activities onsite have been conducted to meet requirements under 40 CFR Part 63, Subpart ZZZZ. Stack test results as well as a Notification of Compliance Status for 40 CFR Part 63, Subpart ZZZZ dated 12/21/2018, were submitted with cover letter dated January 4, 2019, and are summarized below:

DATE	CO Reduction (%)	CO in PPMVD @ 15%O2
October 24, 2018*	87%	42 ppmvd
LIMIT (one or other) (SC I.1)	70% minimum	<23 ppmvd

*Average output was reported to be 2.261 KW

Stack test requirements meet permit condition SC V.2. Facility staff report that due to the limited hours of operation annually, testing to meet the subpart requirements (8760 hours or three years, whichever comes first) will be conducted before October 24, 2021. The Facility has indicated that they have tentatively scheduled testing for August-September 2021.

MONITORING/RECORDKEEPING – Records required under PTI 173-08A are required to maintained for a period of 5 years and include the following operational data:

- Monthly diesel fuel usage and NG usage (calculated at end of each calendar month) (SC VI.1a)
- 12-Month rolling total diesel fuel and natural gas usage (calculated at the end of each calendar month) (SC VI.1a)
- Fuel receipts of fuel supplier certifications indicating:
 - Sulfur content of diesel fuel used (SC VI.1b)
 - Heat content of fuels (SC VI.1c)
- Monthly hours of operating for EUGENERATOR (SC VI.1f)
- Calculations of total heat release of all fuels used in EUGENERATOR (SC VI.1d)
- Calculations of average hourly heat release in MMBTU/hr and annual heat release in MMBtu/12 month rolling time period (SC VI.1e)

Fuel usage, hours of operation, maintenance checks, CPMS parameters and volume of material processed are recorded daily by the operator. Monthly totals, and 12-month rolling totals as well as heat release calculations are completed by Facility Staff on a monthly basis. A review of the records maintained by the Facility reported the following information:

DATE	Monthly Fuel Usage (gallons)	Monthly Hours of Operation
May 2020	5013	122.75
March 2019	6542	124
May 2018	7324	116.5
Feb 2017	5182	84.5
April 2016	3839	82
LIMIT	NA	NA

DATE	Average Hourly Heat Release [LS(1)] (MMBtus)	Month Total Heat Release (MMBtus)
May 2020	7.33	701.82
March 2019	10.53	915.88
May 2018	11.39	1025.36
Feb 2017	11.89	752.48
April 2016	7.9	537.46
LIMIT	21.7 MMBtu/hr (SC II.2)	NA

Monthly totals appear to be relatively consistent with previous years, as are yearly totals presented below:

DATE	12-Month Rolling Fuel Usage (gallons)	12-Month Rolling Heat Release (MMBtus)
2020	73103	10234.42
2019	76184	10655.75
2018	81198	11367.72
2017	68504	9745.64
2016	65418	8745.58
LIMIT	NA	44,524 MMBtu (SC II.1)

In addition to the above referenced information, the Facility is required to maintain the following records associated with equipment and control device malfunctions:

- Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment as required under 63.6655 (a)(2). (SC VI.1h)
- Records of performance tests and performance evaluations as required in 40 CFR 63.10(b) (2)(viii). (SC VI.1.i)
- Records of all required maintenance performed on the air pollution control and monitoring equipment as required under 40 CFR 63.6655(a)(4). (SC VI.1.j)
- Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner

of operation as required under 40 CFR 63.6655(a)(5). (SC VI.1k)

The facility maintains records associated with engine and catalyst maintenance in compliance with permit conditions. (SC VI.1g) In addition, a copy of each notification and report that was submitted to comply with subpart ZZZZ, including all documentation supporting any Initial Notification or Notification of Compliance Status that was submitted is maintained on file. (SC VI.1g)

The Facility reports that their CPMS meets the following permit requirements:

- For a CPMS, the temperature sensor shall have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger as required under 40 CFR 63.6625 (b)(4). (SC VI.1d)
- The permittee shall conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in the site-specific monitoring plan at least annually.(SC VI.1e)
- The permittee shall conduct a performance evaluation of each CPMS in accordance with the site-specific monitoring plan.(SCVI.1f)

The Facility reports that the annual CPMS evaluation is conducted in October annually.

With respect to reporting requirements under 40 CFR Part 63, Subpart ZZZZ, the Facility reports submittal of the required semi-annual reports and notifications directly to EPA. District Staff have requested that copies of all future submittals be submitted to District Staff.

SUMMARY

On August 10, 2020 AQD District Staff conducted a scheduled site inspection of the A&L Iron and Metal, Inc. Facility (AKA A&L) located at 2000 Milbocker Road, Gaylord, Otsego County, Michigan. (N7508). The A&L Facility is a metal recycler.

The referenced Facility operates under two Permits to Install (173-08A and 176-05B). On April 1, 2020, the Facility submitted Air Permit Exemption Determination for Changes to Natural Gas Fuel Process Controls for EUGENERATOR. The referenced document outlined the proposed installation of an Altronic GTI bi-fuel system manufactured by Sulzer Turbo Services New Orleans Inc. (AKA Sulzer). Supplemental documents were provided. A review of the document as well as supplemental data indicated based on evaluation of meaningful change that the proposed changes would not meet Rule 201 permitting exemptions under Rules 285(2)(b) and Rule 285(2)(c). The Facility has contracted Impact to prepare and submit a permit modification application to incorporate the proposed changes as well as correct for the three existing stacks of EUGENERATOR. The referenced application is anticipated to be submitted tentatively August 17, 2020.

The last site inspection for the purposes of general compliance with respect to permit conditions was conducted on September 2, 2010.

Compliance status for the purpose of this report has been based on observations and information provided as part of the August 10, 2020, site inspection. The Facility is not required to submit annual emission estimates or other reporting.

Since 2011 no complaints have been received for the Facility.

Two Violation Notices (VNs) are of record for the Facility and are summarized below:

VN issued	VN Resolved	Violation/EU
1/9/2008	11/6/2008	Opacity, required/EUSHREDDER permit
5/10/2016	unresolved	Opacity/EUGENERATOR

AQD District Staff and Facility Staff believe that the existing opacity issues associated with EUGENERATOR may be resolved through activities associated with the permit modification application

anticipated to be submitted on August 17, 2020. The Facility has been responsive to AQD to date to resolve issues as encountered. Though Method 9 VE observations were taken for a period of 15 minutes prior to the site inspection, and indicated VE's in compliance with permit limits, the inspector had not been recertified at the time of the observations.

EPA Region 5 Staff conducted an onsite inspection of the referenced facility on October 4, 2017. As a result of the site visit EPA determined that the existing Reciprocating Internal Combustion Engine (RICE) which drives the Facilities electric generator (EUGENERATOR), was subject to Federal Regulation under 40 CFR Part 63, Subpart ZZZZ (AKA the RICE MACT). The findings were summarized in an EPA Finding of Violation dated March 28, 2018. Administrative Compliance Order (ACO) EPA-5-18-113(a)-MI-04, was issued on April 26, 2019.

Prior to the August 10, 2020, site inspection, the Facility self-reported failure to record water injection rates and shredder motor current rates as indicated in the approved MAP for EU-SHREDDER. Implementation of the MAP is required under SCIII.9 for EU-SHREDDER. The Facility reports that the documentation has been implemented prior to completion of this inspection report. No other compliance issue was noted at the time of the site inspection, and the Facility appears to be in general compliance with permits issued.

NAME _____

DATE _____

SUPERVISOR _____

Sharon LeBlanc

Digitally signed by Sharon LeBlanc
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