

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

A390036642

FACILITY: Martin Marietta Magnesia Specialties, LLC		SRN / ID: A3900
LOCATION: 1800 Eastlake Rd., MANISTEE		DISTRICT: Cadillac
CITY: MANISTEE		COUNTY: MANISTEE
CONTACT: Robert Gutowski, Manager of Engineering Services		ACTIVITY DATE: 08/23/2016
STAFF: Shane Nixon	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: On-site inspection and records review		
RESOLVED COMPLAINTS:		

AQD staff traveled to Manistee County to perform an inspection of the Martin Marietta Magnesia Specialties facility. The purpose of the inspection was to determine the facility's compliance with Renewable Operating Permit (ROP) No. MI-ROP-A3900-2015a. Mr. Robert Gutowski, Director of Engineering Services, accompanied staff during the inspection.

During the inspection, Mr. Gutowski informed AQD staff that Rotary Kiln #2 has been removed from service. All other process equipment listed in the ROP have operated in the last 12 months.

AQD staff requested records of process equipment operational data. A large volume of records is maintained for each process and air pollution control devices and printing all records is unnecessary as the facility is required to submit semiannual deviation reports. Staff requested records for random dates per month for the previous 12 month rolling time period.

Martin Marietta manufactures magnesium oxide and magnesium hydroxide products for use in various industrial applications. Magnesium hydroxide is manufactured by an exothermic reaction or natural brine and dolomitic lime in three separate reactor systems. In two of the reactor systems, brine and dolomitic lime are reacted in initial or primary reactor vessels which then overflow by gravity to secondary vessels for additional reaction. The third reactor system uses filtrate to hydrate the dolomitic lime prior to reacting it with brine in a single reactor vessel. Overflow of the slurries from each of the reactor series flow through a series of settling basins (a thickener and a clarifier) where magnesium oxide settles. The slurry from the thickener's underflow is pumped to vacuum drum filters, where it is washed and dewatered. Slurry is pumped to storage tanks prior to being transferred to rotary kilns and Herreshoff furnaces, depending on the type of product desired.

A rotary kiln and multi-hearth furnaces are used to remove free and molecularly bound water from magnesium hydroxide to form different grades of magnesium oxide. Some of the magnesium oxide is processed further in vertical kilns to generate periclase for use in refractory brick.

SOURCE-WIDE CONDITIONS

Emission Limits – There are no source-wide emission limits associated with this facility; therefore, this section is not applicable.

Material Limits - There are no source-wide material limits associated with this facility; therefore, this section is not applicable.

Process/Operational Restrictions – Martin Marietta is required to implement and maintain a malfunction abatement plan (MAP) for the facility. Cadillac District Office files indicate the most recent version of the MAP was submitted with the ROP renewal application in 2014. No revisions to the MAP have since been made. The facility provided records of preventive maintenance (PM) performed on emission units and control devices which demonstrate the facility is complying with the PM portion of the MAP.

Design/Equipment Parameters - There are no source-wide design or equipment parameters associated with this facility; therefore, this section is not applicable.

Testing/Sampling - There are no source-wide testing or sampling requirements associated with this facility; therefore, this section is not applicable.

Monitoring/Recordkeeping - There are no source-wide monitoring or recordkeeping requirements associated with this facility; therefore, this section is not applicable.

Reporting – Annual certification of compliance and semiannual deviation reports pursuant to the ROP were previously reviewed and documented.

Stack/Vent Restrictions - There are no source-wide stack or vent restrictions associated with this facility; therefore, this section is not applicable.

Other Requirements – Martin Marietta is required to maintain and implement a fugitive emissions control plan for the facility. The plan, as submitted by the facility, indicates fugitive dust control activities will be recorded. Records of fugitive dust abatement activities were recorded, as stated in the fugitive dust plan. Roadways over the past five years were paved and dust suppression (brine) is no longer applied on roads. A contractor has been hired to sweep paved roadways.

