M4199
MANUAL

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

M419931347

FACILITY: GENERAL MOTORS HAMTRAMCK		**SRN / ID:** M4199
LOCATION: 2500 E GENERAL MOTORS BLVD, DETROIT		**DISTRICT:** Detroit
CITY: DETROIT		**COUNTY:** WAYNE
CONTACT: Meghan Kennedy , Environmental Engineer		**ACTIVITY DATE:** 09/14/2015
STAFF: Usama Amer	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Targeted Inspection of a Major Source		
RESOLVED COMPLAINTS:		

On July 28, 29, and September 14, 2015, I conducted a targeted scheduled inspection at General Motors Detroit -Hamtramck Assembly (GMDH), located at 2500 General Motors Blvd., Detroit, Michigan. The purpose of the inspection was to verify GMDH's compliance with the requirements of Article II, Air Pollution Control, Part 55 of Act 451 of 1994, and with the conditions of the Renewable Operating Permit (ROP) No.MI-ROP-N4199-2010, and to evaluate the process and control equipment. During the inspection Jessica Jeffery, Sr. Environmental Engineer, Jennifer Tegen, Sr. Environmental Engineer, and Meghan Kennedy, Environmental Engineer, represented GMDH.

BACKGROUND

- GMDH Plant consists of an automobile assembling operation, and a utilities plant with hot water boiler operations. Descriptions of each emission unit are included in the following tables, as provided in the plant's ROP No. MI-ROP-M4199-2010.

- The majority of air pollutant emissions from GMDH are attributed to the coatings operations and coal and natural gas hot water boilers.

- On February 17, 2010, the AQD issued to GMDH the above ROP. The ROP has an expiration date of on February 17, 2015, and GMDH submitted a renewal application on June 27, 2014; therefore, the current ROP remains active while the renewal is being processed.

- The following 2 Permits to Install (PTI) have been issued to GMDH in 2015:

1. PTI No. 196-14 - Installation of new natural gas-burning equipment as part of the topcoat operations; fourteen "air supply houses" and seven regenerative thermal oxidizers (RTOs)

2. PTI No. 91-15 – Elimination of coal capabilities at the powerhouse

COMPLIANCE STATUS

General Conditions

9, 10 – Compliance – Collected air contaminants shall be removed to maintain controls at required collection efficiency; air cleaning devices installed and operated in a satisfactory manner – Controls were installed and operating as directed by the ROP during the 7/28/2015 inspection.

11 – Compliance – Visible emissions limited to 20% over a six-minute average, with the exception of one 27% six-minute period per hour, unless otherwise specified in the ROP or in a federal new source performance standard. This limit applies to point source (non-fugitive) emission units at the plant – I did not observe visible emissions exceeding 20% opacity during the 7/28/2015 inspection.

12 – Compliance – Nuisance emissions prohibited – No citizen complaints have been received by the AQD's Detroit Office for GMDH in the period since the last inspection.

19 through 23, 25 (and under individual EU/FG tables at SCs VII.1 through 3) – Compliance – Semiannual deviation reports, Rule 912 reports, compliance certifications and report certifications – Semiannual deviation reports and annual certifications for the year 2014 have been received, reviewed and saved in MACES.

24 – Compliance – Submissions to the Emissions Inventory. The AQD received GMDH's 2014 MAERS databases, reviewed and saved it in MACES.

SECTION I: Coatings Operations

Source-Wide Conditions

* Conditions #III. Process/Operational Restrictions

1. GMDH shall not produce more than 78.5 jobs per hour, as averaged over the hours of operation for each calendar month and determined at the end of each calendar month. A job shall be defined as a fully assembled vehicle leaving the assembly line.

2. GMDH shall not produce more than 337,500 jobs per year, as determined at the end of each calendar year.

- GMDH has been averaging 50% of its limits due to low volume sales. Also, GMDH had a 4-month shut down for conveyor type change over. The old platform conveyor has changed to a skillet type.

- Vehicle production rates were as follows:

- 2014 – 39.54 jobs/hr for 7/14; 47,256 jobs/year - Attachment A.1
- 2015 – 37.53 jobs/hr for 5/15; 48,717.40 jobs/year – Attachment A.2

* Condition #VI. Monitoring/Recordkeeping

1. GMDH shall maintain daily and monthly records of the hours of operation for the assembly line.

2. GMDH shall maintain records of the daily and monthly number of jobs produced for the assembly line.

3. GMDH shall calculate and maintain records of the hourly averaged jobs per hour, as determined at the end of each calendar month.

- Attachments A.1 & A.2

EUPRETREATMENT

DESCRIPTION: Surface preparation for the painting applications to follow. Vehicle bodies are cleaned with detergent and rinsed. Microcrystals are applied to vehicle bodies for corrosion resistance and enhanced paint adhesion. The e-coat is controlled by an RTO, although, GMDH does not take credit for the abatement.

* Condition #VI. Monitoring/Recordkeeping

1. GMDH shall maintain a current listing from the manufacturer of the chemical composition of each material used in EUPRETREATMENT, including the weight percent of each compound. The data may consist of MSDSs, manufacturer's formulation data, or both.
- MSDS are kept to demonstrate compliance with this condition.

EUELPOSYSTEM

DESCRIPTION: An electrocoat dip tank followed by an electrocoat curing oven. There aren't any add on controls associated with this emission unit.

* Condition #I - EMISSION LIMITS

* Condition #I - EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario
1. VOC	76.8 pph	Averaged over the operating hours in a calendar month, with the exception of testing pursuant to General Condition (GC) 13, when it shall be determined by the testing protocol agreed upon by AQD
2. VOC	0.16 kilograms per liter of applied coating solids2	Calendar month volume weighted average
3. VOC	1.2 pounds per gallon coating, minus water, as applied	Calendar month volume weighted average
4. VOC	172.8 tpy2	As determined at the end of each calendar year

- Attachments B.1 & B.2 list the following emission rates:

Pollutant	**Reported Rate**	Time Period/ Operating Scenario
1. VOC	11.29 pph for 7/14 Attachment B.1 7.66 pph for 4/15 Attachment B.2	Averaged over the operating hours in a calendar month, with the exception of testing pursuant to General Condition (GC) 13, when it shall be determined by the testing protocol agreed upon by AQD
2. VOC	0.06 kg/l of ACS for 8/14 Attachment B.1 0.05 kg/l of ACS for 5/15 Attachment B.2	Calendar month volume weighted average
3. VOC	0.47 lb/gal for 8/14 Attachment B.1 0.37 lb/gal for 5/15 Attachment B.2	Calendar month volume weighted average
4. VOC	5.22 tpy for 2014 Attachment B.1 5.46 tpy for 2015 Attachment B.2	As determined at the end of each calendar year

* Condition #V.1 - The VOC content for each primer, minus water, as applied, shall be determined using EPA Reference Method 24. Alternatively, for water-borne primer, the VOC content may be determined from formulation data, and for non-water-borne primer, the VOC content may be determined from formulation data if acceptable to the AQD District Supervisor. If the Method 24 and formulation values should differ, then Method 24 results shall be used to determine compliance.

