

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

N375827402

FACILITY: GREAT LAKES GAS TRANSMISSION STATION #10		SRN / ID: N3758
LOCATION: NAUBINWAY ROAD, NAUBINWAY		DISTRICT: Upper Peninsula
CITY: NAUBINWAY		COUNTY: MACKINAC
CONTACT: Sean Bennett ,		ACTIVITY DATE: 09/24/2014
STAFF: Joe Scanlan	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled inspection of gas transmission station.		
RESOLVED COMPLAINTS:		

FACILITY: Great Lakes Gas Transmission (GLGT) Naubinway Compressor Station #10, ROP# MI-ROP-N3758-2008

INSPECTION DATE: 9/24/2014

MDEQ-AQD STAFF:

- Joseph Scanlan, EQA

FACILITY REPRESENTATIVE:

- Sean Bennett, TransCanada

LOCATION:

The Naubinway Compressor Station #10 is located approximately 1.5 miles north of US-2 on Naubinway Road, north of the unincorporated community of Naubinway, in Garfield Township, Mackinaw County. The station and main vehicle ingress/egress are located on the east side of Naubinway Road just north of the Elbow Lake Road intersection. There is a 6' chain link security fence topped with barbed wire surrounding the property and a single gated entrance with an intercom system. The surrounding area is rural. The only developed property nearby is an active gravel pit approximately 800' to the west of Naubinway Road, accessed via Elbow Lake Road.

SUMMARY OF OPERATIONS:

Naubinway Compressor Station #10 is one of five stationary compressor stations in the Upper Peninsula used to maintain pressure in GLGT's mainline line to and from storage facilities located in the U.P. or to local distribution companies or other end users. These compressor stations ensure transportation and delivery of gas remains steady and uninterrupted. Station #10 operates two natural gas-fired turbines to recompress gas during transmission. The gas turbine/compressor assembly system is comprised of three components: a gas generator, a power turbine, and a gas compressor. The units receive the gas from the pipeline transmission system, compresses the gas, and then discharges it to the pipeline transmission system at a higher pressure. The station does not operate a natural gas storage field or dehydration system. Transmission/compressor station #10A in Brevort is unmanned and may be operated remotely from Station #10. In addition, all stations can be operated remotely from the main control facility located in Texas.

The facility also has a natural gas-fired generator used to produce electrical power to the station in the event of a power outage and auxiliary equipment including a natural gas-fired boiler, two natural gas-fired space heaters and six above-ground storage tanks.

HISTORY:

Naubinway Compressor Station #10 consists of two natural gas-fired turbines. Compressor Building 1001 houses EUUNIT1001 (Unit 1001) which was installed in 1969. EUUNIT1001 is a 16,000 horsepower Rolls Royce Avon 76G natural gas-fired turbine/compressor. Compressor Building 1002 houses EUUNIT1002 (Unit 1002) which was installed in 1971. EUUNIT1002 is also a 16,000 horsepower Rolls Royce Avon 76G natural gas-fired turbine/compressor.

The four-stroke rich burn emergency generator (EUGENERATOR) is a 201 horsepower Waukesha F1197G and was installed in 1968 to provide power to the station in the event of a power outage. EUGENERATOR operates exclusively on natural gas. No air use permits were required at the time of installation of the generator, however it is now subject to the MACT standards in 40 CFR part 63 subpart ZZZZ for stationary RICE emergency generators.

REGULATORY APPLICABILITY:

ROP# MI-ROP-N3758-2008

Naubinway Compressor Station #10 turbine compressors EUUNIT1001 and EUUNIT1002 are subject to 40 CFR, Part 70 because of the potential emissions of NOx and CO exceeds 100 tons per year. This source is not considered a major source of HAP emissions because the potential to emit of any single HAP regulated by the Clean Air Act, Section 112 is less than 10 tons per year and the potential to emit of all HAPs combined is less than 25 tons per year. This source is subject to Prevention of Significant Deterioration (PSD) regulations because the stationary source has the potential to emit NOx and CO greater than 100 tons per year.

EUGENERATOR is subject to the stationary RICE emergency generator MACT standards, 40 CFR part 63 subpart ZZZZ.

