

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection

A585831138

FACILITY: Mead Johnson & Company, LLC		SRN / ID: A5858
LOCATION: 725 E. Main Street, ZEELAND		DISTRICT: Grand Rapids
CITY: ZEELAND		COUNTY: OTTAWA
CONTACT: Thomas A. Joelson, Senior EH&S Facilitator		ACTIVITY DATE: 09/15/2015
STAFF: Steve Lachance	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: PCE - Review of 40 CFR 63 Subpart DDDDD Compliance Status (SLachance, 9/15/15)		
RESOLVED COMPLAINTS:		

The purpose of this inspection was to assess the facility's current compliance status with 40 CFR 63 Subpart DDDDD, The Boiler and Process Heater MACT for Major Sources of HAPs.

Prior to on-site activities, SL reviewed readily available AQD files (MAERS, MACES, ROP, ROP Staff Activity Report, etc.) and identified the following facility emission units as likely regulated by 40 CFR 63, Subpart DDDDD.

- Boiler 1 - Existing - Natural Gas (NG) and fuel oil; but 0 throughput of oil in recent MAERS - 35 mmBtu/hr
- Boiler 2 - Existing - NG and fuel oil; but 0 throughput of oil in recent MAERS - 35 mmBtu/hr
- Boiler 3 - New - Natural Gas (NG) only - 97 mmBtu/hr
- North Dryer - Existing - NG only - 21.7 mmBtu/hr
- South Dryer - Existing - NG only - 21.7 mmBtu/hr
- ZSP Dryer - Existing - NG only - 9.5 mmBtu/hr

Note, with respect to this rule, "existing" sources were constructed prior to June 4, 2010; and "new" sources were constructed on June 4, 2010 or there-after. Further note, the compliance date for existing sources is January 31, 2016; there is still time to take any necessary actions to demonstrate compliance; while the compliance date for "new" sources is immediate. Therefore, the provisions of 40 CFR 63 Subpart DDDDD actively apply to any new source, while the compliance date for existing sources is nearing, but still pending.

Further review of the facility's specific DDDDD file indicated AQD receipt of the following documents:

- Initial Notification Report (received May 28, 2013) identifying 5 Existing Affected Sources:

EUBOILERNO1, EUBOILERNO2, EUN-DRYER, EUS-DRYER, EUZSP-SPRAY-DRYER

and

1 New Affected Source:

EUBOILERNO3

Each of these units is described in the Initial Notification Report in a manner consistent with the above descriptions (with respect to size and fuels) and so AQD's files seem to be generally consistent with the facility's declaration of applicability.

- Tune-up Compliance Report for EUBOILERNO3 received January 31, 2014; periodic, prescribed tune-ups and demonstration there-of are the basis for continued compliance with 40 CFR 63 Subpart DDDDD for New, NG-only boilers. At heat input rates greater than 10 mmBtu/hr, tune-ups are required every year; unless the boiler is equipped with defined oxygen trim systems, in which case tune-ups are required only every five years. This tune-up report did contain as an attachment to the cover letter statements required per 40 CFR 63.7540(a)(10) including statements on burner inspection; observed flame pattern; oxygen

trim status; minimized CO; adjustments made; and also included combustion analyses.

SL and AL of this office arrived at about 10 AM, Tuesday September 15, 2015. The facility was represented by:

- Tom Joelson
- Michael Honsberger
- Michael Monaghan
- Brian Briggs

The inspection commenced with an entrance meeting during which AQD staff declared their intent to focus activities on 40 CFR 63 DDDDD, including currently applicable compliance determinations. This would just be a partial compliance evaluation in our cycle of inspection for major sources. SL shared DEQ's "Environmental Inspections: Rights and Responsibilities" brochure and Boiler MACT Insert. SL explained his understanding of affected equipment on-site (per above). Facility staff agreed and also stated that there is currently no fuel oil capability on-site; and so all on-site equipment is NG-only. Staff also agreed with the "new" vs. "existing" distinction in the rule; and so EUBOILERNO3 is currently regulated by the rule; while the other equipment has a compliance date of January 31, 2016.