- Currently, the VOC content for water-borne and non-water-borne primers are determined, by the coating manufacturer, using EPA Reference Method 24. Accordingly, the VOC contents are listed in the primers MSDS (Attachments D.1 and D.2) and used for emissions calculations. However, GMDH expressed its preference to determine the VOC contents for the said primers from formulation data. GMDH has already submitted a request for this alternative to the AQD.

- Per the MSDSs, the analytical VOCs by Method 24 are 0.15 lb/gal minus water for the E6433 resin and 1.37 lb/gal minus water for the E6434 paste; as seen in the VOC reports, the resin to paste use ratio is typically about

8 to 1 by volume, which brings the electrocoat bath VOC content down to about 0.3 lb/gal minus water and into compliance with the NSPS and Part 6 limits. Attachments D.1 and D.2

* Conditions #VI.1 - # VI.3 - Monitoring/Recordkeeping

- Attachments A.1, A.2, B.1 and B.2 show the required data.

* Condition #IX.1 - GMDH shall comply with the Standards of Performance for New Stationary Sources (40 CFR Part 60) General Provisions (Subpart A) and Standards of Performance for Automobile and Light-Duty Truck Surface Coating Operations (Subpart MM).

- EUELPOSYSTEM is in compliance with the following requirements of NSPS 40 CFR Part 60, Subpart MM:

1) §60.392(a)(1)(i) - Condition #I.2
2) §60.393(c) - Condition #I.2
3) §60.395.b – Condition #VI.3

Attachments A.1, A.2, B.1 and B.2 show the required data.

EUPRIMERSURFACER

DESCRIPTION: A guidecoat (primer surfacer) spray booth followed by a curing oven. The solventborne primersurfacer is applied manually or automatically with air atomized or electrostatic spray guns. The guidecoat booth is equipped with a downdraft water wash system to control particulate emissions from paint overspray. VOC emissions from the curing oven are controlled by a thermal oxidizer.

POLLUTION CONTROL EQUIPMENT: Thermal incineration, downdraft water wash system

* Conditions #I.1 - #I.8

Pollutant	Limit	Time Period/ Operating Scenario
1. PM	2.42 pph	Averaged over the operating hours in a calendar month, with the exception of testing pursuant to General Condition (GC) 13, when it shall be determined by the testing protocol agreed upon by AQD
2. PM	5.45 tpy	As determined at the end of each calendar year
3. VOC	109 pph	Averaged over the operating hours in a calendar month, with the exception of testing pursuant to General Condition (GC) 13, when it shall be determined by the testing protocol agreed upon by AQD
4. VOC	1.40 kilograms per liter of applied coating solids	Calendar month volume weighted average
5. VOC	14.9 pounds per gallon of applied coating solids	Calendar day volume weighted average as determined by the procedure specified in R°336.1610(6)(b)

Pollutant	Limit	Time Period/ Operating Scenario
6. VOC	245 tpy	As determined on a 12 month rolling total at the end of each calendar month
7. VOC	12.6 pph	Averaged over the operating hours in a calendar month
8. VOC	28.5 tpy	As determined on a 12 month rolling total at the end of each calendar month

- Attachments E.1, E.2, F.1, F.2, G.1 - G.4, list the following emission rates:

Pollutant	Reported Emission Rate	Time Period/ Operating Scenario
1. PM	0.45 pph for 4/14 Attachment E.1 0.45 pph for 5/15 Attachment E.2	Averaged over the operating hours in a calendar month, with the exception of testing pursuant to General Condition (GC) 13, when it shall be determined by the testing protocol agreed upon by AQD
2. PM	0.22 tpy as of 12/14 Attachment E.1 0.25 tpy as of 5/15 Attachment E.2	As determined at the end of each calendar year
3. VOC	25.36 pph for 4/14 Attachment F.1 21.05 pph for 5/15 Attachment F.2	Averaged over the operating hours in a calendar month, with the exception of testing pursuant to General Condition (GC) 13, when it shall be determined by the testing protocol agreed upon by AQD
4. VOC	1.30 kg/LSA for 1/14 Attachment G.1 1.25 kg/LSA for 1/15 Attachment G.2	Calendar month volume weighted average
5. VOC	6.22 lb/GACS for 3/14 Attachment G.3 5.34 lb/GACS for 1/15 Attachment G.4	Calendar day volume weighted average as determined by the procedure specified in R° 336.1610(6)(b)
6. VOC	12.7 tpy for 2014 Attachment F.1 13.53 tpy as of 5/15 Attachment F.2	As determined on a 12 month rolling total at the end of each calendar month
7. VOC	NA – Anti-chip application has not operated since the 1990s	Averaged over the operating hours in a calendar month

Pollutant	Reported Emission Rate	Time Period/ Operating Scenario
8. VOC	NA– Anti-chip application has not operated since the 1990s	As determined on a 12 month rolling total at the end of each calendar month

* Conditions #III.1 & #VBI.9:

- Compliance – Primer surfacer booths shall not be operated unless the downdraft waterwash system is installed and operating properly; daily visual inspections – The waterwash system was observed operating at the primer surfacer booth during the September 14, 2015 inspection.

III.2, IV.1, VI.3 through 8, 15 and 16 – Compliance – Primer surfacer booths shall not be operated unless the associated oven incinerators are installed and operating properly, including maintaining either a minimum 1300° F oven temperature or a 1300°F average over three hours in each incinerator, and maintaining a minimum retention time of 0.5 seconds in each incinerator; temperature measuring device installed, temperature recorded at least once every 15 minutes, and device accurate to either 0.75% of temperature or within 2.5°C; monthly summary of thermal oxidizer data and operational status of oxidizers; calibration of temperature devices kept; inspections of oxidizers (annual) and heat exchangers (18 months) and records kept of annual/maintenance inspections; records kept of bypass events.

- New robots were installed in the booths in July, 2012. Therefore, a Transfer Efficiency (TE) test was conducted in November, 2012. The TE, as Grey Primer was used, showed an 89% TE.

- North and south prime oxidizer temperatures registered 1330°F and 1325°F when viewed during the inspection. Prime oven oxidizer temperature records for 3/20/14 and 9/14/15 are provided in Attachments I.1 & I.2. Both the north and south prime ovens were in operation on 9/14/15. Prime oven oxidizer temperature records are given in 10-minute intervals and demonstrate the 1300°F minimum was met during production hours (beginning about 6 AM and lasting through about 4 PM). Calibrations were last performed on 12/15/14 (Attachment J). Also Attachment N.2 shows that the residence time for each of the north and south ovens is 0.57 seconds.

