

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

A624030773

FACILITY: CARGILL SALT - ST. CLAIR		SRN / ID: A6240
LOCATION: 916 S. RIVERSIDE AVE., SAINT CLAIR		DISTRICT: Southeast Michigan
CITY: SAINT CLAIR		COUNTY: SAINT CLAIR
CONTACT: Priscila Gavel, EHS Professional		ACTIVITY DATE: 07/01/2015
STAFF: Robert Elmouchi	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled inspection.		
RESOLVED COMPLAINTS:		

On July 1, 2015, I conducted a scheduled inspection of Cargill Salt, Inc. (Cargill) located at 916 South Riverside Avenue, Saint Clair, Michigan. The purpose of this inspection was to determine the facility's compliance with the requirements of the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the administrative rules, Renewable Operating Permit (ROP) No. MI-ROP-A6240-2009, Permit to Install (PTI) No.5-13, 167-14 and 180-14.

This facility is uniquely identified with the State Registration Number (SRN) of **A6240**.

I entered the facility, identified myself, presented photo identification and explained the purpose of the inspection to Ms. Priscila Gavel, Environmental, Health & Safety and Mr. Jason Rasmussen, Senior EHS Professional. Also present during portions of the inspection were Mr. John Stuart, Plant Manager; and Mr. Luis Whitworth, Powerhouse Supervisor.

PTI 167-14

PTI (permit to install) 167-14 was approved on March 13, 2015. PTI 167-14 approves the installation of natural gas-fired EUBOILER15 and addresses the compliance requirements of EUSCREENING, EUDURACUBE, EUPRETZEL and EUDRYER (from PTI 5-13). PTI 167-14 is expected to become the only active applicable permit after EUBOILER5 and EUBOILER10 have been rendered inoperable and the temporary boiler has been decommissioned. It should be noted that even though EUTFFDEVP, EUCLARIFICATION, EUTFFALBERGERAF and EUTFFALBERGERBC appear in Title V permit MI-ROP-A6240-2009, they are all exempt from the R 336.1201 (Rule 201) requirement to obtain an approved PTI per R 336.1290 (Rule 290). Therefore, these emission units do not appear in PTI 167-14 and the permittee is required to maintain recordkeeping per Rule 290 in order for these emission units to remain exempt from Rule 201.

PTI 167-14 was submitted by Cargill Salt in preparation of the removal of EUBOILER5 and EUBOILER10, and the installation of EUBOILER15. EUBOILER5 is a spreader stoker coal fired boiler with natural gas co-fired burners. EUBOILER10 is natural gas / No. 2 oil fired boiler. With the removal of EUBOILER5 and EUBOILER10, Cargill Salt will become an area source and no longer be subject to the renewable operating permit (ROP) requirements of Title V. Cargill Salt plans to request the voiding of MI-ROP-A6240-2009 when both EUBOILER5 and EUBOILER10 have been permanently decommissioned. As of this inspection, Cargill expects to submit the ROP void request on or about October 1, 2015.

Per the July 1, 2015, inspection, I observed that EUBOILER5 has been physically removed. I also observed that the multicyclone mechanical collector with high temperature fabric filter baghouse (sidestream separator); all ash handling equipment with silo; and all coal conveying equipment have been removed. The exhaust stack and the coal receiving road with grate remain.

EUBOILER10 remains functional and is capable of generating 75% of the steam required for maximum production. A temporary boiler, EUTEMPBOILER approved per PTI 180-14, was operating the day of the inspection. EUTEMPBOILER was installed to make up for the EUBOILER10 steam generation shortfall.

EUBOILER15

During this inspection I observed EUBOILER15 undergoing installation. The boiler is manufactured by Babcock & Wilcox. I observed the nameplate listed the following information:

NB: 00069

B&W Serial No.: 201-3718

B&W Project No.: 0635-3040, West Point, Mississippi

Boiler MAWP [Maximum Allowable Working Pressure]: 700 PSI at 750 °F

Capacity – MCSC: 175,000 LB/HR

Boiler H.S. [Heating Surface]: 6,973 Sq. Ft.

Waterwall H.S.: 1,395 Sq. Ft.

Year Built: 2015

Also affixed to this nameplate is a Cargill Salt orange asset tag with the following information: PH [Power House] Boiler 15 Gas Fired Asset 4180.