EULU-SYSTEM

Material handling operation in the Hydrate Area consisting of seven conveyors and three elevators. All emissions are vent to two pulse-jet baghouses for control.

Emission Limits – Particulate emissions from the emission unit are limited to 0.0095 pounds per 1,000 pounds of dry exhaust gases. The methods used for demonstrating compliance with the emission limit are non-certified visible emissions observations and monitoring and recording the differential pressures across the baghouses. AQD staff did not observe any visible emissions from the baghouses at the time of the inspection. The differential pressures across baghouse nos. 25-1050 and 25-1051 were 1 inches W.G. and 8 inches W.G., respectively. The observed differential pressures were within the ranges listed in the MAP.

Material Limits – There are no material limits associated with this emission unit; therefore; this section is not applicable.

Process/Operational Restrictions – Each baghouse is required to be installed and operating properly. Proper operation is maintaining the differential pressures within the ranges specified in the MAP. Staff review of records and semiannual deviation reports indicate each baghouse has operated within the acceptable ranges for the previous 12 months.

Design/Equipment Parameters – Conditions of the ROP require that each baghouse be equipped with a differential pressure gauge. AQD staff observed the gauges at the time of the inspection.

Testing/Sampling – Non-certified visible emission checks are required to be performed once per operating day. Records indicate no visible emissions were observed.

Monitoring/Recordkeeping – Records of the baghouse differential pressures were made available to AQD staff upon request (attached).

Reporting – Annual certifications of compliance and semiannual deviation reports were previously reviewed and documented.

Stack/Vent Restrictions – There are no stack or vent restrictions associated with this emission unit; therefore, this section is not applicable.

Other Requirements – There are no other requirements associated with this emission unit; therefore, this section is not applicable.

EUHCLTANK

A 20,000 gallon tank located in the Hydrate Area which stores hydrochloric acid for use to acidify wash water and various effluent brine to prevent precipitation of magnesium hydroxide or calcium carbonate within the system. Emissions from the emission unit are controlled by a packed-bed water fume scrubber.

Emission Limits – There are no emission limits associated with this emission unit; therefore, this section is not applicable.

Material Limits – There are no material limits associated with this emission unit; therefore, this section is not applicable.

Process/Operational Restrictions – The scrubber is required to be installed and operating properly. Proper operation is maintaining the differential pressure within the range specified in the MAP and maintaining a minimum flow rate of 1.5 gallons per minute. Staff review of records and semiannual deviation reports indicate the scrubber has operated within the acceptable range specified in the MAP for the previous 12 months and the minimum liquid flow rate has been maintained. In November 2015 through January 2016, a temporary HCl tank and scrubber were used while a permanent replacement tank and scrubber was installed. The scrubbing liquid flow rate of the temporary scrubber was monitored and recorded to demonstrate proper operation. The differential pressure observed at the time of the inspection was 0.4 inches W.G. and the liquid flow rate was 4.2 gallons per minute.

Design/Equipment Parameters – As per the requirements of the ROP, the scrubber was equipped with a liquid flow meter and differential pressure gauge.

Testing/Sampling – There are no testing requirements associated with this emission unit; therefore, this section is not applicable.

Monitoring/Recordkeeping – Records of scrubbing liquid flow rate and differential pressure across the scrubber demonstrates the operational parameters are monitored and recorded. During the installation of the new tank and scrubber, the differential pressure across the temporary scrubber was not monitored or recorded. However, the monitoring and recording deficiency was noted in the semiannual deviation report.

Reporting – Annual certifications of compliance and semiannual deviation reports were previously reviewed and documented.

Stack/Vent Restrictions – The stack appeared to be constructed in accordance with the maximum diameter and minimum height requirements.

Other Requirements – There are no other requirements associated with this emission unit; therefore, this section is not applicable.

EUANIMAG

Material handling operation consisting of the Animag load out station. The emission unit is controlled by two pulse jet baghouse (25-0832 and 25-0929). The emission unit was not operating at the time of the inspection.

