

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

N785368277

<b>FACILITY:</b> Lease Management, Inc.-KLIMEK/STAWOWY-OIL PROD FAC		<b>SRN / ID:</b> N7853
<b>LOCATION:</b> T19N R4E SECTION 17, STERLING		<b>DISTRICT:</b> Bay City
<b>CITY:</b> STERLING		<b>COUNTY:</b> ARENAC
<b>CONTACT:</b> Doug Struble , Vice President		<b>ACTIVITY DATE:</b> 07/20/2023
<b>STAFF:</b> Nathanael Gentle	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> SM OPT OUT
<b>SUBJECT:</b> Scheduled Onsite Inspection FY23		
<b>RESOLVED COMPLAINTS:</b>		

On July 20, 2023, AQD staff conducted a scheduled onsite inspection at Lease Management, Inc – Klimek / Stawowy Oil Production Facility, SRN N7853. The purpose of the inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environment Great Lakes and Energy, Air Quality Division (AQD) and to determine compliance with the facility’s Permit to Install (PTI), PTI No. 273-07. AQD staff were assisted onsite by Mr. Doug Struble, Vice President. At the time of inspection, the facility was found to be in compliance.

## Facility Description and History

The Klimek / Stawowy Oil Production Facility is owned and operated by Lease Management Inc. The facility is located on Kocot Rd between Melita Rd and N Locust Rd in Deep River Township, Arenac County, MI. Coordinates for the facility are 44.04986900, -84.02160800. The Klimek / Stawowy Oil Production Facility is a central processing facility. Wells drawing oil condensate are fed to the facility. Condensate is passed through one of two heater treaters onsite. The heater treaters separate the condensate into three components, gas, oil, and brine solution. Gas is flared off. Brine is sent to an onsite brine storage tank. Oil is sent to one of three onsite oil storage tanks.

Ownership of the Klimek / Stawowy Oil Production Facility was transferred to Lease Management Inc on 5/1/2021. The facility was previously owned and operated by Muskegon Development Company. The Klimek / Stawowy Oil Production Facility is a synthetic minor source of sulfur dioxide (SO<sub>2</sub>). One Permit to Install is associated with the facility, PTI No. 273-07.

The facility was last inspected in March 2019. At that time, the facility was owned and operated by Muskegon Development Company. No recent complaints are on file for the facility. As a synthetic minor source, annual emission reports for the facility are required to be submitted to the Michigan Air Emissions Reporting System (MAERS). MAERS reports for the facility have historically been submitted on time and complete.

## Compliance Evaluation

### EUFLARESYSTEM

EUFLARESYSTEM is a flare system designed to burn the sour gas from the heater treaters and vapors from the storage tanks. Burning the sour gas in the flare converts the hydrogen sulfide

(H<sub>2</sub>S) to sulfur dioxide (SO<sub>2</sub>). Special Condition (S.C.) 1.2 stipulates that the flare shall be installed, maintained, and operated in a satisfactory manner. Staff report as part of routine maintenance, the flare is taken apart and cleaned at least once each year.

EUFLARESYSTEM is equipped with a device to monitor the volumetric flow rate of gas going to the flare on a continuous basis, S.C. 1.3. The system is equipped with an electronic gas flow meter. Data from the gas flow meter can be accessed remotely. Staff log the gas flow data into an excel spreadsheet in which daily gas flow volumes are tracked. Staff measure the H<sub>2</sub>S concentration of gas going to the flare on a monthly basis. Staff report Draeger tubes are used to measure the H<sub>2</sub>S concentration.

Using H<sub>2</sub>S concentration measurements and gas flow volumes to the flare, staff calculate and track the mass flow rate of H<sub>2</sub>S entering EUFLARESYSTEM, S.C. 1.4. Monthly records of each calendar day hydrogen sulfide mass flow rate to EUFLARESYSTEM and of the hydrogen sulfide concentrations, volumetric flow rates, and calculations supporting each calendar day's mass flow rate were provided and reviewed for the period of May 2022 to May 2023. During the period of records reviewed, the measured H<sub>2</sub>S concentration of gas going to the flare ranged from 18000 ppm to 38000 ppm. Daily volumes of H<sub>2</sub>S burned in the flare are calculated. During the period of records reviewed, the largest daily volume of H<sub>2</sub>S burned in the flare was 72.8 lbs per 24-hour period, well below the permitted limit of 384 pounds per calendar day, S.C. 1.1.

