

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

B170927926

<b>FACILITY:</b> Federal-Mogul Powertrain Systems	<b>SRN / ID:</b> B1709
<b>LOCATION:</b> 200 S Maple Street, SPARTA	<b>DISTRICT:</b> Grand Rapids
<b>CITY:</b> SPARTA	<b>COUNTY:</b> KENT
<b>CONTACT:</b> Donna Spytma , EHS Coordinator	<b>ACTIVITY DATE:</b> 12/04/2014
<b>STAFF:</b> Eric Grinstern	<b>COMPLIANCE STATUS:</b> Compliance
<b>SUBJECT:</b> Unannounced inspection	<b>SOURCE CLASS:</b> SM OPT OUT
<b>RESOLVED COMPLAINTS:</b>	

#### **Unannounced inspection of Federal Mogul– Sparta**

Prior to entering the facility a survey of the perimeter was made, no visible emissions or odors were noted.

At the facility EG met with Chuck Meek Engineering Manager. The Environmental Manager, Donna Spytma, was on temporary leave from the facility at the time of the inspection. It was agreed that a tour of the facility operations would be conducted with Mr. Meek, and any records or follow-up issues would be addressed with Ms. Spytma upon her return.

#### **FACILITY DESCRIPTION**

The facility is a green sand iron foundry that manufactures piston rings and rear axle spacers. The facility melts iron in four electric induction furnaces that vent to baghouse control. Both ductile and grey iron is processed at the facility.

#### **REGULATORY ANALYSIS**

The facility is a minor source with an opt-out permit (PTI No. 391-07). The facility also holds a permit for a heat treat line (PTI No. 223-08).

The facility is subject to the Iron and Steel Foundry Area Source NESHAP, Subpart ZZZZZ. The facility is considered a small foundry under the NESHAP since they currently melt less than the 20,000 ton per year threshold. The facility only purchases pig iron for melting and has certified compliance with the metallic scrap and mercury requirements of the NESHAP. At this time the facility is considered to be in compliance with the NESHAP.

There are several conditions within the permit that are derived from Subpart ZZZZZ. Some of these conditions are based on the assumption that the facility would be classified as a large area source, which they currently are not. The underlying applicable requirement in these cases is Subpart ZZZZZ. The facility will only be expected to comply with these conditions when and if they exceed the 20,000 ton per year metal production threshold. The facility reported a total charge amount of 15,508 tons in 2013 via MAERS.

#### **EUFURNACES**

The facility has four electric induction furnaces that have swing hoods, one hood for Furnaces 1 & 2 and one hood for Furnaces 3&4. The hood is swung over the furnace that is in the state of charging/melting. All metal handling processes are ducted to the 50k Dustar baghouse. Furnace No. 4 is the smallest of the four furnaces and is generally used for testing/prototype runs. The furnace is currently not functional but is scheduled for repair.

The facility uses tundish ladles for all ductile inoculation. Production of ductile is currently approximately 30-40% of total metal. During the inspection staff observed ductile inoculation. While the process does not have capture or control, emissions from the tundish ladle were minimal compared to what staff has observed at other facilities.

#### **Emission/Material Limits/Monitoring/Recordkeeping**

EUFURNACES limits the emission of PM and PM-10 and establishes a VE limit of 10% opacity. Compliance with the emission limits is demonstrated through proper operation of the baghouse. Proper operation of the baghouse is demonstrated via the requirement that the facility monitor and record the pressure drop once per shift. Review of facility records showed that they are monitoring and recording pressure drop across the baghouse. During the inspection no VE was noted from the baghouse.

Additionally, the facility maintains monthly emission calculations, derived from emission factors, for the furnace as part of the records required to demonstrate compliance with the facility-wide emission limits (FGFACILITY).

Status: Compliant

#### Stack/Vent Restrictions

Visual evaluation of the stack (SVDUSTAR2) showed that it appeared to meet the required dimensions.

#### EUGRINDING

The facility has numerous finishing processes, including lathes and grinders. The dry grinding processes are controlled by the 16k Dustar baghouse. There are also numerous other units that have control devices that met the requirements for exemption under Rule 285.

#### Emission/Material Limits/Monitoring/Recordkeeping

EUGRINDING limits the emission of PM and PM-10. It also limits VE to 10%. Compliance with the emission limits is demonstrated through proper operation of the baghouse. Proper operation of the baghouse is demonstrated via the requirement that the facility monitor and record the pressure drop once per shift. Review of facility records showed that they are monitoring and recording pressure drop across the baghouse. During the inspection no VE was noted from the baghouse.

Additionally, the facility maintains monthly emission calculations, derived from emission factors, for the furnace as part of the records required to demonstrate compliance with the facility-wide emission limits (FGFACILITY).

Status: Compliant

#### Stack/Vent Restrictions

Visual evaluation of the stack (SVDUSTAR1) showed that it appeared to meet the required dimensions.

Status: Compliant

#### FGMOLDSAND

All sand related processes are controlled by the Sly pulse jet baghouse and the 50k Dustar baghouse. The muller, sand cooler and sand room are controlled by the Dustar baghouse. Mold Making: The facility uses a green sand system that is processed through a muller and cooler. Sand in the system is made up of new sand and bentonite clay binder, shakeout sand and excess sand from the molding machines. Shakeout sand is processed through an evaporative cooler that is controlled by a cyclone which is connected to the Sly baghouse. All exhaust points and conveyor drop points are ducted to the Sly Baghouse. The facility has seven automatic mold making machines. The facility does not use any cores.

Shakeout: From mold making the molds are carried down eight separate conveyor lines to eight automatic sand shakeout stations. Sand from shakeout is carried via conveyor back to the sand reclamation system.

