

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection

P089549739

FACILITY: MDEQ RRD		SRN / ID: P0895
LOCATION: 3675 South Straits Highway, INDIAN RIVER		DISTRICT: Gaylord
CITY: INDIAN RIVER		COUNTY: CHEBOYGAN
CONTACT: Eric walters ,		ACTIVITY DATE: 08/01/2019
STAFF: Sharon LeBlanc	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: Self-initiated site inspection of AS/SVE remediation system. Permit 20-18. Stack does not appear to meet requirement for height and unobstructed vertical flow. VN to be issued if not resolved by August 30, 2019. sgl		
RESOLVED COMPLAINTS:		

INTRODUCTION

AQD District Staff conducted a self-initiated site inspection of Michigan Department of Environment, Great Lakes & Energy (EGLE, formerly MDEQ) Remediation Site – Jack’s Auto Repair. The referenced facility (SRN P0895) is located at 3675 South Straits Highway, Indian River, Cheboygan County, Michigan.

The referenced facility operates under General Permit No. 20-18, issued on March 19, 2018. The system was started up on September 13, 2018.

FACILITY

The referenced Facility is a mobile air sparge and soil vapor extraction (AS/SVE) system housed in an enclosed trailer.

Jack’s Auto Service (AKA Indian River Auto Care) is located at the SE corner of the intersection of South Straits Hwy and Martha Street, Indian River, Michigan. Supplemental remedial investigative activities summarized in the Final Site Assessment Report dated June 26, 2017 indicated the continued presence of soil contamination onsite.

Remediation activities for the site were designed such that the AS/SVE system would operate at 80 cfm to draw an optimum vacuum from the SVE well and would withdraw a maximum of 41 pounds of hydrocarbon per month. Contaminants anticipated to be remediated included not only petroleum hydrocarbons, tetrachloroethylene and 1,2 dichloro 1,1,2,2 tetrafluoromethane. Remediation activities are anticipated to last one year.

Operation and maintenance (O&M) of EUSOIL, is presently being conducted by staff from Fleis & Vandenbrink. The system was reported to be started up on September 13, 2018, and was reported to have operated without any issues, until it was shut down for the month of June to evaluate/assess the contamination remaining onsite.

Weather conditions at the time of the site visit were sunny and warm, with clear skies. The system was noted to be operating at the time of the visit, with warm effluent air heating the exhaust stack (2-inch diameter Schedule 40 PVC pipe).

Immediately adjacent properties include restaurants and commercial buildings. Some residential buildings are anticipated to be located within a block or two of Straits Highway, which acts as a main business route for the town.

DRIVING DIRECTIONS

From the Gaylord Office, travel north on I-75, to exit 310. Take Exit 310 for Indian River/Rogers City, Michigan, and upon leaving expressway travel west on M-68. Make a right on South Straits Highway (M-68) and travel north to the intersection of Oakley/Martha Street (3rd intersection) on the right-hand side. The Facility is on the SE side of the intersection. The trailer which is a dark colored is located on the west side of the building.

PERMITTING

Only one permit (20-18) has been issued for the referenced Facility. As previously indicated, the permit was issued on March 19, 2018. As part of the permit review, emissions for the proposed remediation system was evaluated for Rule 225 screening level compliance. The low expected emission rate of 0.5 tpy was determined to not be cost effective for either 702 BACT or 224 TBACT.

Emission concentrations were analyzed for “total VOC and other volatile organic compounds”, rather than VOCs and the individual compounds of tetrachloroethylene and 1,2 dichloro 1,1,2,2 tetrafluoromethane. Total emissions were estimated at 0.48 tons per year using the maximum contaminant concentrations from the most recent sampling and the 80-cfm exhaust rate. No control device was proposed, and no emissions modeling was conducted.

REGULATORY

The Facility is a true minor based on Potential to Emit, for VOC. The Facility is not subject to NESHAP or NSPS subparts.

EQUIPMENT

The trailer mounted remediation equipment per the permit application includes both an approximately 5-horsepower compressor and an approximately 10-horsepower SVE blower package unit with air flow meters to measure flow rates. The remediation system including the associated air flow distribution system (aka piping run) is collectively identified under permit 20-18 as EUSOIL.

COMPLIANCE

No complaints, Violation Notices, consent orders or other compliance issues are associated with the Facility.

EUSOIL – AS/SVE, trailer mounted, remediation system, sparge and extraction wells and piping run. No pollution control device is associated with the system. One Stack is associated with the system (SVSOIL).

OPERATION/DESIGN LIMITS - No process or operational limits are associated with permit 20-18.

MATERIAL LIMITS – No material limits are associated with permit 20-18.