Special Condition 1.6 stipulates that the stack vent for the flare shall be a minimum of 40 ft above ground level. As part of the onsite inspection, AQD measured the height of the flare using a Nikon Forestry Pro II range finder. Height measurements obtained include 41.8 ft and 43 ft. Limitations in the measuring technique are believed to account for the variability of measurements. Based on the measured values, the stack height appears to be in compliance with the minimum height requirement.

### **FGTREATERS**

FGTREATERS consists of two heater treaters, EUHEATERTREATER1 and EUHEATERTREATER2. The heater treaters are used to separate the incoming condensate into three components, gas, oil, and brine solution. Gas separated in the heater treaters is burned in EUFLARESYSTEM, S.C.2.2. The permittee shall not burn sour natural gas in either of the heater treaters, S.C. 2.1. The fuel source for the heater treaters is primarily propane. An onsite propane tank was observed to be plumbed to the units. Staff report sweet natural gas from a nearby sweet gas well is also sometimes used for a fuel source. At the time of inspection material was being passed through the treaters, however the burners were not being utilized. Staff report the facility often gets enough separation of the material without needing to utilize heat.

### **FGTANKS**

FGTANKS consists of both oil tanks and brine tanks. The facility process utilizes three oil tanks and one brine tank. Each oil tank has a volume of 400 bls. The brine storage tank has a volume of 210 bls. A new 210 bl tank was observed onsite during the inspection. Staff said the new tank is going to be used to replace the existing brine storage tank.

Tanks were observed to be plumbed so that evaporative gas emissions are sent to the flare for combustion, S.C.3.1. The oil tanks load out is equipped with a vapor return system, S.C.3.2. Signs were posted at the loadout instructing operators to hook up the vapor return system during tank load out activities.

## **FGFACILITY**

FGFACILITY encompasses all process equipment at the facility including equipment covered by other permits, grandfathered equipment, and exempt equipment. Three wells are processed at the facility including the Klimek 1-17, Stawowy 1-17, and Wojtowicz 2-17. The Klimek 1-17 and Stawowy 1-17 draw material from the Detroit River Sour Zone. The Wojtowicz 2-17 draws material from the Dundee Zone. Prior notification shall be provided to the AQD District Supervisor before processing additional wells at the facility, S.C.4.2.

As previously discussed, the facility is equipped with a flare, S.C.4.3. Fencing and warning signs were observed to be in place to prevent access to the flare by unauthorized individuals, S.C.4.6. Emergency relief valves, storage tanks, and the vapor recovery system are vented to the flare, S.C.4.4. The flare is equipped with a continuously burning pilot flame. The fuel source of the pilot is propane fuel. The flare is equipped with a thermocouple to detect whether the pilot is lit or not. In the event the pilot flame is extinguished the facility automatically shuts in from all wells, S.C.4.5. Additionally, each well is equipped with a murphy switch to shut in the well before the pressure reaches the company-determined safety set-point.

Special Condition 4.7 stipulates the permittee shall perform visible emission observations of the flare at least once each calendar day that FGFACILITY is operating. Visible emission observations are performed by the pumper for the facility. If visible emissions are observed, diagnostics and maintenance are performed to ensure proper flare operation. A daily checklist is completed by the pumper to document visible emission observations. Per calendar day records of visible emission observations were provided and reviewed for the period of January 2023 through May 2023, S.C.4.8. Items on the checklist include noting if the flare opacity is over or under 20%, observing the flare status as lit or not, the status of the treater pilot, and checking the murphy switches at all the well heads. During the period of records reviewed, there were no instances in which the flare was not lit, or excess opacity was observed.

Records of monthly and 12-month rolling SO<sub>2</sub> emissions from FGFACILITY are maintained, S.C.4.9. SO<sub>2</sub> emission records were provided and reviewed for the period of May 2022 to May 2023. During the period of records reviewed, the highest monthly SO<sub>2</sub> emissions occurred at the end of May 2023 with 2842.2 lbs of SO<sub>2</sub> emitted. Twelve-month rolling SO<sub>2</sub> emissions ranged from 8.83 tons to 10.20 tons, well below the permitted limit of 89 tpy, S.C.4.1.

## **Summary**

On July 20, 2023, AQD staff conducted a scheduled onsite inspection at Lease Management, Inc – Klimek / Stawowy Oil Production Facility, SRN N7853. The Klimek / Stawowy Oil Production Facility is a central processing facility owned and operated by Lease Management Inc. The facility is located on Kocot Rd between Melita Rd and N Locust Rd in Deep River Township, Arenac County, MI. Coordinates for the facility are 44.04986900, -84.02160800. The Klimek / Stawowy Oil Production Facility is a synthetic minor

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NAME Mathewood Spitzer

DATE 8/3/2023

SUPERVISOR Chris Stone