

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

N165233295

FACILITY: West Branch Production Gathering & Compressor Stat		SRN / ID: N1652
LOCATION: 2251 SIMMONS RD, WEST BRANCH		DISTRICT: Saginaw Bay
CITY: WEST BRANCH		COUNTY: OGEMAW
CONTACT: Jim Clark ,		ACTIVITY DATE: 01/26/2016
STAFF: Sharon LeBlanc	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: FCE site inspection for facility re-permitted in 2015. sgl		
RESOLVED COMPLAINTS:		

On Tuesday, January 26, 2016, AQD District Staff conducted a scheduled site inspection at the COBRA Oil & Gas Corporation (COBRA) Gathering & Compression Station (formerly known as the West Branch Gas Plant) (SRN N1652), 2251 Simmons Road, West Branch, Ogemaw County, Michigan. Transfer of ownership/operations for the facility occurred on August 1, 2015. The facility was operating upon arrival, AQD staff conducted site inspection activities with Mr. Jim Clark and Mr. Jim Szwarc of COBRA and Mr. Brian Osborne of Osborne Production Services.

Three Permit to Install (PTI) No.s 709-96, 544-88 and 529-87 were previously of record for the facility. However the previous owner (Whiting Oil and Gas Corporation) re-permitted the facility under PTI 184-14, issued on March 2, 2015. The facility is reported to be a production gathering and booster compressor station for produced natural gas and natural gas condensate. It should be noted that the previously permitted natural gas processing equipment has been decommissioned, and that only condensates are collected as a result of gathering, dehydration and compressing activities onsite.

#### FACILITY DESCRIPTION

Based on available plat maps, the COBRA Gathering & Compression Station (CGCS) is located on a parcel of approximately 82 acres, (not including any easements for traffic or buried lines) approximately 1/2-mile south of the intersection of M-55 and Simmons Road, east of West Branch, Michigan. Adjacent properties include residential, agricultural and oil and gas production fields.

At the time of the initial permit application the facility was owned by Marathon Oil. Ownership changes of record in the District Files included:

Transfer Date	Previous Owner	New Owner
November 2000	Marathon Oil	RSEC, LLC
September 2002	RSEC, LLC	Whiting Petroleum Corporation
March 2004	Whiting Petroleum Corporation	Whiting Oil and Gas Corporation
August 2015	Whiting Oil and Gas Corporation	COBRA Oil & Gas Corporation

Constructed in 1988, the CGCS is a fenced facility, and operates 24-hours a day, seven days a week. However, it is only manned daily as necessary to observe and document operating conditions, perform necessary maintenance and related tasks. Gas and condensate fluids are extracted from wells drilled into producing reservoirs located in nearby properties/oil fields.

At the time of the permit application, natural gas being processed was reported to be from the Richfield, Amherst Berg, PDC and Glenwood zones. The saturated gas is separated at the well location and transmitted through gas gathering lines to the gas processing facility where it is dewatered, compressed (by internal combustion driven compressors) and transferred to a sales line meter. Recently relocated to just outside the facility fence on the residue sales line is the Michcon/DTE mercaptan station, which injects odorant into the NG line. Saturated water vapor on the low pressure inlet is removed by glycol dehydration after compression. The main high pressure gas stream is dewatered by at other locations prior to arriving at this facility.

The volume of material being processed at the facility has fluctuated and reduced over time as the reserves in the formation change and are depleted as the wells are produced.

The light crude oil produced at the well is separated at the well location and transported directly to market and is no longer received at the facility greatly reducing the liquid volumes processed.

