

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

B191273188

FACILITY: RENK America		SRN / ID: B1912
LOCATION: 76 GETTY STREET, MUSKEGON		DISTRICT: Grand Rapids
CITY: MUSKEGON		COUNTY: MUSKEGON
CONTACT: Phil Boucon , EHS Manager		ACTIVITY DATE: 06/27/2024
STAFF: Scott Evans	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: On site inspection for FY24		
RESOLVED COMPLAINTS:		

Introduction

On June 27, 2024, State of Michigan Department of Environment, Great Lakes, and Energy Air Quality Division staff member Scott Evans (SE) conducted an on-site inspection of the RENK facility located at 76 Getty Street in Muskegon Michigan to assess compliance with permit requirements and all other air quality rules and regulations. This facility is a diesel engine and transmission systems development and production facility. It contains machining, assembly, metal treatment, and engine testing equipment. This facility is a Title V Opt-Out facility for Hazardous Air Pollutants, NOx, CO, Particulate Matter (PM) and Volatile Organic Compounds (VOCs). It has two active permits to install (PTIs): PTI No 507-87 and PTI No. 161-08.

Upon arrival at the facility, SE conducted a brief inspection of the facility exterior. There were no observable odors or visible emissions. SE then entered the facility and was greeted by EHS Manager Phil Boucon. A meeting to discuss the purpose of the visit took place and an inspection of the facility interior followed.

PTI No. 507-87

This permit contains special conditions applied to a countercurrent packed air stripping tower for a groundwater treatment system. There are five special conditions outlined, labeled as SC10 – SC14.

SC10 states that there shall be no visible emissions from the air stripper. During the inspection it was observed that there were no visible emissions from the air stripper. The facility is compliant with the requirement.

SC11 states that VOC emissions rates from the air stripper shall not exceed 0.17 lbs/hr nor 0.74 tpy. The facility submits quarterly reports as required in the next condition. The most recent report identified the hourly emission rate as 0.01 lbs/hr. This rate would suggest an annual emission rate of 0.04 tpy assuming 24 hour per day operation of the equipment. The facility is compliant with the condition.

SC12 states that the facility shall monitor and record the flow rate and total VOC concentration of the air stripper influent and effluent water streams and submit a report on a quarterly basis. As stated, the facility has submitted their quarterly reports as required with the most recent report being submitted on May 17, 2024. The facility is compliant with this condition.

SC13 states that the exhaust from the stripper shall be released vertically from a 60ft. stack. The stack was not measured for safety reasons. Observation of the stack appeared to

confirm compliance with dimensional requirements. The facility is compliant with this condition.

SC14 states that testing to verify emission rates of the unit may be required by the AQD and must be completed by the facility. At this time testing is not necessary.

PTI No.161-08

This permit contains requirements for four emission units (EUs) and two flexible groups (FGs) as listed below:

- EU-PRODUCTIONCELLS
- EU-EXPERIMENTCELLS
- EU-ALUMINUMLINE
- EU-FERROUSLINE
- FG-SURFACETREAT
- FGFACILITY

EU-PRODUCTIONCELLS

This unit consists of test cells for dynamic testing of production engines and transmission systems. Emissions are controlled by parallel thermal oxidizers.

This unit has one emission limit of 0.10 lbs. of PM per 1000 lbs. of exhaust gases. Compliance with this limit is determined through proper installation and operation of the thermal oxidizers, which is discussed below. At the time of the inspection, the thermal oxidizers were properly installed and appeared to be operating properly, demonstrating compliance with this limit.

This unit has one operational limit, which states that the unit may not operate unless the thermal oxidizer is installed and operational, maintaining a minimum operational temperature of 1100°F. During the inspection, the thermal oxidizer system was operating at 1509°F, demonstrating compliance with the temperature requirement.

This unit has one monitoring requirement, which states that the thermal oxidizer must have a continuous temperature monitor to demonstrate proper operation. During the inspection, a proper temperature monitor was used to determine the operational temperature observed above, demonstrating compliance with the requirement.

