

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

P003849903

FACILITY: RIVERSIDE ENERGY MICHIGAN, LLC - FOSTERS LAGER CPF		SRN / ID: P0038
LOCATION: NE NW SW Sect 22 T31N-R4E, HILLMAN		DISTRICT: Gaylord
CITY: HILLMAN		COUNTY: MONTMORENCY
CONTACT:		ACTIVITY DATE: 08/01/2019
STAFF: Bill Rogers	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Scheduled Minor Source Inspection		
RESOLVED COMPLAINTS:		

On August 1, 2019, I inspected the Riverside Foster's Lager facility near Hillman. This was a scheduled minor source inspection.

Riverside provided me with documents reporting Potential to Emit and also estimates of actual emissions. Assuming these are correct, the facility is a true minor source and doesn't need an Air Use Permit in order to operate legally.

#### DOCUMENT REVIEW

According to emission estimates, attached, the highest pollutant at the most polluting load is NOx at 75% power. At this rate the claimed Potential to Emit is 19.33 tons per year. The document claims other pollutants and NOx at other loads are all lower than this.

Engine specifications from Caterpillar claim a heat input for the engine of 99,992 BTU per minute at 100% load. This comes out to 5,999,520 BTU per hour, or roughly 6 MMBTU/h.

Rule 285(g) exempts reciprocating internal combustion engines of less than 10 MMBTU/h from permit requirements. This engine qualifies for the exemption.

The exemption doesn't apply if equipment emits more than "significance levels" of pollutants, which for NOx is 40 tons per year. This engine doesn't emit that much, so the exclusion from exemption is not a concern.

NSPS HH for glycol dehydrators exempts glycol dehydrators which emit less than approximately 1 ton per year of benzene from the more stringent control requirements it imposes on higher-polluting ones. According to an emission estimate, attached, total VOC potential to emit for the glycol dehydrator on site is 0.03 tons per year. Assuming all VOC was benzene, it would still be under 1 ton per year of benzene. Therefore this dehydrator is exempt from the control provisions of NSPS HH.

#### INSPECTION

The facility sign reads Riverside Energy Michigan LLC / 10661 E Carter Rd Ste 201 / Traverse City MI 49684 / (231) 995-4000 (989) 705-7665 / Foster's Lager CPF / T31N-R4E, Sec 22, NE 1/4 NW 1/4 SW 1/4 / Hillman Twp Montmorency Co

The facility had one mid-sized Caterpillar natural gas fired compressor engine. The engine was operating. It didn't seem to be vibrating unusually but it was loud. It exhausts horizontally through the shed wall to a horizontal muffler, then through a pipe elbow to exhaust unobstructed vertically upward from a tall stack. Judging the stack's height by the length of its shadow compared to my own, I estimate the stack as about 12 inches diameter by 40 feet high.

The engine has a lean burn AFRC box operating. There is the housing (at least) for a catalytic oxidizer in the exhaust stream, although Riverside does not claim credit for any emission reduction from one at this site.

The engine has a Caterpillar control box with a digital readout. This reported 55045 hours, 1176 RPM, 27

V, 53 PSI (oil pressure presumably,) 195 degrees (coolant temperature, presumably). According to data on a sheet attached to a clipboard, catalyst inlet temperature was 727 degrees f and out was 741 degrees f. A temperature rise across a catalytic oxidizer implies the oxidizer is burning pollutants out of the exhaust stream, and is therefore functioning properly.

There is a glycol dehydrator. It had moderate glycol odors. The burner stack is perhaps 6 inches diameter by 24 feet high, unobstructed vertically upward. The still vent was perhaps 2 inches diameter by 22 feet high, terminating at a T shaped pipe fitting. There was some visible "steam" from the still vent. The builder's plate on the dehy claimed it had a Wenco Flame Arrested Burner of 125,000 BTU per hour capacity.

I noted the following tanks:

One 400 barrel tank inside a lined berm, labeled "Caution- Non Potable Water- Liquid Industrial Waste." It was vented to the atmosphere. I didn't trace any odors to it. The berm seemed well maintained.

Four 300 gallon drum on still tanks, over berm structures: Methanol under the edge of the roof near the SW corner of the shed; Triethylene Glycol in the open but under a tarp, near the glycol dehydrator; HDAX Low Ash Gas Engine Oil and a second from which the label had peeled, near the compressor engine.

One oval metal tank, unlabeled, near the radiator. Probably engine coolant.

Several drums. Some were labeled as waste, one was labeled "Spill Kit" and one was labeled "H2O."

Other than the glycol odor and "steam" from the dehy, I did not see any opacity or notice any odors. I didn't see any leaks or spills. I didn't see stained soils which would lead me to suspect spills in the past. Maintenance appears good.

NAME William J. Rogers Jr.

DATE 8/14/19

SUPERVISOR 