- 4 episodes of lower than 1300°F took place in 2014, and another 4 episodes of lower than 1300°F took place as of May, 2015. Attachment H.1

* Conditions #V.1 through 3, VI.2.c through e, VI.10 – Compliance – Tests for transfer efficiency, oven loading rates, and oxidizer destruction efficiency within 180 days of permit issuance if not conducted in the last five years; records of tests maintained; description of paint system maintained with a records of changes made and annual reviews required to determine if the performance tests remain representative of current operations:

- Transfer efficiency (TE) tests on the prime lines were conducted on 11/13/12, oven loading (OS/L) rates tests were conducted in March & April, 2015, and oxidizer destruction efficiency (DE) tests were conducted in April, 2015. The TE results (89%) of 11/13/12 were previously reviewed and accepted. TE testing was not required in 2014 – see Attachment M. The DE on the North and South Prime Ovens, which were replaced in 2014, were 99.7% as per the DE test of 4/14-15/15 (Attachments K.1 & K.2). As of the date of this inspection report, the OS/L results have not been reviewed thoroughly. A thorough review will follow.

* Condition #V.4 – Compliance – VOC content to be determined according to EPA protocol – VOC content of the coatings are conducted by the coatings manufacturer and reported on the coatings MSDSs. Attachments D.1, D.2, & L.1

* Condition #VI.1 - #VI.16 – Monitoring/Recordkeeping requirements – Compliance – All required records were provided during the inspection and copies of thereof are attached herewith.
Attachments B.1, B.2, E.1, E.2, & N.1 - N.5

* Conditions #VII.4, #IX.2 and 3:

– Compliance – CAM compliance; semiannual reporting of exceedances and excursions – 40 CFR 64 requirements are covered by the monitoring conditions in the emission unit. Eight (8) CAM excursions have been reported for 2014, and ten (10) have been reported for 2015 thus far.

* Conditions #VIII.1 through 13 – Compliance – Primer surfacer/topcoat booth stack to vent unobstructed vertically at a height not less than 147 feet above ground and with no minimum diameter; each of four oven stacks (two primary stacks and two bypass stacks) and eight wet sand oven stacks to vent unobstructed vertically at a height not less than 53 feet above ground and with no minimum diameter.

– These stacks were viewed from ground level during the inspection and judged in compliance with these requirements, though measurements were not performed. It is noted that the wet sand operations have not been used for a number of years. According to GM during an earlier inspection, "wet sand" refers to manual sanding, conducted with water, to remove defects in the vehicle body and the ovens installed to dry the vehicles.

* Condition #IX.1 – Compliance – Primer surfacer must meet the requirements of NSPS MM

– Condition #I.4 is based on the NSPS and semiannual reports for 2014, which have been received and demonstrated compliance with the emission limit.

EUTOPCOATSYSTEM

DESCRIPTION: A topcoat spray booth followed by a curing oven. There is a heated flash-off area located between the basecoat portion of the booth and the clearcoat portion of the booth. The waterborne basecoat is applied manually or automatically with air atomized or electrostatic spray guns, the solventborne basecoat replacement (BCR) is applied manually or automatically with air atomized or electrostatic spray guns. The BCR is a topcoat material, but is applied in the primer surfacer booth. The solventborne clearcoat is applied manually or automatically with air atomized or electrostatic spray guns. The topcoat booth is equipped with a downdraft water wash system to control particulate emissions from paint overspray. VOC emissions from the curing ovens are controlled by a thermal oxidizer.

POLLUTION CONTROL EQUIPMENT: Downdraft water wash system, thermal incineration, purge collection for solventborne material.

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario
1. PM	11.3 pph	Averaged over the operating hours in a calendar month, with the exception of testing pursuant to General Condition (GC) 13, when it shall be determined by the testing protocol agreed upon by AQD
2. PM	26.6 tpy	As determined at the end of each calendar year
3. VOC	367 pph[2]	Averaged over the operating hours in a calendar month, with the exception of testing pursuant to General Condition (GC) 13, when it shall be determined by the testing protocol agreed upon by AQD
4. VOC	1.47 kilograms per liter of applied coating solids[2]	Calendar month volume weighted average

Pollutant	Limit	Time Period/ Operating Scenario
5. VOC	14.9 pounds per gallon of applied coating solids	Calendar day volume weighted average as determined by the procedure specified in R°336.1610(6)(b)
6. VOC	796 tpy[2]	As determined on a 12 month rolling total at the end of each calendar month

- Attachments O.1 – O.4, P.1 – P.2, Q.1 – Q.2, and R.1 – R.2 list the following emission rates:

Pollutant	Reported Emission Rate	Time Period/ Operating Scenario	Comments
1. PM	2.02 pph for 5/14 Attachment O.1 1.85 pph for 3/15 Attachment O.2	Averaged over the operating hours in a calendar month	Also in compliance with Conditions #VI.11 & VI.12
2. PM	1.73 tpy for 6/13 - 5/14 Attachment O.3 1.22 for 4/14 – 3/15 Attachment O.4	As determined at the end of each calendar year	Also in compliance with Conditions VI.11 & VI.12
3. VOC	88.81 pph for 5/14 Attachment P.1 80.88 pph for 3/15 Attachment P.2	Averaged over the operating hours in a calendar month	Also in compliance with Conditions VI.1 a – f, & VI.2 a – b
4. VOC	0.92 kg/L ACS for 8/14 Attachment Q.1 0.84 kg/L ACS for 5/15 Attachment Q.2	Calendar month volume weighted average	
5. VOC	6.59lb/GACS for 8/5/14 Attachment Q.3 5.97 lb/GACS for 5/19/15 Attachment Q.4	Calendar day volume weighted average as determined by the procedure specified in R°336.1610(6)(b)	
6. VOC	77.94 tpy for 5/14 Attachment R.1 54.23 tpy for 3/15 Attachment R.2	As determined on a 12 month rolling total at the end of each calendar month	

* Conditions #III.1, VI.9 – Compliance – Topcoat spray booths shall not be operated unless the downdraft waterwash system is installed and operating properly; daily visual inspections – The waterwash system was observed during the 9/14/15 inspection. The system was operating properly. Module #5 was not operating on the inspection day, 9/14/15, due to scheduled routine cleaning and maintenance.

* Conditions #III.2, IV.1, VI.3 through 8, 13 and 14 - In Compliance – Topcoat booths shall not be operated unless the associated oven incinerators are installed and operating properly, including maintaining either a minimum 1300°F oven temperature or a 1300°F average over three hours in each incinerator, and maintaining a

minimum retention time of 0.5 seconds in each incinerator; temperature measuring device installed, temperature recorded at least once every 15 minutes, and device accurate to either 0.75% of temperature or within 2.5°C; monthly summary of thermal oxidizer data and operational status of oxidizers; calibration of temperature devices kept; inspections of oxidizers (annual) and heat exchangers (18 months) and records kept of annual/maintenance inspections; records kept of bypass events.