ARRIVAL:

On 9/24/2014 I conducted a scheduled visit of GLGT Naubinway Compressor Station #10. PPE worn during this inspection included steel-toed boots, safety vest, safety glasses and hardhat. The turbines were not running therefore no hearing protection was required.

TransCanda owns and operates this facility. My contact at the site was TransCanada employee Mr. Sean Bennett. Mr. Bennett informed me that the turbines were not in operation at the time of my visit. The turbines do not operate often during the warmer seasons and only operate occasionally to boost pressure in the system during these times. During peak demand times when the outside temperature drops and there is a much higher need for natural gas (residential/commercial building heat, etc.) the turbines operate quite frequently--usually with one operating at all times.

Prior to escorting me to the turbine buildings, Mr. Bennett disengaged the facility's 'fire eyes' in order to prevent the emergency shutdown system from coming online while I took photographs (camera flash was a concern). Materials limits for turbines EUUNIT1001 and EUUNIT1002 require the units to burn only natural gas, which is the only fuel available. Both EUUNIT1001 and 1002 are identical stationary Rolls Royce Avon 76G turbine compressors and each unit is housed in individual buildings.

EU DETAILS:

No.	Emission Unit	Description	Permit #	Comp. Status
1	EUUNIT1001	Rolls Royce Avon 76G natural gas-fired turbine/compressor	ROP-N3758-2008	C
2	EUUNIT1002	Rolls Royce Avon 76G natural gas-fired turbine/compressor	ROP-N3758-2008	C

3	EUGENERATOR	Waukesha Model F1197G natural gas-fired 201 hp	40 CFR part 63 subpart ZZZZ	C
---	-------------	---	--------------------------------	---

Materials Limit

The turbine compressors EUUNIT1001 and EUUNIT1002 shall fire only natural gas to ensure compliance with the visible emission limitations of Rule 301.

- Both EUUNIT1001 and EUUNIT1002 continue to operate exclusively on natural gas.

Monitoring/Recordkeeping

Records of all fuel types fired in EUUNIT1001 and EUUNIT1002 shall be maintained on file for a period of five years. Mr. Bennett provided records when requested.

- EUUNIT1001 operated a total of 46 hours in September 2014 using a total of 6505 MCF of natural gas and was last operated on 9/30/2014 for 21 hours; and
- EUUNIT1002 operated a total of 59 hours in September 2014 using a total of 6442 MCF of natural gas and was last operated on 9/10/2014 for 19 hours.

EUGENERATOR records shall be maintained on file for a period of five years. Records include hours of operation in emergency and non-emergency modes and any maintenance performed on the stationary emergency generator.

- EUGENERATOR operated a total of 4.7 hours in non-emergency mode and 4.2 hours in emergency mode over the last 12 months; and
- EUGENERATOR had the following maintenance performed over the last 12 months
 - 9/18/14 spark plug inspection--plugs were gapped and look good;
 - 9/18/14 air cleaner inspection--air cleaner looked good;
 - 9/18/14 belts and hoses inspection--belts and hoses in good shape;
 - 9/18/14 oil sample collected--OK

SUMMARY:

No violations of ROP #MI-ROP-N3758-2008 were observed at the time of this inspection and the facility appears to be in compliance with the ROP.

NAME _____ DATE _____ SUPERVISOR _____



TRANSCANADA OPERATING PROCEDURE (FORM)

TransCanada
In business to deliver

Title: RICE MACT Maintenance Record Sheet

Revision: 00

Effective Date: 2014/07/16

Status: Issued

Page 1 of 1

TOP Contact: Alena Polk

Instructions:

1. This form is to be completed in conjunction with the TOP entitled RICE MACT Maintenance (EDMS No. 008029868)
2. Save this form using the following naming convention:
 - Task Title_CMMS Facility ID_yyyy_mm.doc' (e.g. RICE MACT Maintenance_00005_2014_07.doc').
 - Attach completed form to SAP Work Order Refer to IPSECA (Identify Plan Schedule Execute Close Analyze) Work Management Quick Reference Guide Page 88
3. For information on filing and the onsite/offsite retention requirements, please refer to the 'TransCanada Facility Filing Structure Reference' compliance list (EDMS No. 003794696).