Based on size (>10 mmBtu/hr), SL expected annual tune-up reports for existing EUBOILERNO3. SL asked about a report for 2014 for this boiler since it is not located in the above-referenced file; and facility staff easily produced the attached reports for tune-ups in November and December, 2014. These, too, have the required elements per 63.7540(a)(10).

Note, these reports incorporate statement of "oxygen trim" systems for EUBOILERNO3, EUN-DRYER and EUS-DRYER; despite size, these units can qualify for 5-year tune-up cycles based on the presence and use of these systems. SL did ask, however for the facility to confirm that the existing systems meet the definitional requirements of oxygen trim systems in the rule.

Final categorization of the on-site equipment (with applicable requirements in parentheses^*) could be*:

EUBOILERNO3; New - NG-only with Oxygen Trim (on-going tune-ups on a 5-year cycle)

EUN-DRYER and EUS-DRYER; Existing - NG-only with Oxygen Trim (One-time Energy Assessment by January 31, 2016; Tune-up by January 31, 2016; on-going tune-ups on a 5-year cycle)

EUBOILERNO1 and EUBOILERNO2; Existing - NG-only but > 10 mmBtu/hr (One-time Energy Assessment by January 31, 2016; Tune-up by January 31, 2016; on-going tune-ups on a yearly cycle)

EU-ZSP-SPRAY-DRYER; Existing - NG-only but < 10 mmBtu/hr and > 5 mmBtu; (One-time Energy Assessment by January 31, 2016; Tune-up by January 31, 2016; on-going tune-ups on a 2-year cycle)

^Discussions were guided by reference to the attached template for DDDDD Existing NG-Only sources.

The facility shared their plans to complete the One-time Energy Assessment for existing equipment, as well as the required initial compliance tune-ups in October or November. These are required to be completed by January 31, 2016. The Initial Compliance Notification based on these activities is due 60 days following the completion of the last associated compliance demonstration for the equipment.

The facility is on schedule for annual tune-up activities; and may continue to do so for reasons outside of 40 CFR 63 DDDDD. The question of additional, non-compliance reporting arose; the source will need to explore the capabilities, performance and expectations of EPA's centralized reporting (CEDRI)

system. Otherwise, DDDDD requirements will be included in the next ROP renewal cycle; and Mr. Joelson appeared to be very familiar with the DEQ tools (web-site, NESHAP tool, templates, etc.) for purposes of permit re-application and maintaining compliance with on-site equipment.

SL and AL (escorted by Mr. Joelson and Mr. Briggs) then viewed certain affected equipment. EUBOILERNO1 and EUBOILERNO2 were both operating at 25% burner capacity on NG only. SL observed the pipe cut-off and empty space where the fuel pump had been for each boiler; SL concurs that there is no oil capability on-site at this time for these units. EUBOILERNO3 was just starting up (<10% burner capacity.) The North and South Dryeres were not operating as that part of the plant was in a scheduled maintenance outage. The ZSP-SPRAY-DRYER was observed in operation at 100% burner rate.

SL stated that there were no DDDDD concerns at this time; and that this had been a beneficial exercise for rectifying his understanding of AQD's source files, outreach efforts, DDDDD tool effectiveness and source awareness.

*Pending correct assessment that the stated units have oxygen trim systems meeting the definitional requirements of the rule.

NAME




DATE

9/16/15

SUPERVISOR



ATTACHMENTS:

- 2014 "BOILER MACT REPORTS" (each unit) 
- Template for DDDDD Existing- NG-only

**FG-MAJOR SOURCE – Boiler/Process Heater- Existing Natural Gas Only
FLEXIBLE GROUP CONDITIONS****DESCRIPTION**

Requirements for existing Gas 1, (Natural Gas only) for existing Boilers and Process Heaters at major sources of Hazardous Air Pollutants per 40 CFR Part 63, Subpart DDDDD. These existing boilers or process heaters must comply with this subpart no later than January 31, 2016, except as provided in 40 CFR 63.6(i).