- The oven incinerators temperatures are reported (electronically) every 10 minutes. A temperature profile, for each is oven incinerator, is kept electronically. During the inspection, the oven incinerators temperatures ranged between 1325° F and 1330° F (Attachments R.3 & R.4). Also, Attachment N.2 shows that the residence time for each of the incinerator ovens is 0.83 seconds. Calibrations were last performed on 12/15/2014, and all were found to have passed calibrations. Attachment S

* Conditions III.3, V.5 – Compliance – Purge capture system (a 5,000 gal collection tank) for solventborne materials installed and operating to provide 85% VOC capture; test for purge capture within 180 days of permit issuance if not conducted in the last five years – Purge capture system tests were last conducted on 8/3/2010 through 8/4/2010.

* Conditions V.1 through 3, VI.2.c through e, VI.10 – Compliance – Tests for transfer efficiency, oven loading rates, and oxidizer destruction efficiency within 180 days of permit issuance if not conducted in the last five years; records of tests maintained; description of paint system maintained with a records of changes made and annual reviews required to determine if the performance tests remain representative of current operations.

- Transfer efficiency (TE) tests on the topcoat lines were conducted on 11/21/2011 through 11/23/2011. The TE testing results, provided in Attachment T, were: Silver Metallic Basecoat – 65%, Black Solid Basecoat – 63%, and Clearcoat – 78%. Oxidizer destruction efficiency (DE) tests were conducted 12/10/2013 through 12/13/2013. The DE testing results, provided in Attachment U, were: Mod 1 TO – 96.9% and Mod 3 TO – 98.5%. The DE tests conducted in 2013 followed the replacement of the robots.

* Condition V.4 – Compliance – VOC content to be determined according to EPA protocol – VOC content of the coatings are given in the semiannual VOC reports and MSDSs.

* Conditions VII.4, IX.1 and 2 – Compliance – Annual deviation report received on 3/12/15 – 40 CFR 64 requirements are covered by the monitoring conditions in the emission unit. Four (4) deviations reported for the EUTOPCOATSYSTEM, and three (3) deviations reported for the EUPRIMERSURFACER in the assembly plant. Said deviations occurred in the 1st Semi-annual certification period and were considered minor.

NSPS MM for Automobile and Light-Duty Truck Coating Operations
The federal New Source Performance Standards (NSPS) at 40 CFR 60, Subparts A and MM regulates volatile organic compound emissions from automobile and light-duty truck surface coating operations installed after 10/5/1979. The electrocoat, primer surfacer, and topcoat lines at DHAC were all installed in the early 1980s and are subject to this subpart.

60.392(a)(1)(i), (b), (c) – Compliance – The electrodeposition prime coat (electrocoat) must meet a VOC emission rate equal to or less than 0.17 kilogram per liter of applied coating solids; the guidecoat (primer surfacer) must meet a VOC emission rate equal to or less than 1.40 kilogram per liter (equivalent to 11.7 pounds per gallon) of applied coating solids; the topcoat must meet a VOC emission rate equal to or less than 1.47 kilogram per liter (equivalent to 12.3 pounds per gallon) of applied coating solids.

60.393(b), 60.395(a)(1), 60.395(b) – Compliance – An initial performance test must be conducted by calculating the monthly volume weighted average mass of VOC emitted per volume of applied coating solids (60.393(b)) and this test shall be repeated monthly; these results shall be reported (60.395(a)(1)) initially; any exceedances during subsequent tests shall be reported (60.395(b)). Though incinerators control the oven exhaust from the electrocoat, primer surfacer, and topcoat coating operations, GM DHAC does not apply any credit for VOC reduction within these affected facilities when calculating for compliance with the NSPS MM standards, therefore, the performance of the incinerators does not fall under the regulatory scope of the NSPS at this time.

The emission limits have been incorporated into the ROP at SC I.2 of EUELPOSYSTEM, SC I.4 of EUPRIMERSURFACER, and SC I.4 of EUTOPCOATSYSTEM. The monthly calculations and records necessary

to determine continued compliance with the emissions limits are also incorporated into the ROP. Annual and Semiannual NSPS MM reports for the period January through December, 2014 were received and reviewed.

EUDEADNER

I.1 through 5, III.1, V.1, VI.1 through 5, VII.1 through 3, VIII.1 and 2 – Compliance – The deadener booth last operated in 5/2011 and is no longer in use (submittals of 9/27/2011 and 9/25/2013). According to GMDH, during the previous inspection in 2011, the design of the Volt rendered the deadener booth obsolete. In addition, in recent years non-VOC materials were used as the deadener and no VOCs have been reported emitted from this emission unit. While unused this emission unit does not release emissions to the ambient air and is therefore considered to be in compliance with all applicable requirements.
Attachment V

EUFINALREPAIR

I.1 through 3, VI.1 through 4 – Compliance – VOC emissions limited to: 3.1 pounds per hour averaged over the operating hours in a calendar month (LAER); 4.8 pounds per gallon of coating, minus water, as applied, on a calendar day volume weighted average (Rule 610); 6.8 tons per 12-month rolling time period (LAER). Records to be maintained; monthly records permitted unless an individual coating exceeds the 4.8 pounds per gallon of coating, minus water, as applied, and then daily records of the coating are required.

- Final repair records for the periods January through December, 2014, and January through May, 2015 are given in Attachments W.1 & W.2, respectively. A total of 59.3 gallons of coating were used with 178.3 pounds, or 0.089 tons, of VOCs emitted in January, 2014, and a total of 44.6 gallons of coating were used with 136.7 pounds, or 0.068 tons, of VOCs emitted in April, 2015. Consequently, the highest monthly emission rates were reported for January, 2014 and April, 2015. Also, when GMDH uses an individual coating exceeds the 4.8 pounds per gallon of coating, minus water, as applied, it keeps daily calculations of VOC emission rates of this individual coating on a daily basis. GM DH complied with 6.8 tons per 12-month rolling time period (LAER) 2/2014 as the only time the VOC lb/hr exceeds 1.0 lb/hr and averaged 1.11 lb/hr (89.8 lb/81 hr) was in 2/2014. Attachments W.1 & W.2

* Condition III.1, VI.5 – Compliance – Each final repair booth is not to be operated unless the associated dry filters are installed and operating properly – Attachment X contains records of booth inspections for the period January through December, 2014, which occur every other week; filters were changed on 2/6/15 and 5/3/15.

