

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

K215532280

FACILITY: FERRIS STATE UNIVERSITY		SRN / ID: K2155
LOCATION: 625 S WARREN AVE, BIG RAPIDS		DISTRICT: Grand Rapids
CITY: BIG RAPIDS		COUNTY: MECOSTA
CONTACT: Daniel Sovinski , Plant Engineer		ACTIVITY DATE: 11/24/2015
STAFF: Steve Lachance	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled inspection for FY '016		
RESOLVED COMPLAINTS:		

This was a scheduled inspection for FY2016. The purpose of the inspection was to assess compliance with applicable air use rules and regulations, including the conditions of Permit to Install (PTI) No. 05-14, which is the facility-wide "opt-out" permit.

The inspection commenced at about 9:30 AM, Tuesday 11/24/15. No odors or visible emissions attributable to regulated processes were noted as SL toured the campus, got a parking pass and approached the General Services Building.

The facility was represented by Mr. Daniel Sovinski, Plant Engineer by proxy. It was the week of Thanksgiving and SL determined via cell-phone conversations that Mr. Sovinski was "off"; and that Ms. Michelle Upton was also unavailable on this date. SL stated his intention to inspect, and requested available records on support via telephone and email correspondence upon return to the office. Mr. Sovinski supplied the requested records on Monday, 11/30/15; these are entered into the Plant File.

As discussed in previous meetings and on-site inspections, Mr. Sovinski oversees/maintains a database for fuel use and required "opt-out" records. These are based on daily fuel meter readings and acceptable MAERS emission factors. Each permitted emission unit (combustion) is incorporated; and SL has verified use of MAERS emission factors for combustion processes.

These received records are the basis for compliance with the PTI's opt-out limits and shows that emissions are well-below allowed limits. (Further discussion below.)

Specific observations and details of observations during the inspection and record review are included below.

#### EU-INCINERATOR

Only pathological waste is burned in this unit per Special Condition (SC)II.1. No use reported in 2015. The previous inspection in 2014 documented that the current operator ("Richard") appeared to be very familiar with maintenance and operational issues for the unit. Procedures were observed to be posted by the unit in accordance with SCIII.1 and Appendix A. The required switches and procedures were installed and used per SCIV.1. The stack appeared to meet the requirements of SCVII.1. Richard was familiar with the requirements of Appendix A, and his discussions of unit

operating procedures were consistent with these.

No visible emissions were observed on 11/24/15; the unit did not appear to be operating.

#### EU-COGEN

This consists of a 1130 kW gas turbine and a 45 mmBtu/hr "Nebraska" heat recovery steam generating boiler. (The boiler is also known as Boiler No. 2.) This equipment did not appear to be in use at the time of the on-site inspection.

SL had previously obtained a sample of the No. 2 fuel oil that would be used in this equipment to verify compliance with the sulfur in fuel restriction in SC 2.3. Analysis of this sample for sulfur content indicated compliance with applicable sulfur restrictions at 0.07% sulfur content by weight. Any oil received onsite since would be Ultra-Low Sulfur Diesel (ULSD) with a maximum sulfur content of 15 ppm by weight. SL considers this unit to be in compliance with the emission limits of PTI #05-14, based on the most recent test results and the accepted emissions revisions/corrections contained in this permit.

#### EU-BOILER

This is also known as "Boiler 3" or the "Volcano" Boiler. It's rated at 75,000 pph steam production and was installed in 1996. (It's subject to NSPS, Subpart Dc.) In practice, the boiler operates on natural gas only, but it can use the same No. 2 fuel oil sampled above as a backup/emergency fuel.

This monitoring and recordkeeping substantiates compliance with SCVI.1 through VI.6, and the stack appears to be constructed in accordance with the requirements of SCVIII.1.

No visible emissions were noted during the on-site visit to the Power House vicinity on 11/24/15.

#### (Other Emission Units That Have Been/Were Observed)

Wick's Boiler No. 1; this boiler is rated at 75,000 pph steam production and was installed in about 1965 and is grandfathered from Rule 201 permitting requirements. Fuel use and estimated emissions are incorporated into recordkeeping and FG-FACILITY requirements.

New Units Boilers 4 and 5; these natural gas (only) boilers were installed in 2013 and have nameplate capacities of 20.4 mmBtu/hr heat input and rated emissions of 30 ppm NOx. Per previous discussion with site personnel and FTC&H:

- FTC&H has examined Rules 278 and 282 and has concluded that the project to

- the installation of 2 NG-fired boilers rated at 20.4 mmBtu/hr each is eligible for exemption (SL concurs);
- NSPS Initial Notifications have been prepared and submitted (received by AQD on 6/28/13);
  - These will NOT be regulated by the Boiler MACT since FSU is an Area Source of HAPs and the Area Source Rule does not regulate gas-fired boilers.
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  - In fact, SL noted that the existing boilers are exempted from the Area Source Boiler MACT as Gas1 Units based on documented use of oil for less than 48 hours per calendar year. SL discussed this with Mr. Sovinski and Ms. Upton and noted that operation of any of the equipment on oil for more than 48 hours per calendar year would trigger regulation under the Boiler MACT as liquid-fired units.

**Also; Bond Hall and East Campus Apartments Boilers; SL had previously observed five (5) 2mmBtu/hr natural gas-fired boilers servicing Bond Hall. These are exempt from permitting per Rule 282(b)(i). Previous site contact Mr. Bula had incorporated these into his facility-wide records and emission estimates.**

## **FG-FACILITY**

**This section of the permit requires facility-wide emission limits, recordkeeping, and emissions tracking. Available records (SCVI.1 through VI.5) incorporate each of the above sources. Emissions of HAPs use in vocational programs are negligible as these programs have reduced in extent. Due to use of natural gas, low utilization of EU-COGEN, and declining emissions of HAPs from the vocational program, the facility's emissions are well below those established in SCI.1 through I.5.**

**SL reviewed the records, which are organized per the following:**

- Daily Data Input of Fuels Used
- Compiled Monthly Summaries
- Monthly Emissions (by equipment) based on throughputs and MAERS EFs
- EFs Used
- FG-FACILITY fuel usage and emissions; this is organized by/presents:
  - Natural Gas Used by Month
  - Fuel Oil Used by Month
  - NOx Emissions by Month (and 12-month rolling period)
  - SOx Emissions by Month (and 12-month rolling period)
  - HAP (individual and aggregate) Emissions by Month (and 12-month rolling period)

**For 2014, NOx = 21.68 tons; SOx = .03 tons.**

**For 2015 through November, NOx = 22.69 tons and SOx = 0.09 tons.**

**Again, HAPs are negligible.**

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At the time of the inspection, SL considers the facility to be in compliance with the requirements of PTI No. 05-14 and applicable air use rules and regulations.

ATTACHMENTS; none; but 11/30/15 records on CD in plant file

NAME 

DATE 12/4/15

SUPERVISOR 