Emission limits – Particulate emissions are limited to 0.1 pound per 1,000 pounds of dry exhaust gases and visible emissions are limited to 10 percent opacity based on a six minute average. The methods used for demonstrating compliance with the emission limits are non-certified visible emissions observations and monitoring and recording the differential pressures across the baghouses.

Material Limits – There are no material limits associated with this emission unit; therefore, this section is not applicable.

Process/Operational Restrictions - Each baghouse is required to be installed and operating properly. Proper operation is maintaining the differential pressures within the ranges specified in the MAP. Staff review of records and semiannual deviation reports indicate each baghouse has operated within the acceptable ranges for the previous 12 months.

Design/Equipment Parameters – Conditions of the ROP require that each baghouse be equipped with a differential pressure gauge.

Testing/Sampling – Non-certified visible emission checks are required to be performed once per operating day. In the event that visible emissions are observed, a USEPA Method 9 observation by a certified reader is required to be performed and results are to be recorded and corrective action taken. No visible emissions have been present based on a review of records submitted and semiannual deviation reports.

Monitoring/Recordkeeping – Records of the baghouse differential pressures were made available to AQD staff upon request (attached).

Reporting – Annual certifications of compliance and semiannual deviation reports were previously reviewed and documented.

Stack/Vent Restrictions – There are no stack or vent restrictions associated with this emission unit; therefore, this section is not applicable.

Other Requirements – There are no other requirements associated with this emission unit; therefore, this section is not applicable.

EUN2SMILL

Material handling operation consisting of one Raymond mill. Particulate emissions are controlled by one pulse jet baghouse (25-0887). The emission unit was not operating at the time of the inspection.

Emission limits – Particulate emissions are limited to 0.1 pound per 1,000 pounds of dry exhaust gases. The methods used for demonstrating compliance with the emission limits are non-certified visible emissions observations and monitoring and recording the differential pressure across the baghouse.

Material Limits – There are no material limits associated with this emission unit; therefore, this section is not applicable.

Process/Operational Restrictions – The baghouse is required to be installed and operating properly. Proper operation is maintaining the differential pressure within the range specified in the MAP. Staff review of records and semiannual deviation reports indicate the baghouse has operated within the acceptable range for the previous 12 months.

Design/Equipment Parameters – Conditions of the ROP require that the baghouse be equipped with a differential pressure gauge.

Testing/Sampling – Non-certified visible emission checks are required to be performed once per operating day. No visible emissions have been present based on a review of records submitted and semiannual deviation reports.

Monitoring/Recordkeeping – Records of the baghouse differential pressure were made available to AQD staff upon request (attached).

Reporting – Annual certifications of compliance and semiannual deviation reports were previously reviewed and documented.

Stack/Vent Restrictions – There are no stack or vent restrictions associated with this emission unit; therefore, this section is not applicable.

Other Requirements – There are no other requirements associated with this emission unit; therefore, this section is not applicable.

EURK3

Rotary kiln No. 3 is fired with petroleum coke, coal, and/or natural gas. EURK3 is used to remove free and chemically bound water from the magnesium oxide slurry. The rotary kiln is currently firing on natural gas only. The last time the facility fired on solid fuel was 2014 Particulate emissions from the rotary kiln are controlled by an electrostatic precipitator (ESP). The emission unit was not operating at the time of the inspection.

Emission Limits – Sulfur dioxide emissions are limited to 2.4 pounds per million Btu heat input when firing coal. Coal has not been fired within the last 12 months and the limit is not applicable at this time due to firing only on natural gas.

Particulate matter emissions are limited to 0.13 pounds per 1,000 pounds of dry exhaust gases. Stack testing performed in 2013 resulted in particulate emissions of 0.02 pounds per 1,000 pounds of dry exhaust gases. Testing was performed when firing on natural gas.

Material Limits – Coke fuel is limited to 5 percent sulfur by weight. There is currently no coke fuel located on-site.

