

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

N808568348

FACILITY: S.C. Holdings, Inc.		SRN / ID: N8085
LOCATION: 2301 TWO MILE & BEAVER RD, KAWKAWLIN		DISTRICT: Bay City
CITY: KAWKAWLIN		COUNTY: BAY
CONTACT: Brad Norton , District Manager ELMG Mideast		ACTIVITY DATE: 07/27/2023
STAFF: Kathy Brewer	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: On site inspection of emission control portion closed industrial waste landfill leachate purge system. Since last inspection portable carbon units have been replaced with permanent carbon tanks. MAP update needed. All emission values <0.01 TPY 12 month rolling, well below limit of 1 TPY.		
RESOLVED COMPLAINTS:		

On July 27, 2023 I (KLB) conducted an inspection at SC Holdings remediation site of the closed Hartley & Hartley landfill. The closed landfill is a former waste disposal facility that accepted municipal & industrial waste from the 1950's until 1978. The facility accepted spent solvents, oils & other liquids & solid wastes. Leachate from the landfill is collected & sent off site for disposal. The site received PTI #209-08 on September 22, 2008 for a leachate pre-treatment system.

Brad Norton, District Manager, ELMG (Environmental Legacy Group Management) Mideast, Waste Management Inc. accompanied me on the inspection. We viewed the leachate storage holding tank (T-100), oil/water separator, passive carbon system (55 gal drum), aeration tank (T-300), carbon pre-heater, fan assisted carbon units, carbon tank pressure gauge, and the vents from passive and fan assisted carbon systems.

All treatment units were operating and required records were reviewed. The facility will need to update the facility MAP to reflect current operating and monitoring. No violations of the PTI #208-09 or air regulations were found.

Records reviewed:

Quarterly operating reports December 2021 – June 2023

Emissions January 2023, September 2022, July 2021

Treatment system inspection and maintenance records December 2022 to June 2023

Carbon replacement records

October 2008 MAP

PTI No. 209 -08 Eval and PTI application

EULEACHATETRTMNT: Collected leachate is pumped to an oil-water separator, aeration tank, & placed in a holding tank until shipped off-site. The air from the oil-water separator & holding tanks is ducted to a passive carbon adsorber unit. The aeration tank emissions are ducted to two carbon adsorber units that can be operated in series, in parallel, or individually and vented out SVCONTROL2

Passive Carbon MME 1200

85% VOC Removal Efficiency

Vent ID: SVCONTROL1

MME 120 receives exhaust from:

T-100 (12,000 gallon holding tank)

T-200 (Oil/Water separator)

T-250 (Oil holding tank)

Forced Carbon MME 350 & 360

≥95% VOC Removal Efficiency

Vent ID: SVCONTROL2

MME 350 & 360 receive exhaust from:

T-300 (aeration holding tank)

fan (F340) pulls exhaust which is heated to 90F (heater HTR 345) then vented to MME 350 & 360

Canisters have differential pressure monitor (PSH 300). Expected operating range is 4 " H₂O

Emission Limits

The emissions are limited to 1 TPY VOC on a 12 month rolling average. All emission records reviewed showed the emissions were less than 0.01 TPY.

Material Limits

The PTI does not contain any material limits

Process/Operational Restrictions

SC III.1. requires both the passive and the air assisted carbon system must operate per a MAP.

On October 16, 2008, the facility submitted the required MAP. The plan was acceptable and considered approved on January 20, 2009. The facility originally had portable carbon beds operated in series. The carbon beds were initially replaced every month. The system is designed for a flow of 15 gallons/minute leachate but is typically operated at 7 - 8 gallons/minute. Concentrations of VOCs in air vented to the carbon units from the aeration tank are many times lower than system designed treatment capacity and the carbon is no longer replaced monthly.

The facility operator monitors carbon bed vent concentrations using Draeger tubes for Vinyl chloride (5-30 ppm range) and for Benzene (5-50 ppm range). If the system is being operated with aeration tank exhaust vented to a single carbon bed, and the carbon bed vent gas monitoring shows detectable levels of either air contaminant,

the aeration tank exhaust is vented to the other carbon bed. If the system is being operated in series, when the outlet from the first carbon bed shows detectable levels of an air contaminant, the second in series carbon bed becomes the first carbon treatment unit and the former first in line carbon bed is replaced and becomes the second in line carbon bed. The available PTI development information indicates the facility can achieve the claimed removal efficiencies under either carbon operating scenario.

The passive carbon adsorption system and the rest of the EULEACHATETRTMNT including, storage tank, oil water separator, aeration tank, and heater is operated as described in the 2009 approved MAP.

A MAP update request letter will be sent to the facility requiring they update the current MAP to clarify the current operating and monitoring of the fan assisted carbon system.

Design/Equipment Parameters

The passive carbon system is required to be operated in a satisfactory manner per SC IV.1 but no specific equipment, monitoring or testing requirements are listed.

The fan assisted carbon system is required to be operated in a satisfactory manner per SC IV.2. The Special Conditions in other sections of the PTI require testing, monitoring, and recordkeeping of the aeration tank influent and effluent to verify emissions.

Testing/Sampling

Based on records provided by Waste Management staff the facility has conducted required testing and calculated VOC emissions. The facility tests aeration tank influent and effluent for several parameters and submits sample results quarterly to the Bay City AQD office. Review of the submitted test results indicate the facility is in compliance with testing requirements and emission limits.

Monitoring/Recordkeeping

SC VI.1 requires emission calculations to be completed monthly. The facility assumes the Method Detection Limit for any monitored parameters in the influent and effluent if the result is non-detect. All VOCs are summed, and the total amount of VOC removed from the leachate in the aeration tank is assumed to be sent to the fan assisted carbon system. Documentation provided in the PTI application used a 95% removal efficiency when the fan assisted carbon system was operated in series or individually.

Per the facility and file information the list of analytes monitored for quarterly sampling is the same as with the permitted application information.

The passive carbon system receives vents from the leachate storage tank and the oil/water separator. Based on the treatment plant design the passive carbon has a removal efficiency of 85% for VOCs.

SC VI. 2.Requires the facility to monitor and record the flow rate and the VOC concentration of the aeration tank influent and effluent.

Records reviewed contained the required monitoring and emission calculations.

Quarterly reports for with flow and VOC data for December 2021 – June 2023 are attached. Reported flows were 7 -8 gpm. The site has installed flow controls with a flow set point of 7 gpm.

Date	Gal/Min	Aeration tank Inlet VOC ppm – Outlet VOC ppm	Lbs/hr Reported	Lbs/hr calculated	Days (hours)	Emissions (monthly) Reported Tons	Emissions (monthly) Calculated Tons
Jan 9, 2023	7	4.1	0.001	0.00072	27 (648)	0.002	0.0002
Sep 6, 2022	7	8.2	0.001	0.0014	28 (672)	0.001	0.0005
Jul 21, 2021	8	18.7	0.004	0.0037	28 (672)	0.004	0.001

Reported VOC emissions in 2021 were 0.0026 TPY and in 2022 were 0.0034 TPY.

On site records were available for maintenance activities including carbon the most recent replacement date of November 16, 2021.

Reporting

The facility submits quarterly reports

Stack/Vent restrictions

The following stacks appear to be compliant with the dimension and height restrictions in the PTI.

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)
1. SVCONTROL1 Passive Carbon	2	25

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)
system vent to atmosphere		
2. SVCONTROL2 Fan assisted carbon system vent to atmosphere	6	25

NAME *Kathy Brewer*

DATE 8/7/2023

SUPERVISOR *Chris Kane*