Installation of EUBOILER15 is scheduled to be completed by September 2015 and trial operation of this boiler is scheduled to occur in September 2015. EUBOILER15 is scheduled to become fully operational on October 1, 2015. Shortly afterwards, EUBOILER10 and EUTEMPBOILER shall be decommissioned. EUBOILER15 will be subject to 40 CFR Part 63 Subparts A and JJJJJ.

PTI 180-14

PTI 180-14 approved the installation of a temporary natural gas-fired boiler, which is identified as EUTEMPBOILER. Per 40 CFR 63.7575:

Temporary boiler means any gaseous or liquid fuel boiler that is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A boiler is not a temporary boiler if any one of the following conditions exists:

(1) The equipment is attached to a foundation.

(2) **The boiler or a replacement remains at a location within the facility and performs the same or similar function for more than 12 consecutive months, unless the regulatory agency approves an extension.** An extension may be

granted by the regulating agency upon petition by the owner or operator of a unit specifying the basis for such a request. Any temporary boiler that replaces a temporary boiler at a location and performs the same or similar function will be included in calculating the consecutive time period.

(3) The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.

(4) The equipment is moved from one location to another within the facility but continues to perform the same or similar function and serve the same electricity, steam, and/or hot water system in an attempt to circumvent the residence time requirements of this definition.

The EUTEMPBOILER nameplate listed the following information:

NAT'L BD. NO.: 3901

Certified by: National Dynamics, Lincoln, Nebraska

MAWP: 350 P.S.I.G.

Heating Surface: 2,685 Sq. Ft.

Max. Des. Strm. Cap. 40,000 Lb./Hr.

On August 26, 2015, Ms. Gavel provided the following additional information. EUTEMPBOILER steam generating capacity is 40,000 pounds per hour but is actually operating at 27,000 pounds per hour.

Model: NOS-1A-53

MFG. Serial No.: 0-4335

A Bremco, Inc. nameplate indicated that the boiler was repaired on 10/16/08.

Also affixed to the boiler was a Michigan Department of Licensing and Regulatory Affairs, Bureau of Construction Codes metal tag with a Michigan Boiler Serial Number of 438873. Next to this tag was a Michigan boiler certificate of inspection dated 5-11-15. PTI 180-14 does not specify emission limits for EUTEMPBOILER. PTI 180-14 restricts emissions by limiting the maximum heat input capacity to 110 MMBTU/hour or less, and by limiting the operation of EUTEMPBOILER to not than 4,320 hours per 12-month rolling time period. As of the date of this inspection, Cargill has not exceeded the operating hour limit.

During this inspection, it was noted that the exhaust gases from the stack were obstructed by a conical rain cap and therefore exhaust gases from the stack were not discharged vertically upwards to the ambient air. This appears to be in violation of the table VIII general condition that states, "*The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted.*" Because 40 CFR 52.21(c) & (d) was one of the underlying applicable requirements of SVTEMPBOILER, I contacted the permit engineer, Terry Wright, to determine the significance of this noncompliance. Mr. Wright reviewed the permit file and determined that, per the initial permit application review, the dispersion of air toxics was independent of the exhaust stack parameters. Furthermore, per an email from Ms. Gavel on July 14, 2015, Cargill Salt had removed the rain cap on July 14, 2015. Therefore, this appears to be a minor noncompliance, which has been corrected in a timely manner and does not warrant a violation notice.

MI-ROP-A6240-2009**EUDURACUBE**

I reviewed records of the non-certified 1-minute Method 22 visible emission observations, which appeared to demonstrate compliance. I reviewed records of the pressure drop across the wet scrubber, which appeared to demonstrate compliance with the permit range limits of a pressure drop range between 2.4 and 4.2 inches of water column. I reviewed records of the scrubbing liquid flow rate to the wet scrubber in gallons per minute, which appeared to demonstrate compliance with the permitted minimum flow rate of at least 37 gallons per minute. Hard copies of collected records are attached to the printed report.

EUBOILER5

Per the July 1, 2015, inspection, I observed that EUBOILER5 has been physically removed. The permittee is still required to maintain previously collected permit required records and submit pertinent information in the semi-annual and annual deviation reports for calendar year 2015. Per a review of Cargill's 2014 MARES report, the permanent removal of EUBOILER5 will reduce annual particulate emissions by approximately 85 tons per year.

EUBOILER10

EUBOILER10 is scheduled to cease operation on October 1, 2015, when EUBOILER15 begins operation on the same day.