Process/Operational Restrictions – The rotary kiln is not allowed to operate unless four of the ESP fields are operating at a minimum of 50 percent power or three fields as 100 percent power. Records submitted by the facility and semiannual deviation reports indicate the ESP has operated within the ranges specified in the MAP with the exception of February 16, 2016 due to a fuel system upset which lasted for less than one hour. The fuel system upset caused the ESP to shut down to prevent a possible explosion and power to the ESP was restored when the combustible level within returned to zero.

Design/Equipment Parameters – There are no design or equipment parameters associated with this emission unit; therefore, this section is not applicable.

Testing/Sampling – As mentioned previously, stack testing was performed in 2103 for particulate matter. Stack testing for sulfur dioxide is unnecessary at this time since the facility is not firing coal.

No visible emissions have been present based on a review of records submitted and semiannual deviation reports.

Monitoring/Recordkeeping – Monitoring and recording of coal usage and sulfur dioxide emissions is unnecessary as the rotary kiln is currently not fired on solid fuels.

Records of the ESP sparking rate and voltage were available to AQD staff upon request. AQD staff determined the records adequate based upon their review.

There were seven instances in which the ESP operated when power to one of the fields was less than 100 volts. These occurrences caused facility personnel to implement corrective actions pursuant to Compliance Assurance Monitoring (CAM). The corrective actions taken by the facility in response to the excursions were adequate. Based upon the corrective actions, AQD staff does not feel that a CAM Quality Improvement Plan is necessary.

Reporting – Annual certifications of compliance, semiannual deviation reports, and CAM reports were previously reviewed and documented.

Stack/Vent Restrictions – The stack appeared to be constructed in accordance with the parameters listed in the ROP.

Other Requirements – As per the ROP requirements, no other fuels have been substituted for the fuels listed in the permit.

Based upon review of the submitted CAM reports, corrective action taken for excursions were timely and adequate. Changes to the CAM plan are not necessary at this time.

FG-PERICLASEPLNT

FGPERICLASEPLNT is a combination of three Herreshoff furnaces and two shaft kilns with coolers. Emissions from the flexible group are controlled by three ESPs and two cyclones.

Emission Limits – Particulate emissions from Herreshoff Furnace No. 1 and EUSHAFTKILN3 are limited to 0.20 pounds per 1,000 pounds of exhaust gases. Stack testing in 2014 indicates particulate emissions from the emission units were 0.15 pounds per 1,000 pounds of exhaust gases.

Particulate matter emissions from Herreshoff Furnace No. 2, EUSHAFTKILN2, and EUSHAFTKILN3 are limited to 0.20 pounds per 1,000 pounds of exhaust gases. Stack testing in 2012 indicates particulate emissions from the emission units were 0.11 pounds per 1,000 pounds of exhaust gases.

Particulate matter emissions from Herreshoff Furnace No. 3, EUSHAFTKILN2, and EUSHAFTKILN3 are limited to 0.055 pounds per 1,000 pounds of exhaust gases. Stack testing in 2013 indicates particulate matters were 0.051 pounds per 1,000 pounds of exhaust gases.

Material Limits – There are no material limits associated with this flexible group; therefore; this section is not applicable.

Process/Operational Restrictions – The emission units are not allowed to operate unless their associated ESP is installed and operating properly. Proper operation includes operating the ESP in automatic mode and monitoring and recording any corrective action taken if the ESP is placed in manual

mode. Records indicate the ESPs have operated properly.

The cyclones associated with the flexible group are required to operate within the differential pressure ranges specified in the MAP. AQD review of records and semiannual deviation reports indicate the cyclones have operated properly.

There are no records in which emission units operated while bypassing any control device associated with this flexible group.

Design/Equipment Parameters – The duct from EUHERRFUR3 to HF-ESP2 inside diameter is not allowed to exceed 24 inches. Staff was unable to determine the diameter of the duct; however, there appeared to be no modifications to the duct.

Each cyclone associated with the shaft kilns were equipped with differential pressure gauges.

