

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

N790024538

FACILITY: TRENDWELL ENERGY CORPORATION - Briley 7 Satellite		SRN / ID: N7900
LOCATION: BRILEY 7 SATELLITE CPF, BRILEY TWP		DISTRICT: Gaylord
CITY: BRILEY TWP		COUNTY: MONTMORENCY
CONTACT: Danita Greene , Production and Environmental Compliance		ACTIVITY DATE: 03/11/2014
STAFF: Gloria Torello	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: 2014 Site Inspection.		
RESOLVED COMPLAINTS:		

**Directions.** The facility is located in Montmorency County, Briley Township. The facility is located on the east side of Thornton Road, 1/4 mile north of M-32.

**Application.** This is Antrim gas facility. The application included one rich burn Cat G3306, 230 HP engine without control. The application did not reference a glycol dehydrator.

**Permit.** Permit 348-07 included the one engine. The facility will remain on AQD's opt-out list because permit 348-07 EUENGINE1 condition 1.8 allows the engine to be replaced. In MACES, under Regulatory Summary, NOx is marked Synthetic Minor; and under MACT, 40 CFR Part 63 Subparts ZZZZ was added.

**MAP.** The malfunction abatement plan (MAP) was approved by the AQD on April 16, 2014. The MAP includes a Cat 3306, rich burn, with a catalytic converter, and no AFRC.

**MACTS.** The engines are subject to 40 CFR Part 63 Subpart ZZZZ. This is an area source (minor for HAPs). The EPA has not delegated the Subpart to MI AQD and the Subpart was not reviewed.

**Records.** Records were requested on March 12, 2014 and received on April 3, 2014.

**MAERS.** The 2013 MAERS included one emission unit: Cat 3306, 203 hp, No catalytic converter (cc). During the site inspection, Torello found the engine has a catalytic converter. Torello contacted Danita Green at Trendwell (616-866-5024) about the cc, and Donna Koltuniac of Otwell Mawby (231-946-5200) responded. Indeed there is a cc on the engine. The permittee completed an emission reduction test/sample and determined the reduction from the cc is less than the 90% for NOx and 80% for CO as found in MAERS emission factors. Gloria and Donna spoke with Dennis McGeen of AQD about MAERS. Donna will made changes and resubmitted the MAERS showing the engine has a cc, and showing the pollutant reductions per the test.

**Brochure:** The inspection brochure will be forwarded to the permittee with the site inspection notes via email.

**Compliance:** In MACES Report Generator, it shows no violation notice was ever sent out for this facility

**Inspection.** No glycol dehydrator is located on site. One large tank is on-site in a lined and bermed retaining area. The engine was operating. No visible emissions from the engine stack were observed. Noise is associated with the engine. The engine has a

catalytic converter. The engine has a clipboard with records of cc temperatures. On 3/11/14 the record includes the cc temps were Inlet 991 F and Outlet 1030 F. Torello's cc temp observations were Inlet 987 F and Outlet 1035 F.

Permit 348-07 was issued based upon information in the application. The application describes the Briley 7 engine as a Caterpillar 3306. The clipboard with records describes the engine as a Cat 3408. Donna communicated this is a typo and field records will be updated to show the onsite engine is a CAT 3306.

Other information from the site visit: RPM 1116, Catalyst Service Date 10/8/12. Washed .6" wc. Temp Baseline 0-5.

AQD will not request a modification to permit 348-07 to include the cc as the cc is exempt under R285(f), and permit 348-07 was issued for the engine without needing a cc.

Permit Conditions. The conditions of permit 348-07 are discussed below.

#### **EUENGINE1**

1.1a, 1.7, 1.11. Records show the 12-month rolling NOx emissions in December 2013 were 2.82 tons (42 tons permitted).

1.2. The AQD approved the MAP on April 15, 2014.

1.3, 1.4, 1.9. The permit limits the number of hours the engine may operate without control, and the permit requires keeping records of the number of hours the engine operated without control. Per the MAP, Appendix C, which is the Catalytic Converter Field Report, the report includes "Down Time, and Reason for Down Time." The records received showed no downtime.

Also, in the MAP, Page 3, at 3.1, it states, "Monthly and 12-month rolling time period records will be maintained of the number of hours the engine is run without the catalytic convert in operation." When reviewing SRN N6142, per conversation with Danita Green of Trendwell, the monthly and 12-month rolling record will be added to Trendwell's record keeping, as this record currently is not made.

1.5. The permittee provided the Engine Emissions Analysis, completed by Exterran, for the engine. Analysis is required per the MAP. The analysis included:

- control efficiencies: NOx Conversion 76.4%, and CO Conversion 75.7%.

1.6, 1.10. Natural gas usage is monitored and recorded. There is not a limit on natural gas usage.

1.8. Maintenance records show of the engine and catalyst were provided. In Trendwell's letter dated April 3, 2014, there is information the engine is equipped with a catalyst which has been in place on the engine since 2007. Per Rule 285(f), notification to AQD to add pollution control was not required.

1.12a, 1.13. By visual estimate, the engine stack met the requirements of a minimum of 30 feet above ground level and a maximum of 4 inches in diameter.

**MAP**

The AQD approved the MAP on April 16, 2014. The MAP includes the catalytic converter on the engine.

The MAP does not require the catalyst to have a higher outlet temperature as compared to the catalyst inlet temperature. Per Table 4, if the catalyst temperature is below 750 degrees F, or above 1350 degrees F, the catalyst will be inspected. The records show the catalyst outlet temperature is greater than the inlet temperature.

The MAP requires establishing a baseline differential pressure across the catalytic converter when a new catalytic converter insert is installed. If the pressures exceed the manufacturer's recommendation (typically 7-inches water column from baseline) the catalyst will be cleaned and inspected. Per conversation with Danita Green of Trendwell, and Brian Keelan a contractor and field supervisor 989-619-2808, Brian said yearly the catalyst element is replaced. After the replacement, "stack testing" (testing per the MAP) of the emissions is completed for NOx and CO reduction efficiencies, and emissions in tons per year. Brian said the differential pressure across the catalytic converter is established during the testing. The test results show the Catalyst Pressure is taken during testing.

**Conclusion:**

The permittee needs to keep records per the MAP which includes: "Monthly and 12-month rolling time period records will be maintained of the number of hours the engine is run without the catalytic convert in operation." Torello has set up a telephone meeting with Danita on September 23, 2014 to follow up on this issue.

With this exception, based on the site visit, review of records, and the content of this report, Torello concludes the permittee is in compliance with the requirements of the permit.

NAME *Giovanni Torello*DATE *7-14-14*SUPERVISOR 