Facility: CS 10 NaubinwayEngine S/N: Waukesha/176038Engine Type: APU

Hours on the unit:

Activity	Date Completed	Technician	Remarks/ Deficiencies:
Spark Plug Inspection (Natural Gas or Propane-Fired Engines)	<u>9/18/14</u>	<u>SEB</u>	<u>Natural Gas, Plugs were gapped and look good</u>
Air Cleaner Inspection (Diesel-Fired Engines)	<u>9/18/14</u>	<u>SEB</u>	<u>Air Cleaner looked good</u>
Belts and Hoses Inspection	<u>9/18/14</u>	<u>SEB</u>	<u>Belts and hoses in good shape</u>
Oil Sample Taken*	<u>9/18/14</u>	<u>SEB</u>	<u>See Fluid Life analysis</u>
Oil Changed*	<u>N/A</u>		

*An oil sample should be sent to Fluid Life for analysis or changed. (If the oil has been changed during the calendar year, there is no need for a RICE MACT analysis).

Operating Hours for Month

10 Naubinway

From:09/01/2014 To:09/30/2014

Unit	Model Number	Rated Hp	Daily Operating Hours																															Daily Sum	D vs M Diff	Month Hrs	TOTAL LIFE			Date Last Run
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				Hours	Starts	EHO	
10-A-01	AVON-76	12,500				5																									20	21	47	1	46	256,321		256,321	9/30/2014	
10-B-02	AVON-76	12,500	23							18	19																							60	1	59	180,910		180,910	9/10/2014

Operating Hours for Month

Station: 10 Naubinway

2014		Report Generated Oct 27 2014 8:53AM																																				
Unit	Days Reported Fuel (MG)																															Month		Fuel	Hrs	HeatRate		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31							
10A50																																		6558	608945	9781		
10A502	30728				756				1706	1711																						6442	592532	10038				
10A502B34					756																											6558	608945	9781				

Tasks

How-To Videos

brad_stermer

Home Browse Samples TRANSCANADA PIPELINES US GLGT Type: OTHER CS-10 NAUBINWAY, APU #1 POWER UNIT, AUXILLARY

CS-10 NAUBINWAY, APU #1

Options

Customer Information

TRANSCANADA PIPELINES US GL...

TSM 224

Attn: HUE ONG

Phone: (780) 453-4213

Fax: (780) 453-4185xFAX

Unit Information

Unit #: CS-10 NAUBINWAY...

Component: POWER UNIT

Location: AUXILLARY

Manufacturer:

Serial #:

Model:

Lubricant

Manufacturer: MOBIL

Brand: DELVAC 1300 SUPE...

Grade: 15W40

Sample Information

Sample: 2014/09/24 - 145

Sample Date: 2014/09/18

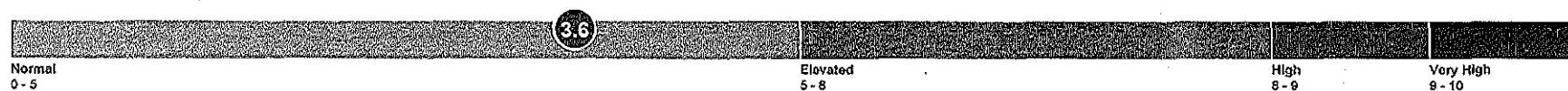
Lab Tracking #:

Employee:

Avantis WO#:

Avantis WR#:

Sample Rank



Sample Information

Contaminants

Wear Metals

Sample Date	Oil	Meter Reading	Unit Service	Component Service	Oil Service	Units	Oil Chg	Sodium (Na)	Potassium (K)	Silicon (Si)	Aluminum (Al)	Iron (Fe)	Copper (Cu)	Lead (Pb)	1
2014/09/22	MOBIL, DELVAC 1300 SUPER (USA), 15W40							2	0	5	0	0	0	1	
2014/09/18	MOBIL, DELVAC 1300 SUPER (USA), 15W40	819		819		HR	N	3	2	2	0	3	3	1	

Create Alert

Tasks

How-To Videos▼

brad_sterner ▼

[export to Excel \(api/history/excel?compid=1475175764970\)](#)[Lab Comments](#) | [Top Trends Analysis](#) | [Reliability Alerts](#) | [Discuss](#)**Results**

2014/09/18 Water flagged for your attention.

Recommendations

2014/09/18 Customer Notes: ISO cleanliness counts elevated. Monitor with next sample. All other tests performed were within specification.HO

[Create Alert](#)