Emission Units: {Enter specific emission unit ID's here, or}

The collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within the units designed to burn gas 1 fuel subcategory as defined in 40 CFR 63.7575. At the time of permit renewal:

Less than 5 MMBtu/hr	List units this size
Equal to or greater than 5 MMBtu/hr and less than 10 MMBtu/hr	List units this size
Equal to or greater than 10 MMBtu/hr	List units this size

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall only burn natural gas. (40 CFR 63.7499(I))

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee must meet the tune-up and Energy Assessment work practice standards for each applicable boiler or process heater at the source. (40 CFR 63.7500(a)(1), 40 CFR Part 63, Subpart DDDDD, Table 3, Nos. 1-4)
2. The permittee must operate and maintain affected sources in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. (40 CFR 63.7500(a)(3))
3. The permittee may obtain approval from the Administrator to use an alternative to the work practice standards noted in SC III.1 and/or SC III.2. (40 CFR 63.7500(b))
4. The permittee must:
 - a. Complete a tune-up every 5 years (61 months) for boilers/process heaters less than or equal to 5 million Btu per hour. (40 CFR 63.7500(e), 40 CFR 63.7515(d))
 - b. Complete a tune-up every 2 years (25 months) for boilers greater than 5 million Btu per hour and less than 10 million Btu per hour. (40 CFR 63.7500(e), 40 CFR 63.7515(d))

- c. Complete a tune-up annually (13 months) for boilers greater than 10 million Btu per hour. **(40 CFR 63.7540(a)(10), 40 CFR 63.7515(d))**
- d. Conduct the tune-up within 30 calendar days of startup, if the unit is not operating on the required date for a tune-up. **(40 CFR 63.7540(a)(13))**
- e. Follow the procedures described in SC IX 4.a through 4.f for all initial and subsequent tune ups. **(40 CFR 63.7540(a)(10), 40 CFR Part 63, Subpart DDDDD, Table 3)**
- f. Complete the Initial tune ups on all affected units no later than January 31, 2016, except as provided in **40 CFR 63.7510(j)** and **40 CFR 63.7540(a)(13)**.

- 5. The permittee must complete the one-time energy assessment no later than January 31, 2016. **(40 CFR 63.7510(e))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

- 1. The permittee must keep a copy of each notification and report submitted to comply with 40 CFR Part 63, Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that the permittee submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv). **(40 CFR 63.7555(a)(1))**
- 2. The permittee must keep each record on site, or they must be accessible from on-site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The permittee can keep the records off site for the remaining 3 years. **(40 CFR 63.7560(a), (b), and (c))**

VII. REPORTING

- 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
- 2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
- 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- 4. The permittee must submit a Notification of Compliance Status that includes each boiler or process heater before the close of business on the 60th day following the completion of the initial compliance demonstrations for all boiler or process heaters at the facility. The Notification of Compliance Status report must contain the following information. **(40 CFR 63.7545(e))**
 - a. A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a description of the add-on controls used on the unit to comply with 40 CFR Part 63, Subpart DDDDD, description of the fuel(s) burned. **(40 CFR 63.7545(e)(1))**
 - b. Certification(s) of compliance, as applicable, and signed by a responsible official: **(40 CFR 63.7545(e)(8))**
 - i. "This facility complies with the required initial tune-up according to the procedures in 40 CFR 63.7540(a)(10)(i) through (vi)." **(40 CFR 63.7545(e)(8)(i))**

ii. "This facility has had an energy assessment performed according to 40 CFR 63.7530(e)." **(40 CFR 63.7545(e)(8)(ii))**