V.1 – Compliance – VOC content determined by EPA Method 24 with formulation data as an alternative; records maintained – The VOC content and MSDSs of the final repair coatings were reviewed during the inspection. The MSDSs provide VOC content information in four ways: formula VOC with water; formula VOC without water; EPA Method 24 with water; EPA Method 24 without water. GM uses the EPA Method 24 data without water for the final repair daily average.

EUSEALERADH

*Conditions I.1 through 7, VI.1 through 4 – Compliance – VOC emissions limited to: 60.8 pounds per hour averaged over the operating hours in a calendar month (LAER); either 4.8, 4.3, 3.5, or 3.0 pounds per gallon of coating, minus water, as applied, on a calendar day volume weighted average depending on the coating type (Rule 621); 137 tons per 12-month rolling time period (LAER). Records are to be maintained.

- Sealers and adhesives records for the period January through December, 2014 (Attachments Y.1), and January through May, 2015 (Attachments Y.2) were provided during the inspection. For 2014: A total of 190,945.8 gallons of coating were used with 31,093 pounds, or 15.55 tons, of VOCs emitted over 1,364 production hours. The highest monthly emission rate is reported for 4/14, when 4,419 pounds VOC were emitted over 176 hours for a monthly average of 25.59 pounds per hour. For 2015: The highest monthly emission rate is reported for 3/15, when 4,273.4 pounds VOC were emitted over 179 hours for a monthly average of 23.88 pounds per hour.

V.1 – Compliance – VOC content determined by EPA Method 24 with formulation data as an alternative; records maintained – The VOC content of the sealers and adhesives and MSDSs were reviewed during the inspection.

EUBOOTHCLEAN

* Conditions I.1, V.1, VI.1 through 3 – Compliance – VOC emissions limited to 350 tons per 12-month rolling time period (LAER). Records to be maintained – As shown on Attachment Z.1, no cleaning activities occurred during the period from January through December, 2014. Attachments Z.2 & Z.3 show that the highest clean solvents usage has occurred in March, 2015: a total of 660 gal with 3,590.4 lbs of VOC, or 1.8 tons.

EUPURGE

* Conditions I.1, V.1, VI.1 through 3 – Compliance – VOC emissions limited to 650 tons per 12-month rolling time period (LAER). Records to be maintained – Purge solvent records for the period January through December, 2014 (Attachments AA.1), and January through May, 2015 (Attachments AA.2) were provided during the inspection. For 2014: VOC emissions total 190,684.67 pounds, or 95.34 tons, in the 12-month period, while the maximum VOC emission of 43,170.95 pounds, or 21.58 tons, occurred in April, 2014 (Attachment AA). For the period June, 2014 through May, 2015: VOC emissions total 172,293.34 pounds, or 86.15 tons, in the 12-month period, while the maximum VOC emission of 28,350.95 pounds, or 14.68 tons, occurred in February, 2015 (Attachment AA.3).

EUMISCSOLV

* Conditions I.1, V.1, VI.1 through 3 – Compliance – VOC emissions limited to 307 tons per 12-month rolling time period (LAER). Records to be maintained – Miscellaneous solvent emissions for the period January through December, 2014 (Attachments BB.1), and January through May, 2015 (Attachments BB.2) were provided during the inspection. For 2014: VOC emissions total 26,887.05 pounds, or 13.44 tons, in the 12-month period. For the period June, 2014 through May, 2015: VOC emissions total 39,364.38 pounds, or 19.68 tons, in the 12-month period.

EU-Acoustical/Structural Foam

* Conditions I.1 and 2, III.1, V.1, VI.1 and 2, VII.1 through 3, VIII.1 – Compliance – The acoustical/structural foam application has not been observed in operation since the 2005 inspection and according to the 9/27/2011 and 9/25/2013 submittals has not been operated since 8/2006. While unused this emission unit does not release emissions to the ambient air and is therefore considered to be in compliance with all applicable requirements.

FG-MACT

The federal National Emissions Standards for Hazardous Air Pollutants (NESHAP) at 40 CFR 63, Subparts A and IIII (MACT IIII) regulates hazardous air pollutants (HAP) emissions from the surface coating of automobiles and light-duty trucks. GM DHAC is a major source of HAPs. At 63.3082(g), GM is an existing affected source under MACT IIII for auto and light truck surface coating with an initial compliance date of 4/26/2007 (63.3083(b)). Semiannual compliance reports required at 63.3120(a) are to cover the periods 1/1 through 6/30 and 7/1 through 12/31. Reports are due (postmarked) by 7/31 and 1/31, respectively.

In the NOCS, GM states that the compliance options at 63.3091(b), 63.3092, 63.3090(c), and 63.3090(d) have been chosen. Thus, the ELPO or electrocoat is separated from the other materials and evaluated on its own. The control devices installed at the electrocoat, primer surfacer, and topcoat operations are not employed to achieve compliance with the HAP emissions limitations, therefore, the testing and monitoring of control device performance is not required for purposes of this regulation.

* Conditions I.2, I.5 and I.5a – Compliance – Organic HAP emissions from combined primer surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations plus all coatings and thinners must meet 0.132 kilograms per liter (1.10 pounds per gallon) of coating solids deposited on a calendar month basis; under 63.3092(a) each material in the electrocoat must contain no more than 1.0 percent by weight of any organic HAP and 0.10 percent by weight of any organic HAP which is an OSHA carcinogen per 29 CFR 1910.1200(d)(4).

- During the inspection, GMDH provided HAPs emission records for January through December, 2014 (Attachments CC.1), and January through May, 2015 (Attachments CC.2). The maximum monthly emissions (in pounds HAP per gallon solids applied) were reported at 0.31 in 1/14, and 0.24 in 1/15.

* Condition I.3 – Compliance – HAP emissions from all sealer and adhesive materials not components of glass bonding systems to no more than 0.010 kilograms HAP per kilogram (pound per pound) sealer/adhesive material on a calendar month basis.

- During the inspection, GMDH provided HAPs emission records for January through December, 2014 (Attachments CC.1), and January through May, 2015 (Attachments CC.2). GMDH reports emissions of 0.000 pounds HAP per pound sealer/adhesive for each month operated from January through December, 2014.

* Condition I.4 – Compliance – HAP emissions from all deadener materials to no more than 0.010 kilograms HAP per kilogram (pound per pound) deadener material on a calendar month basis

– GMDH reported that the deadener operations were not conducted since May, 2011. Attachments CC.3 and CC.4

* Condition III.1 – Compliance – Work practice plan to be developed and implemented

– A copy (Attachment CC.5) of the "Work Plan for the Minimization of organic HAP emissions", last revised on 5/29/2015. The Work Plan, as written, addresses the subconditions of III.1 and the MACT as follows:

Conditions III.1.a through e – Compliance – HAP containing coatings, thinners, cleaning materials, and waste materials to be stored in closed containers (63.3094(b)(1)); risk of HAP spills minimized (63.3094(b)(2); HAP materials to be conveyed in closed containers or pipes (63.3094(b)(3)); mixing vessels with HAPs closed except when adding, removing, or mixing in materials (63.3094(b)(4)); HAP emissions minimized during cleaning operations (63.3094(b)(5)) – Addressed at II.A through E of the Work Plan, pages 1 through 3.