Emission Units (EUs) identified for CGCS under PTI 184-14 include:

- EUGLYDEHY - Tri Ethylene Glycol Dehydrator (TEG),
- EUENGINE - Low Pressure Inlet, wet gas Compressor 3408 C707, with a 405 maximum HP spark ignition natural gas fueled, 4 stroke rich burn engine filled with a nonselective catalytic reduction control (NSCR) and air fuel ration control (AFRC), and
- FGNATGASCOMPSTA (The Facility)

The following emission units/components of CGCS have been identified at the site but were determined as exempt from permitting during permitting for PTI 184-14:

- Line heater (0.75 MMBTU/Hr)
- Reboiler heater (0.125 MMBTU/Hr)
- 400 bbl slop tank
- 400 bbl condensate/produced water tank
- Two 400 bbl condensate tanks
- Three 300 gallon methanol tanks
- 30 gallon Glycol tank
- 300 gallon lube oil tank

The Emergency Flare (FLR-1) (formerly identified as EUFLARE) with auto ignite system and thermal camera is no longer identified as an individual emission unit, but is required for FGNATGASCOMPSTA. Use of the flare is anticipated for occasional compressor blowdowns for maintenance, startup, shutdown or malfunction activities or VRU downtime.

In addition, the facility has the following out of service components;

- condensate stabilizers,
- coolers,
- Booster Compressor ( 2 units)
- Battery of six NGL tanks, and associated loadout,
- 20 K barrel condensate tank, and
- 3K barrel condensate tank.

EUFUGITIVES (Fugitive Emissions from valves and fittings) is no longer identified, as the facility is no

longer subject to Subpart KKK.

#### FEDERAL APPLICABILITY

- The facility is a synthetic minor for criteria pollutants, and an area source of hazardous air pollutants (HAPs). Based on the construction date(s) and other onsite conditions reported by the facility the two out of service wet gas/booster compressors are rated over 500 HP and are subject to: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE) (40 CFR Part 63, Subpart ZZZZ) for non-emergency, spark ignited RICE greater than 500 Hp.
- All three compressor engines onsite (two out of service and EUENGINE) were installed prior to 2006, and therefore are not subject to: New Source Performance Standards (NSPS) for Stationary Spark Ignition Internal Combustion Engines (SI-RICE)(40 CFR Part 60, Subpart JJJJ)

Based on changes in 2015, the facility no longer processes NG liquids, and therefore no longer meets the definition of a natural gas processing plant and is not subject to NSPS for Equipment Leaks of VOC from onshore Natural Gas Processing Plants (40 CFR Part 60, Subpart KKK). Therefore the facility is no longer subject to components of NSPS Equipment Leaks for VOC in the Synthetic Organic chemicals Manufacturing Industry (40 CFR Part 60, Subpart VV) and General Conditions under Subpart A.

In addition, the facility is limited by permit to less than the 3 million standard cubic feet per day (SCFD) throughput for the TEG dehydration unit, and as such is exempt from NESHAP for Oil and NG Production Facilities (40 CFR Part 63, Subpart HH). The facility is required to maintain documentation of TEG processing quantities to verify their exempt status.

#### Compliance History –

A review of District Files indicated that no complaints are of record for the facility. In addition, no Violation Notices are of record in District Files. The annual MAERs submittal is of record as having been submitted by the previous owner in a timely fashion since as early as 2004.

The most recent Full Compliance Evaluations (FCE) for the facility was completed on February 5, 2014. No compliance issues were noted.

#### COMPLIANCE EVALUATION

A compliance evaluation was prepared based on conditions stated in PTI 184-14.

Operational Status – At the time of the site inspection, the facility was operating.

Operational Limits –Process or equipment/operational restrictions associated with EUDHY includes a process limit of no more than 2.9 MMSCF/Day of NG. Records show that the highest daily thruput and average daily thruputs were less than half of the process limit.

In addition, the permit requires that the permittee shall comply with all provisions of Subpart HH. However, based on available records and information provided in the permit application, it appears that the existing TEG (EUDEHY) is exempt from subpart HH requirements with the exception of limited recordkeeping requirements to verify EUDHY thruput.

Operational conditions for EUENGINE require submittal of a preventative maintenance/malfunction abatement plan (PM/MAP) for the referenced emission unit. The PM/MAP was submitted by the previous owner within the required 60 days, and was approved by AQD District Staff. A revised PM/MAP was submitted by Cobra on January 21, 2016, to reflect the new ownership.