5. The permittee must submit boiler tune-up compliance reports. The first compliance report shall cover the period January 31, 2016 thru December of the year in which the tune up was completed and must be postmarked or submitted no later than March 15th of the reporting year that immediately follows the year in which the tune-up was completed. Subsequent compliance reports must be postmarked or submitted by March 15th of the year following the tune-up and must cover the applicable 1, 2, or 5 year period starting from January 1 of the year following the previous tune-up to December 31 (of the latest tune-up year). Compliance reports must be submitted using the Compliance and Emissions Data Reporting Interface (CEDRI) which is accessed through the EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). If the reporting form is not available in CEDRI at the time the compliance report is due, a hardcopy of the compliance report shall be submitted to the state and EPA Region 5. At the discretion of the Administrator, the permittee must submit these reports, in the format specified by the Administrator. **(40 CFR 63.7550(b), 40 CFR 63.10(a)(5), 40 CFR 63.7550(h)(3))**
6. The permittee must include the following information in the compliance report. **(40 CFR 63.7550(c), 40 CFR 63.7550(c)(1))**
- Company and Facility name and address. **(40 CFR 63.7550(c)(5)(i))**
 - Process unit information, emissions limitations, and operating parameter limitations. **(40 CFR 63.7550(c)(5)(ii))**
 - Date of report and beginning and ending dates of the reporting period. **(40 CFR 63.7550(c)(5)(iii))**
 - The total operating time during the reporting period. **(40 CFR 63.7550(c)(5)(iv))**
 - Include the date of the most recent tune-up for each unit. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown. **(40 CFR 63.7550(c)(5)(xiv))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

- The permittee must comply with 40 CFR Part 63, Subpart DDDDD no later than January 31, 2016, for existing boilers and process heaters, unless an extension has been granted per 40 CFR 63.6(i). **(40 CFR 63.7495(b))**
- The permittee must be in compliance with the applicable work practice standards. **(40 CFR 63.7505(a))**
- For affected sources (as defined in 40 CFR 63.7490) that have not operated since the previous compliance demonstration and more than one year has passed since the previous compliance demonstration, the permittee must complete a subsequent tune-up within 30 days of startup by following the procedures described in SC IX 4.a through 4.f. **(40 CFR 63.7515(g))**
- The permittee must demonstrate continuous compliance with the tune-up requirement by completing the following: **(40 CFR 63.7540(a))**
 - Inspect the burner, and clean or replace any components of the burner as necessary (the permittee may delay the burner inspection until the next scheduled unit shutdown). At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment. **(40 CFR 63.7540(a)(10)(i))**
 - Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available. **(40 CFR 63.7540(a)(10)(ii))**
 - Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee may delay the inspection until the next scheduled unit shutdown).

Ox Trim - Every 5 yrs (SL)

Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection. **(40 CFR 63.7540(a)(10)(iii))**

- d. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_x requirement to which the unit is subject. **(40 CFR 63.7540(a)(10)(iv))**
- e. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. **(40 CFR 63.7540(a)(10)(v))**
- f. Maintain on-site and submit, if requested by the Administrator, the most recent periodic report containing the information as listed below. **(40 CFR 63.7540(a)(10)(vi))**
 - i. The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater. **(40 CFR 63.7540(a)(10)(vi)(A))**
 - ii. A description of any corrective actions taken as a part of the tune-up. **(40 CFR 63.7540(a)(10)(vi)(B))**
 - iii. The type and amount of fuel used over the 12 months prior to the tune-up, ~~but only if the unit was physically and legally capable of using more than one type of fuel during that period.~~ Units sharing a fuel meter may estimate the fuel used by each unit. **(40 CFR 63.7540(a)(10)(vi)(C))**

- 5. If the boiler or process heater has a heat input capacity of less than or equal to 5 million Btu per hour, the permittee may delay the burner inspection specified in SC IX 4.a until the next scheduled or unscheduled unit shutdown, but the permittee must inspect each burner at least once every 72 months. **(40 CFR 63.7540(a)(12))**

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).