Condition III.1.f.i through viii – Compliance – Minimize organic HAP emissions from the cleaning and purging of the following equipment subject to the HAP emissions standards (63.3094(c)(1)(i) through (viii)): vehicle body wipes, coating line purging, coating line flushing, cleaning of spray booths (grates, walls, equipment, and external areas), and additional housekeeping – Addressed at III.A through H of the Work Plan, pages 4 through 13. Prevalent in the MACT standards and referenced in the Work Plan is the use of "low-HAP or no HAP" solvents and cleaners, however, EPA declines to define this phrase for the purposes of MACT IIII (unlike MACT GGGG, for example, where a "low-HAP solvent option" is defined as a solvent where the volume fraction of each HAP comprises 1% or less by volume of the solvent). As such, MACT IIII provides no standard by which to judge, for example, GM's use of a 6% by weight organic HAP Parcosol 266 for the cleaning of the topcoat booths (e.g. 11 of the Work Plan). Therefore, AQD accepts GM's use of the cleaners specified.

* Condition V.1 and 3, VI.1, 2, 4, and 5, VII.4 and 5 – Compliance – Determine HAP content of materials and conduct compliance demonstrations in accordance with 63.3150 through 63.3152 (adhesives, sealers, and deadeners) and 63.3170 through 63.3173 (primer surfacer, topcoat, glass bonding primer, and glass bonding adhesive with separate electrodeposition); records kept and reports submitted.

- HAP content of materials is provided in all of emission reports where coating materials contain HAPs and attached herewith by reference.

* Condition IX.1 – Compliance – Facility to comply with all applicable requirements of MACT IIII – The relevant provisions are included in the flexible group FG-MACT.

FGFUELFILL

* Conditions I.1, VI.1 through 3 – Compliance – VOC emissions limited to 12 tons per 12-month rolling time period (LAER); gasoline usage, gasoline VOC content, and the EPA TANKS program to be used to calculate emission rate; records maintained

– During the inspection, GMDH provided VOC emission records for January through December, 2014 (Attachments DD.1), and January through May, 2015 (Attachments DD.2). GMDH reports VOC emissions of

9,855.75 lbs, or 4.93 tons, with a throughput of 175,533 gal of gasoline for the period January through December, 2014, and 9,846.18 lbs, or 4.92 tons, with a throughput of 174,247 gal of gasoline for the period January through May, 2015.

* Conditions IV.1 and 2, IX.1 and 2 – Compliance – Gasoline tanks of greater than 2,000 gallons equipped with a permanent submerged fill pipe and must meet requirements of either Rule 606 (existing) or Rule 703 (new).

- Per R 336.1104(h), GM meets the definition of a dispensing facility: "a location where gasoline is transferred to a motor vehicle tank from a stationary vessel". According to the 9/25/2013 submittal, each of the three gasoline tanks was installed in 1983 (and therefore "new" tanks) and have capacities of 20,000, 20,000, and 12,000 gallons, respectively. Therefore, under Rule 703(1) through (4) each storage tank shall be equipped with a permanently submerged fill pipe, a vapor balance system, a system to ensure a vaportight collection line is connected prior to gasoline loading, and a device to ensure the vaportight collection line closes on disconnection.

A schematic of the gasoline tanks is available in GMDH file.

* Conditions VI.4 and 5, IX.3 – Compliance

– For each gasoline tank, records to be maintained on the tank's identification, location, capacity, date of installation/modification, material contained, and vapor pressure – This information is provided in the 9/25/2013 submittal. Since the NSPS Kb revisions of 7/23/1984, the requirement in SC VI.5 only applies to those tanks with a design capacity of 19,800 gallons and greater. Regardless, these gasoline tanks, installed in 1983, predate the 7/23/1984 applicability date of NSPS Kb (60.110b(a)). The tanks do not qualify for regulation under NSPS K or Ka because their capacities are less than 40,000 gallons (60.110 and 60.110a(a)).

* Conditions VI.6 – Compliance – Notice to AQD to be given prior to the construction, reconstruction, or modification of any volatile organic liquid storage vessel greater than 19,800 gallons – No notices have been received since ROP issuance; AQD is unaware of any such tank that has been constructed, reconstructed, or modified without notice. All tanks currently in use at the tank farm were installed in 1983 (9/25/2013 submittal).

FGTANKS

* Conditions III.1 and 2, IX.1 and 2 – Compliance – Gasoline tanks of greater than 2,000 gallons equipped with a permanent submerged fill pipe – The three gasoline tanks are covered under the FGFUELFILL and meet these same conditions in that flexible group.

* Conditions IV.1.a through f – Compliance – Tanks within the flexible group shall meet either subparagraph (b), (c), (d), (e), (g), or (l) within the Rule 284 exemption. Exemption determinations were not asked of the facility in the information request following the 9/25/2013 inspection. Each gasoline storage tank would be exempt under Rule 284(e), however, these tanks are already permitted under the FGFUELFILL flexible group. The diesel fuel tank is likely exempt under Rule 284(d) for the storage of nos. 1 through 6 fuel oils. The tanks for the automatic transmission fluid, power steering fluid, and antifreeze are likely exempt under the Rule 284(g) exemption for the storage of volatile organic compounds in tanks less than 40,000 gallons with vapor pressures less than 1.5 psia; according to the 9/25/2013 submittal, none of the tanks exceed 20,000 gallons and the vapor pressures listed are less than 1.5 psia.

* Conditions VI.1 and 2, IX.3 – Compliance – For each tank, records to be maintained on the tank's identification, location, capacity, date of installation/modification, material contained, vapor pressure, and annual emissions – This information is provided in the 9/25/2013 submittal and in the annual MAERS report; for 2012 MAERS, GM reports less than 1 ton VOC total emitted from FGFUELFILL and FGTANKS. Since the NSPS Kb revisions of 7/23/1984, the requirement in SC VI.2 only applies to those tanks with a design capacity of 19,800 gallons and greater. Regardless, all of the tanks in the tank farm were installed in 1983 and therefore predate the 7/23/1984 applicability date of NSPS Kb (60.110b(a)). The tanks do not qualify for regulation under NSPS K or Ka because their capacities are less than 40,000 gallons (60.110 and 60.110a(a)).