EMISSION LIMITS -- Emission limits associated with the Facility are limited to a total VOC and other volatile organic compounds of 0.5 ton per year. The consultants operating the system calculate emissions using laboratory analytical results from recently collected system samples and calculated using the equation and form provided in Appendix 1 of permit 20-18.

A summary of emissions to date is included. Though initial activities at the site were initiated less than a year ago, it appears that the facility will be well below the annual limits. The highest system effluent concentrations were reported in conjunction with startup samples taken on September 13, 2018. Extrapolation of the effluent concentrations, and assuming continuous operation would result in emissions of approximately 1800 lbs for 12-month rolling. However, the system effluent concentration one week later dropped by over 75%, and system effluent samples collected on June 4, 2019, indicated effluent concentrations of approximately 6% of those at system startup. As of June 2019, total emissions were calculated to be 177.92 lbs of VOC and other volatile organic compounds for the approximately 8.5-month period.

DATE	EMISSIONS (lb/hr)	Hours	Period Emissions (lbs)	12-month Rolling Total Emissions (lbs)	LIMIT (lbs/year)
9/13/18	0.205	720	147.6	--	1000
9/20/18	0.043	--	--	--	1000
10/17/18	0.001	744	0.744	147.804	1000
11/29/18	0.0001	720	0.072	148.876	1000
12/27/18	0.002	744	1.488	150.364	1000

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3/5/19	0.00328	2136	--	157.37	1000
6/4/19	0.01317	1560	10.276	177.92	1000

TESTING ACTIVITIES –With the exception of field samples collected for lab analysis of effluent stream concentrations, no stack testing or formal emissions verification testing is required under permit 20-18. Field samples are collected to meet monitoring and recordkeeping requirements which require monitoring and recording of system effluent stream concentrations. The required data is obtained by collection of effluent air samples of EUSOIL for laboratory analysis of by method TO-15.

MONITORING/RECORDKEEPING – Permit conditions for monitoring and recordkeeping include:

- Monthly calculation of total monthly and 12-month rolling total VOC and other volatile organic compound emissions (SC VI.1 and VI.3)
- Monthly recording of flow rate for system (SC VI.2)
- Monitor and record concentration of VOC and other organic volatile compounds effluent stream (SC VI.2)

The required monitoring and recordkeeping requirements are conducted and submitted as part of required reporting requirements.

REPORTING -- Under permit 20-18, the Facility was reported to submit quarterly the following information using the form in Appendix 1 or an approved equivalent within 30-days of the end of each quarter:

- System flowrate (SC VII.1)
- Total combined concentration of VOC and other organic volatile compounds. (SC VII.1)
- Calculation of VOC and other organic volatile compound emission rates. (SC VII.1)

The required report submittals have been received by AQD Gaylord District Staff on a timely basis. The documents have been determined to be complete and in compliance with permit conditions. Appendix 1 forms are included, and contain the required flowrate, hours of operation and effluent stream concentrations. A review of District files indicates that the most recent quarterly report was submitted on July 8, 2019.

OTHER REQUIREMENTS- EUSOIL has one stack associated with it. By permit the stack (SVSOIL) is to be constructed so that emissions will exhaust unobstructed and vertically into ambient air. Permit conditions limit SVSOIL to a maximum of 4-inch diameter and minimum 30-foot minimum stack height. (SC VIII.1)

During the August 1, 2019, site inspection, District Staff noted that the system stack was constructed of 2-inch diameter, Schedule 40 PVC pipe, and had an estimated height of approximately 25 feet bls. An estimation of height based on the number of courses of concrete block (8.5-inches each course) put the building at approximately 20 feet above land surface, with the top of stack extending approximately 5 feet above that. In addition, District Staff noted that the stack was capped with a "T" that obstructed vertical flow and resulted in flow going back to the land surface. In violation with permit conditions.

Representatives of Fleis & Vandenbrink were contacted electronically regarding compliance issues believed to be associated with the stack. Should adequate response not be received by August 30th, a Violation notice will be issued for the violation.

SUMMARY

AQD District Staff conducted a self-initiated site inspection of Michigan Department of Environment, Great Lakes & Energy (EGLE, formerly MDEQ) Remediation Site – Jack’s Auto Repair. The referenced facility (SRN P0895) is located at 3675 South Straits Highway, Indian River, Cheboygan County, Michigan.

MACES- Activity Report

The referenced facility operates under General Permit No. 20-18, issued on March 19, 2018. At the time of inspection, the system the system was running. In addition, compliance issues were noted in the construction of the stack and the consultant responsible for the site and activities has been notified electronically of concerns. Should appropriate response not be received by August 30, a VN will be issued.

NAME Sharon LeBlanc

DATE 8/14/2019

SUPERVISOR SN