#### Emission/Material Limits/Monitoring/Recordkeeping

EUGRINDING limits the emission of PM and PM-10. It also limits VE to 5%. Compliance with the emission limits is demonstrated through proper operation of the baghouse. Proper operation of the baghouse is demonstrated via the requirement that the facility monitor and record the pressure drop once per shift. Review of facility records showed that they are monitoring and recording pressure drop across the baghouse. During the inspection no VE was noted from the baghouse.

Additionally, the facility maintains monthly emission calculations, derived from emission factors, for the furnace as part of the records required to demonstrate compliance with the facility-wide emission limits (FGFACILITY).

#### Stack/Vent Restrictions

Visual evaluation of the stack (SVSLY) showed that it appeared to meet the required dimensions.

Status: Compliant

#### FG-FACILITY

FG-FACILITY limits emissions below the major source threshold and incorporates Subpart 5Z requirements.

#### Emission/Material Limits/Monitoring/Recordkeeping

FG-FACILITY limits the emission of PM, PM-10, CO and VOC. Compliance with the emission limits is demonstrated through the facility maintaining records of emissions based on emission factors/usage rates, etc. Review of facility records demonstrate compliance with the emission limits.

#### Applicable Subpart 5 Z conditions:

- 4.2 The permittee shall not utilize a binder chemical formulation that uses methanol as a specific ingredient of the catalyst formulation for a warm box mold or core making line. This requirement does not apply to the resin portion of the binder system. (§63.10886 of 40 CFR Part 63, Subpart ZZZZZ)

The facility does not have any warm box operations.

Status: Compliant

#### Process/Operational Limits

- 4.4 The permittee shall implement and maintain an approved plan to address the pollution prevention management practices for metallic scrap and mercury switches by the applicable compliance date specified in 40 CFR 63.10881. The plan shall include the following:
- a) Metallic scrap management program. (40 CFR 63.10885(a))
  - b) Mercury requirements. (40 CFR 63.10885(b))
- The permittee shall revise the plan within 30 days after a change occurs. (§63.10885 of 40 CFR Part 63, Subpart ZZZZZ)

The facility only purchases pig iron.

Status: Compliant

- 4.6 The permittee shall submit an initial notification of applicability according to §63.9(b)(2) of 40 CFR Part 63, Subpart A. (§63.10890(b) of 40 CFR Part 63, Subpart ZZZZZ)

Notification was submitted

Status: Compliant

- 4.8 Within 30 days after the applicable compliance date specified in 40 CFR 63.10881, the permittee shall submit a notification of compliance status according to §63.9(h)(1)(i) of 40 CFR Part 63, Subpart A. The notification shall include all applicable compliance certifications as specified in 40 CFR 63.10890(c)(1) & (2). (§63.10890(c) of 40 CFR Part 63, Subpart ZZZZZ)

The facility is currently in compliance with all notifications of compliance status reports.

Status: Compliance

- 4.10 The permittee shall keep, in a satisfactory manner, records of metal melted in tons per month for FGFACILITY, as required by SC 4.2. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request. (R 336.1205, R 336.1225, §63.10899 of 40 CFR Part 63, Subpart ZZZZZ)

Records maintained and reviewed

Status: Compliance

- 4.11 Within 90 days after the issuance date of this permit, the permittee shall develop a spreadsheet for approval by the AQD District Supervisor to calculate all emissions for FG-FACILITY as specified in SC 4.1a through 4.1d, based on material usage rates, test results and/or emission factors. The permittee shall complete all required calculations and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. (R 336.1205(3))

The facility has developed and is maintaining the required spreadsheet

Status: Compliant

- 4.12 The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period Particulate Matter, PM-10, CO, and VOCs emission calculation records for FG-FACILITY, as required by SC 4.1a, 4.1b, 4.1 c, and 4.1d. The permittee shall keep all records on file at for a period of at least five years and make them available to the Department upon request. (R336.1205 (3))

The facility is maintaining these records

Status: Compliant

**EU-HEATTREAT**

The facility has a heat treating process that was permitted under PTI No. 223-08. The process consists of two gas-fired furnaces equipped with integrated oil quench, a single post treatment washer and three electric tempering furnaces.

**Emission Limits**

Limits particulate emissions to 55 tpy. Compliance with the emission limit is demonstrated through a limitation on the amount of quench oil that can be used and facility emission calculations.

**Material Usage Limits**

1.2 The permittee shall not exceed the net quench oil usage rate of 22,000 gallons in EU-HEATTREAT per year, based on a 12-month rolling time period as determined at the end of the calendar month. The net quench oil usage is defined as the amount of quench oil added to the "Emission Unit" to bring the quench oil levels up to starting levels less any amount of quench oil reclaimed, disposed of, or spilled/cleaned up. (R 336.1331, R 336.1205)

Facility records show compliance with limit.

Status: Compliant

**Recordkeeping/Reporting/Notification**

1.3 The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15<sup>th</sup> day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition.  
(R 336.1331)

Records maintained

Status: Compliant

1.4 The permittee shall record and calculate the particulate (oil mist) emission rate from EU-HEATTREAT for each calendar month, using a material balance for quench oil usage (Appendix I or approved spreadsheet). All monthly quench oil purchased or monthly usage rate to replenish lost quench oil (column A), amount of spent oil sent off-site for recycling (column B), amount of spent oil or sludge sent off-site for disposal (column C), amount of oil spilled (column D) and oil emission calculation (column E) records shall be kept on file for a period of at least five years and made available to the Department upon request. (R 336.1331)

Records maintained

Status: Compliant

Based on the information and observations made during this inspection, the facility is in compliance with applicable air quality rules and regulations.

NAME 

DATE 12/18/14

SUPERVISOR 