This unit has one recordkeeping requirement, which states that records of temperature monitoring shall be maintained by the facility. The facility was able to demonstrate these records during the inspection to confirm compliance with the requirement.

EU-EXPERIMENTCELLS

This unit consists of test cells for dynamic testing of experimental engines and transmission systems. Emissions are controlled by parallel thermal oxidizers, which is the same system as is used by the EU-PRODUCTIONCELLS process.

This unit has one emission limit of 0.10 lbs. of PM per 1000 lbs. of exhaust gases. Compliance with this limit is determined through proper installation and operation of the thermal oxidizers, which is discussed below. At the time of the inspection, the thermal

oxidizers were properly installed and appeared to be operating properly, demonstrating compliance with this limit.

This unit has one operational limit, which states that the unit may not operate unless the thermal oxidizer is installed and operational, maintaining a minimum operational temperature of 1100°F. As previously discussed, during the inspection, the thermal oxidizer system was operating at 1509°F, demonstrating compliance with the requirement.

This unit has one monitoring requirement, which states that the thermal oxidizer must have a continuous temperature monitor to demonstrate proper operation. During the inspection, a proper temperature monitor was used to determine the operational temperature observed above, demonstrating compliance with the requirement.

This unit has one recordkeeping requirement, which states that records of temperature monitoring shall be maintained by the facility. The facility was able to demonstrate these records during the inspection to confirm compliance with the requirement.

FG-SURFACETREAT

This flexible group consists of EU-ALUMINUMLINE and EU-FERROUSLINE, each controlled by a wet scrubber. These units consist of treatment lines for surface cleaning, preparation, and dip coating of various aluminum and ferrous parts, respectively. The systems contain line-specific open-top process tanks, associated lip vents, ductwork, caustic wet scrubbers, induced draft fans and stack.

The group has two emission limits as follows:

- 4.19 $\mu\text{g}/\text{m}^3$ of hexavalent chromium in EU-ALUMINUMLINE
- 3.22 $\mu\text{g}/\text{m}^3$ of hexavalent chromium in EU-FERROUSLINE

Compliance with these limits is determined through proper installation and operation of the wet scrubbers, as discussed below. At the time of the inspection, the facility appeared to be compliant with these limits.

This group has one equipment requirement, which states that the wet scrubbers must be installed, maintained, and operated in a satisfactory manner, including a minimum pH of 9 and adequate flow to the scrubbers. During the inspection, this was discussed, and the scrubbers were observed. Flow to the scrubbers could be observed and it was discussed that pH testing is conducted regularly with handwritten records being maintained and verified on site. During the inspection, the pH was observed to be at 9.4, which is compliant with the requirement.

This group has one recordkeeping requirement, which states that monthly chromic usage shall be maintained by the facility. This was discussed and records were provided to the AQD to demonstrate usage. These records were observed on site during the inspection and the facility appeared compliant with this requirement at the time of the inspection. Copies of these records were not requested as volume of records for this facility is large, but the facility can provide usage records upon request.

This group has two stack requirements that outline the required stack parameters for each unit. The stacks were not measured directly during the inspection for safety. Observation of the stacks appeared to confirm compliance with height and width requirements.

FGFACILITY

This group contains all process equipment at the facility including equipment covered by other permits, grand-fathered equipment and exempt equipment.

This group has the following applied emission limits:

The above compliance determinations were determined using records as discussed below.

This group has two recordkeeping requirements. The first requires that records be prepared by the 30th day of each calendar month. The facility provided records as requested demonstrating compliance with this requirement.

The second requirement states that the facility shall keep monthly and 12-month rolling records of NO_x, CO, VOC, individual HAP, and aggregate HAP emissions. These records were maintained as required and provided to make the above emission limit compliance determinations. The facility was compliant with this requirement.