* Conditions VI.3, IX.4 – Compliance – Notice to AQD to be given prior to the construction, reconstruction, or modification of any volatile organic liquid storage vessel greater than 19,800 gallons; a new emission unit may be installed provided it does not represent a minor or significant modification to the ROP – No notices have been

received since ROP issuance; AQD is unaware of any such tank that has been constructed, reconstructed, or modified without notice. All tanks currently in use at the tank farm were installed in 1983.

MACT EEEE for Non-Gasoline Organic Liquid Distribution

The federal National Emissions Standards for Hazardous Air Pollutants (NESHAP) at 40 CFR 63, Subparts A and EEEE (MACT EEEE) regulates hazardous air pollutants (HAP) emissions from the surface coating of automobiles and light-duty trucks. GM DHAC is a major source of HAPs. On 6/3/2004, the AQD received the Initial Notification from the facility. At that time, the facility believed the Final Rule would be revised to "not apply to end users of organic liquids such as automobile/light duty-truck assembly plants". AQD's records do not contain evidence that a Notification of Compliance Status (NOCS) was received.

Organic liquid storage tanks are regulated by the standard, where "organic liquid" is defined at 40 CFR 63.2406 as liquid mixture containing 5% by weight organic HAP (as listed in the subpart). Gasoline, distillate oils, hazardous waste, and wastewater are excluded from the definition. Therefore, MACT EEEE does not apply to GM's three gasoline storage tanks and diesel fuel storage tank. In the 9/27/2011 submittal, GM indicates that none of the tanks in the tank farm are subject to the MACT EEEE regulation.

FGCOLDCLEANERS

* Condition II.1 – Compliance – Less than 5% of any combination of methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, and chloroform – MSDSs were not requested for this inspection. Since ROP issuance, none of the cold cleaners at the facility have been found using chlorinated cleaning solvents in excess of 5%.

* Conditions III.1 and 2, IV.1 through 5, VI.1 through 4 – Compliance was not evaluated – Cold cleaner operational requirements including draining parts, closing cover when not in use, posting operating procedures near the cleaner, and storing waste solvents in closed containers; cold cleaner operational requirements are based on the type of cleaner and the vapor pressure of the solvent; information on each cold cleaner to be maintained on file.

The cold cleaners were not observed or evaluated of during the 9/14/15 inspection.

* Condition IX.1 – Compliance – Additional cold cleaners may be installed without modifying the ROP provided the installation is exempt and does not represent a minor or significant modification to the ROP

– Not evaluated during the inspection of 9/14/15.

FGRULE287(c)

* Conditions I.1 through 3, VI.2 – Compliance – Not more than 2000 pounds VOC per month per emission unit, 10 tons per 12-month rolling time period per emission unit, and 30 tons per 12-month rolling time period for all emission units combined; records kept

– During the inspection, GMDH provided VOC emission records for a maintenance spray booth, which operates under this flexible group, for January through December, 2014 (Attachments EE.1), and January through May, 2015 (Attachments EE.2). GMDH reports VOC emissions of 150.82 lbs, for the period January through December, 2014, and 136.84 lbs for the period January through May, 2015.

* Conditions II.1, VI.1.a – Compliance – Not more than 200 gallons per month, minus water, for each emission unit; records on usage to be maintained – In the 2014 MAERS, GM reports less than 50 gallons used for the entire calendar year.

* Conditions III.1, IV.1, VI.1.b – Undetermined – The paint spray booth shall have a particulate control system installed and operating properly; records to be maintained on filter replacements – The maintenance spray booth was not observed during the 9/14/15 inspection and information concerning the particulate control system was not asked of the facility during this inspection period.

* Condition IX.1 – Compliance – Additional Rule 287(c) emission units may be installed without modifying the ROP provided the installation is exempt and does not represent a minor or significant modification to the ROP – The maintenance spray booth was installed prior to the renewal date of the ROP.

FGRULE290

– Undetermined, but in the 9/25/2013 submittal, GM reported the facility does not operate a Rule 290 emission unit.

SECTION II: Powerhouse Operations

EUHOPPER

* Conditions I.1, V.1 – Undetermined – Visible emissions from the coal unloading system not to exceed 5% opacity on a six-minute average; visible emission observation to be conducted once per semiannual period as the coal unloading system operates and records kept

– Compliance was not evaluated and records for compliance were not requested.

* Conditions IV.1, VI.1 – Undetermined – The spray wetting system shall be installed and operating properly; records of maintenance activities

– Coal unloading was not occurring at the time of the 9/14/15 inspection and therefore the spray wetting system was not observed in operation.

* Condition IX.1 – Undetermined – Comply with applicable requirements of the NSPS Y for coal preparation plants.

NSPS Y regulates affected facilities at coal preparation and processing plants processing greater than 200 tons per day of coal that commenced construction or modification after October 27, 1974. NSPS Y was last amended on October 8, 2009. A coal preparation plant and processing plant is defined at 40 CFR 60.251(e) as a facility that "prepares coal by one or more of the following processes: breaking, crushing, screening, wet or dry cleaning, and thermal drying." It is understood by AQD that screening operations at the hopper resize coal occasionally (e.g. break up frozen coal) and therefore appears to meet the definition, because the plant has utilized greater than 200 tons in a given day (e.g. the annual coal throughput in MAERS 2004 was 73,136.2 tons for an average of 200.4 tons per calendar day). At 60.250(b) and 60.254(a), coal processing and conveying equipment is prohibited from emissions which "exhibit 20 percent opacity or greater." The 5% emission limit for the hopper is more stringent than the NSPS Y standard and the conveying system is enclosed.

FGASHSYSTEM

* Conditions I.1 through 3, V.1 and 2, VI.1 – Compliance – PM emissions from the ash conveyor and the ash silo each limited to 0.01 pounds per 1000 pounds of exhaust gas, calculated on a dry basis; verification of PM emissions by testing upon request of AQD; PM emissions from ash system limited to 10.2 tons per 12-month rolling time period; calculate and record PM emissions

– PM tests have not been requested by AQD.

– During the inspection, GMDH provided Total PM emission records for January through December, 2014 (Attachments FF.3), and January through May, 2015 (Attachments FF.4). GMDH reports PM emissions of 0.0015 tons for the period January through December, 2014, and 0.00018 tons for the period January through May, 2015.

* Condition III.1 – Compliance – Wetted ash transported to disposal sites in covered truck to prevent fugitive emissions – Ash discharge was not in operation during the inspection, however, the AQD has no evidence, by citizen complaints or otherwise, that the facility generates fugitive dust in either the ash loading or transport operations.

* Conditions IV.1, VI.2 – Undetermined – Maintain and operate fabric filters servicing the ash system; records of maintenance and malfunction events for the fabric filters

– Compliance was not evaluated and maintenance activities records for compliance were not requested.