Although this boiler is permitted to combust natural gas and No. 2 fuel oil, the burners required to use No. 2 fuel oil have not been installed and therefore this emission unit is currently not capable of being fired with fuel oil. Because EUBOILER10 is fueled only with natural gas, which is not expected to cause an opacity exceedance when the burners are properly maintained and operated.

Permit conditions related to the use of No. 2 fuel oil were not evaluated because that fuel has not been used.

Cargill provided records of fuel combusted as required per EUBOILER10 VI.3. These records appear to indicate compliance. The records also appear to demonstrate compliance with the specified requirements of VI.7.a through j. Hard copies of collected records are attached to the printed report.

FGOOO

(EUPRETZEL, EUSCREENING)

Ms. Gavel provided records of the amount in tons of salt processed per month and per 12-month rolling time period, which appear to demonstrate compliance with the 12-month rolling time period permitted limit of 245,000 tons of salt through each emission unit.

Records provided by Cargill appear to indicate compliance with permit specified pressure drop range between 4.2 and 7.2 inches of water column and a scrubbing liquid flow rate of at

least 36 gallons per minute. Hard copies of collected records are attached to the printed report.

During this inspection I observed that the third floor scrubber had a pressure drop of 6.5" of water column and the fourth floor scrubber had a pressure drop of 7" of water column.

FGRULE290

(EUTFFDEVP, EUCLARIFICATION, EUTFFALBERGERAF, EUTFFALBERGERBC)

I reviewed records, which appeared to indicate compliance with R290 emission limits. Hard copies of collected records are attached to the printed report.

CONCLUSION

Cargill Salt appeared to be in compliance with all evaluated permit conditions.



Image 1(20150701 114501 v2) : EUTEMPBOILER conical rain cap on exhaust stack. Per permit engineer, dispersion modeling of air toxics was independent of exhaust stack parameters. Therefore, this noncompliance with PTI 180-14, VIII is insignificant. Cap has been removed by source.

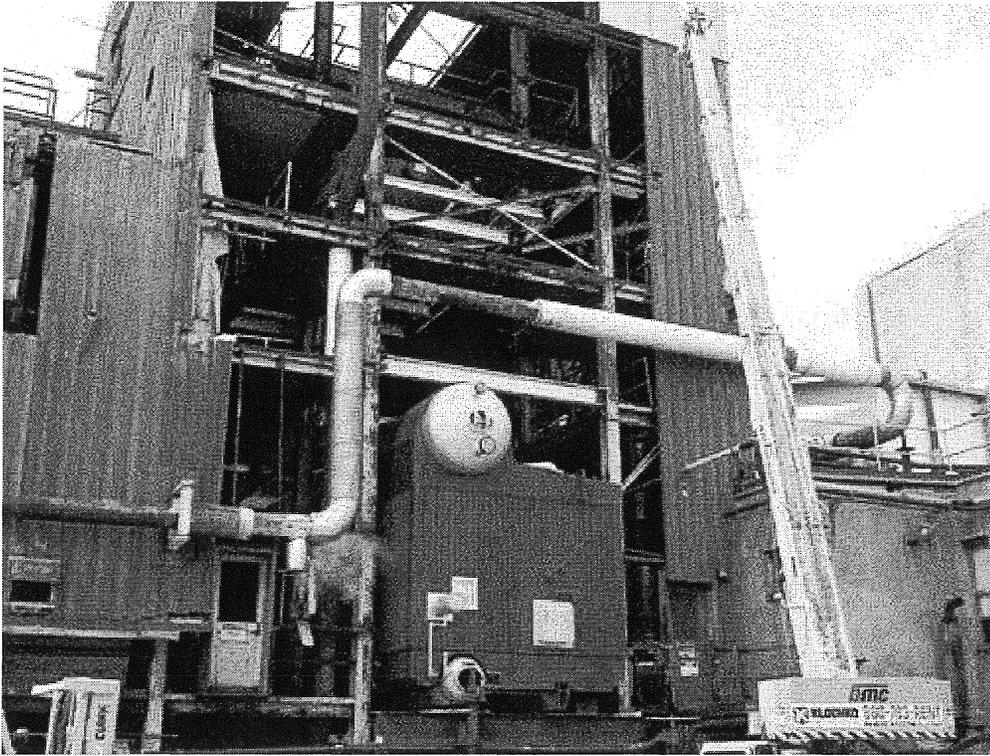


Image 2(20150701 114647 v2) : View of EUBOILER15 installation into the Cargill Salt powerhouse.

NAME *[Handwritten Signature]* DATE *9/29/15* SUPERVISOR *CJE*