In addition, the permittee is required to operate EUENGINE per the manufacturer's recommended maintenance on the control device and in accordance with the PM/MAP. In addition, the permits limits

operation of EUENGINE to no more than 200 hours without a properly operating control device (as defined in PM/MAP). Engine maintenance is contracted by the facility, which uses a computerized maintenance management system to ensure that the overall maintenance plan for the facility is adhered to. Facility personnel track the completion of activities as part of their maintenance records.

EUENGINE is also required to have installed, calibrated and maintained, a device to monitor and record the natural gas usage on a continuous basis. District staff confirmed the presence of the meter and its operational status. The meter was installed after permit issuance by the previous owner.

With respect to compliance with provisions of 40 CFR Part 63, Subpart ZZZZ, as they apply to EUENGINE, it appears that the facility is in general compliance with the subpart.

Operational or process restrictions for FGNATGASCOMPSTA include;

- compression of only sweet natural gas,
- operation of a continuously burning pilot flame at the flare,
- capture of emissions from storage tanks and oil/gas separators by a vapor recovery unit with flare backup, and
- Compressor blowdown activities being conducted in compliance with Rule 285(mm).

Verification of sweet natural gas being compressed is completed annually by the facility during their dehy gas analysis which includes measurement of hydrogen sulfide content.

The facility (FGNATGASCOMPSTA) operates a flare, with a continuously burning pilot flame. The pilot flame is monitored by two infrared cameras, and is checked and recorded twice daily by the facility and documented in a log book. A standby propane tank is onsite to provide fuel for the pilot flame should the normal facility source fail.

The facility has a VRU system to capture, reclaim and reintroduce vapors from storage tanks and oil/gas separators. The flare acts as backup to the VRU system.

During compressor blowdowns, a valve system is in-place to shut down gas flow through the compressor, and minimize gas released. NG releases during blowdown operations are well below the one million SCF, and do not require notification under Rule 285(mm). Blowdowns are conducted in conjunction with maintenance activities on the compressor, and are documented in the maintenance records. Blowgas is routed to the flare.

**Material Limits** – Material limits are limited to no use of stripping gas in EUDEHY. The facility reports operating in compliance with the permit.

**Emission Points** – Emission limits in PTI 184-14 are limited to 12-month rolling limits for NOX (6.5 tpy) and CO (13.80 tpy) for EUENGINE. A review of records indicated that monthly totals were being recorded, and 12-month rolling averages calculated for EUENGINE in compliance with the referenced permit. At present time the facility reports using operational data and vendor data/factors consistent with the permit application for emission calculations and in compliance with the permit.

Emissions calculated/reported were well below the permit limits and in compliance with the permit.

**Monitoring, Testing and Record Keeping** – Emissions testing under the PTI is at the request of AQD DEQ. At the time of the inspection, no testing had been requested by District Staff.

Required data is collected from continuous monitoring devices installed and maintained for EUDEHY (gas processed) and EUENGINE (fuel usage). Monitoring devices installed and utilized are in general compliance with permit conditions. Installation of the monitoring device for EUENGINE was conducted

within the 120 days required by permit. Data collection is in part collected in the form of handwritten daily logs which are input into electronic records, other data is collected electronically.

As previously indicated, the facility is limited by permit to less than the 3 million standard cubic feet per day (SCFD) processing by EUDEHY, and as such is exempt from NESHAP for Oil and NG Production Facilities (40 CFR Part 63, Subpart HH). However, the facility is still required to maintain documentation of TEG processing quantities. Documentation for the past year was available for review, and was well below the permit limit.

As previously indicated monthly emission records and 12-month total rolling average for NOX and CO for EUENGINE are maintained by the facility in accordance with the permit. In addition, the natural gas monitoring device required to be installed for EUENGINE was installed within the required time frame, in compliance with the permit.

Logs of maintenance activities are maintained according to the PM/MAP. Under permit requirements, the facility is required to notify the District Supervisor if an engine is replaced with an equivalent or lower emitting engine. The facility reports that customarily the engine block is changed out every 5 years per the manufacturer's recommendations.

#### SUMMARY

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Based on information reviewed as part of the January 26, 2016 site inspection, the facility appears to be in general compliance with permit conditions.

NAME S. B. Blanc

DATE 2/9/2016

SUPERVISOR C. Hane