NESHAP and Reporting

This facility is subject to one National Emissions Standards for Hazardous Air Pollutants (NESHAP) that Michigan is not delegated as the regulatory authority of: 40 CFR Part 63 Subpart W for Plating and Polishing Operations Area Sources. While Michigan is not the delegated regulatory authority for these rules, compliance notifications have been provided to the AQD.

Historically, the facility has also been subject to two other NESHAP rules. During this inspection the facility was not currently undergoing processes that would be subject to either regulation.

- 40 CFR Part 63 Subpart T for Halogenated Solvent Cleaning. The degreaser no longer uses one of the solvents regulated under subpart T. RENK is now using 1-bromopropane in the degreaser which was added to the HAP list by EPA on February 4, 2022. The highest monthly usage of 1-bromopropane was seen in August of 2023 with 295.6 lbs of emissions, which appears to be exempt from permitting requirements under Rule 290. Emissions of 1-bromopropane are included in the facility wide HAP emission calculations.
- 40 CFR Part 63 Subpart H for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources. RENK does not currently conduct spray application of coatings.

At this time, it appears that the facility is no longer subject to these NESHAP regulations until they resume the operations that would be subject.

As a Title V Opt-Out source for multiple air pollutants, this facility is required to submit annual emissions reporting to the State of Michigan. The most recent submission was received by the AQD on March 14, 2024.

Exempt Equipment

There are multiple pieces of equipment at the facility that are exempt from air permitting regulations under Rule 285. These exemptions include:

- Machining equipment exempt under Rule 285(2)(l)(vi)(A)
- Welding equipment exempt under Rule 285(2)(i)
- Shot blasting equipment with associated dust collectors exempt under Rule 285(2)(l)(vi)(C)

The facility has three powder coating booths that have been used historically. These booths utilize fabric filters and are exempt from air permitting under Rule 287(2)(d). It was expressed by the facility that these booths have not been used in recent years. The facility was advised to observe coating operation rules changes applicable to western Muskegon County as an ozone non-attainment region should they resume or increase any coating operations. At this time, the facility appears to be compliant with rules and regulations.

The facility utilizes mechanical paint stripping equipment stations on an as needed basis. These stations are exempt from air permitting requirements by Rule 285(2)(l)(vi)(B).

The facility has an oil quench system in which a pot of hot oil is used as part of the manufacturing process. Records indicate that this equipment was installed in the 1940s and so is grandfathered and does not require air permitting unless modified or reconstructed.

The facility has multiple stress relief ovens which are exempt from air permitting under Rule 282(2)(a)(i) as they are used as a separate process from the oil quenching operations.

Located at the facility are multiple cold cleaners. These cleaners utilize mineral spirits and are maintained by a contracted company, though some contain alcohol solution and are maintained by facility maintenance. These are small and exempt from air permitting requirements under Rule 281(2)(h). All observed cleaners were properly lidded during the inspection.

The facility has two emergency generators on site. One generator was installed in 1979 and has a heat input of 270,000 btu/hr. This generator is considered an existing unit and is exempt from New Source Performance Standard (NSPS) 40 CFR Part 60 Subpart IIII. The other generator was installed in 2007 and has a heat input of 377,000 btu/hr. This generator is subject to NSPS 40 CFR Part 60 Subpart IIII. It appeared that the facility was aware of and in compliance with the requirements set by the NSPS as demonstrated by retention of manufacturer data of the generators and necessary operational records. Both generators are inspected regularly by the facility. The generators are also subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63 Subpart ZZZZ. Compliance with this NESHAP is demonstrated through compliance with NSPS 40 CFR Part 60 Subpart IIII. Both generators are exempt from air permitting requirements under Rule 285(2)(g).

Conclusion

At the end of the inspection, the facility appeared to be compliant with all permit requirements and all other applicable air quality rules and regulations.

NAME Scott Evans

DATE 8/22/2024

SUPERVISOR HH