FGPOWERHOUSE

* Conditions I.1 and 2, III.2, V.1, VI.2 – Compliance – Particulate emissions limited to 0.03 pounds per million Btu heat input and 65.2 tons per year; testing to verify compliance with short-term limit; fabric filter maintenance

– During the inspection, GMDH provided Total PM emission records for January through December, 2014 (Attachments FF.1), and January through May, 2015 (Attachments FF.2). GMDH reports PM emissions of 2.27 tons for the period January through December, 2014, and 0.22 tons for the period January through May, 2015.

- Records of inspection, maintenance, and repair activities for the baghouses were reviewed during the inspection of 9/14/15.

* Conditions I.3, VI.3, VII.4 – Compliance – Nitrogen oxides emissions not to exceed 0.6 pound per million Btu on a 24-hr average; CEMS shall be used to determine compliance and shall be operating properly; quarterly reports on emissions compliance and CEMS performance; annual RATA

– Data from the NOx CEMS were reviewed during the 9/14/15. Attachment GG is an example of the emissions rates measured by the CEMs. The attachment contains NOx CEMS data for 3/1/15 in 15-minute intervals with individual readings generally recording 0.000 pounds NOx per million Btu.

* Conditions I.4, I.5, II.1, V.2, V.3 – Compliance – Sulfur dioxide emissions not to exceed 1.1 pound per million Btu on a 24-hour average nor 420 ppm corrected to 50% excess air; sulfur in fuel shall not exceed 0.7 percent sulfur by weight; SO2 test upon request of AQD.

– Coal sampling is conducted to determine compliance with all SO2 limits; GM has not reported any deviations in the FCE period. GM's monthly coal sampling show the sulfur content (% S as received) for 4/10/15 at 0.53% (Attachment HH.1), while the vendor analysis of 12/7/13 shows a sulfur content (% S as received) of 0.49 (Attachment HH.2).

* Conditions I.6, V.4, VI.4 – Compliance – Volatile organic compound emissions not to exceed 2.4 pounds per hour; testing upon request of AQD; calculation of emissions.

– During the inspection, GMDH provided VOC emission records for January through December, 2014 (Attachments FF.1), and January through May, 2015 (Attachments FF.2). GMDH reports VOC emissions of 0.43 lb/hr for the period January through December, 2014, and 0.11 lb/hr for the period January through May, 2015.

* Conditions I.7, VI.5, VII.5 – Compliance – Visible emissions not to exceed 10% over a six-minute average; COMS shall be used to determine compliance and shall be operating properly; quarterly reports on emissions compliance and COMS performance; annual COMS audit

– Data from the COMS were reviewed during the 9/14/15. Attachment II is an example of the emissions rates measured by the COMS. The attachment contains COMS data for 3/1/15 6-minute intervals with individual readings between 2% and 4% except during a period of calibration.

* Conditions III.1 and 4, VI.1 and 6 – Undetermined – Heat input for all boilers combined not to exceed 4,350,000 million Btu per year; records of fuel consumption; when combusting natural gas it must be of pipeline quality; when combusting coal it must be of heating value greater than 11,000 Btu per pound as a gross calorific value determined on a moist, mineral matter free basis; Boiler #3 must be equipped with Low-NOx burners prior to natural gas combustion.

- Compliance records were not reviewed for compliance.

* Conditions III.3, VI.7 through 9, VIII.6, IX.1 – Compliance – Comply with CAM requirements for PM using the COMS as a parametric monitor; 2 consecutive 1-hr block averages above 10% is considered an excursion from the PM limit – No CAM deviations have been reported since the issuance of the ROP renewal.

* Conditions VIII.1 – Compliance – Powerhouse stack shall emit vertically upwards at a height no less than 250 feet above ground and with a maximum diameter of 120 inches. This stack was observed during the inspection of 9/25/2013 and judged in compliance with these requirements, though measurements were not performed.

MACT DDDDD for Steam Boilers and Process Heaters

The federal National Emissions Standards for Hazardous Air Pollutants (NESHAP) at 40 CFR 63, Subparts A and DDDDD (MACT DDDDD) regulates hazardous air pollutants (HAP) emissions from boilers and process heaters installed at major sources of HAPs. GM DHAC is a major source of HAPs. Please see report M419922989.

On 1/31/2013, the EPA issued revised standards within MACT DDDDD (78 FR 7138) and on 5/30/2013 the AQD received GM's Initial Notification for the revised standard. Per 40 CFR 63.7545(b), the Initial Notification must be submitted within 120 days from 1/31/2013, or by 5/31/2013; therefore, the AQD considers the submittal to be timely.

MACT DDDDD applies to industrial boilers, commercial boilers, institutional boilers, and process heaters located at Section 112 major sources (40 CFR 63.7490(a) through (e)). An "industrial boiler" is defined at 40 CFR 63.7575 as "a boiler used in manufacturing, processing, mining, and refining or any other industry to provide steam, hot water, and/or electricity." Each of the four boilers produces steam for use at the plant and therefore meets the definition of an "industrial boiler" under the standard. Construction of each boiler commenced prior to 6/4/2010 and therefore each is considered an "existing" industrial boiler (40 CFR 63.7490(d)). Per the Initial Notification, each boiler is a coal-fired spreader stoker design and therefore falls within the subcategory "[s] tokers designed to burn coal/solid fossil fuel" at 40 CFR 63.7499(b). At 40 CFR 63.7490(a)(1), the collection of all existing boilers and process heaters within a subcategory constitutes an affected source and, therefore, the four boilers combine to form an affected source under MACT DDDDD. Because it also has the capability of combusting natural gas, Boiler #1 may also be classified as a "[u]nit designed to burn solid fossil fuel" subcategory under 40 CFR 63.7499(p), but the capability does not appear to preclude Boiler #1 from classification as a stoker unit.

Compliance with MACT DDDDD is required not later than 1/31/2016 for existing boilers and process heaters (40 CFR 63.7495(b)). Aside from the submittal of an Initial Notification, the standards are not yet enforceable.

FGTEMPBOILERS Conditions

GMHD utilized a temporary boiler from 5/29/15 through 7/2/15 and is no longer on site (Attachments JJ.1 & JJ.2). Monthly emissions data and daily usage/dates of operations were kept (Attachments JJ.3 & JJ.4).

CONCLUSION:

At the time of completion of the investigation, GMDH appeared to operate in compliance with the majority of its applicable requirements. The following Tables and Conditions of MI-ROP-M4199-2010 were not determined for compliance, but will be evaluated in the near future:

1. Table FGRULE287(c): Conditions III.1, IV.1, VI.1.b of
2. Table FGRULE290
3. Table EUHOPPER: Conditions I.1, V.1, Conditions IV.1, and VI.1, Condition IX.1
4. FGASHSYSTEM: Conditions IV.1, VI.2

5. FGPOWERHOUSE: Conditions III.1 and 4, VI.1 and 6

NAME Sam Amer DATE 9/29/15 SUPERVISOR JK