Continuous opacity monitoring systems (COMS) were installed at the exhaust points of HF-ESP1 and 2 and were operating at the time of the inspection.

Testing/Sampling – Stack testing for particulate matter has been performed in accordance with the requirements of the ROP.

Monitoring/Recordkeeping – COMS-recorded opacity is used as an indicator of proper operation of the HF-ESP1 and HF-ESP2 in addition to demonstrating compliance Rule 301. The appropriate range of opacity which defines proper operation of each ESP is 20 percent opacity. For CAM purposes, an excursion is defined as 2 consecutive one hour block average opacity values greater than 12 percent.

Semiannual CAM reports submitted by the facility indicate excursions occurred for the previous 12 months and corrective action was adequate and appropriate. As a result of the opacity monitoring and reporting pursuant to CAM as well as excess emission reports, facility personnel opted to shut down EUHERRFURN2 and EUSHAFTKILN2 due to process problems which caused visible emissions greater than 20% opacity. Upon repairs to the process equipment, excess opacity has been less than 1 percent in the first and second quarters of 2016.

The spark rate and voltage of each ESP is used for determining proper function. Records submitted by the facility, semiannual deviation reports, and CAM reports indicate each ESP has operated properly and no excursions of the monitored parameters have occurred.

Reporting – All semiannual deviation reports, annual certifications of compliance, CAM reports, and quarterly excess emission reports were previously submitted and reviewed.

Stack/Vent Restrictions – The stack for ESP No. 3 appeared to be constructed in accordance with the parameters listed in the ROP.

Other Requirements – Based upon the review of records, AQD staff does not feel that the CAM plan needs to be modified.

FGDRYER&MILL

An air swept dryer (EUDRYMAGDRYER) that has two natural gas burners with a maximum heat input of 9 MMBtu/hr each and a proprietary milling system. Particulate emissions are controlled by two fabric filter systems. The emission units were not operating at the time of the inspection.

Emission Limits – Particulate matter emissions and particulate matter less than 10 microns in diameter (PM-10) emissions are limited to 0.01 pounds per 1,000 pounds of exhaust gases and 0.9 pounds per hour, respectively. Visible emissions are limited to 5% opacity based on a six minute average. The methods used for demonstrating compliance with the emission limits are non-certified visible emissions observations and monitoring and recording the differential pressures across the fabric filters. Records submitted by the company indicate the fabric filters operated within the range specified in the MAP and no visible emissions were observed during the previous 12 months.

Material Limits – There are no material limits associated with this flexible group; therefore, this section is not applicable.

Process/Operational Restrictions - The fabric filters are required to be installed and operating properly. Proper operation is maintaining the differential pressures within the ranges specified in the MAP. Staff review of records and semiannual deviation reports indicate the baghouse has operated within the acceptable ranges for the previous 12 months.

Design/Equipment Parameters - Conditions of the ROP require that the fabric filters to be equipped with a differential pressure gauge.

Testing/Sampling - Non-certified visible emission checks are required to be performed once per operating day. In the event that visible emissions are observed, a USEPA Method 9 observation by a certified reader is required to be performed and results are to be recorded and corrective action taken. No visible emissions have been present based on a review of records submitted and semiannual deviation reports.

Monitoring/Recordkeeping - Records of the fabric filter system differential pressures were made available to AQD staff upon request (attached).

Reporting - Annual certifications of compliance and semiannual deviation reports were previously reviewed and documented.

Stack/Vent Restrictions - The stacks appeared to be constructed in accordance with the parameters listed in the ROP.

Other Requirements - There are no other requirements associated with this flexible group; therefore, this section is not applicable.

FG-GROUP-A

FG-GROUP-A is made up of material handling operations consisting of: two crushers, eight mills, 22 feed hoppers, 26 conveyors, 10 screens, two pneumatic transfer systems, 24 elevators, 34 storage bins, six loadouts, unloading equipment, and three baggers. Pollution control equipment for particulate matter emissions consists of 33 baghouses. Five of the emission units contained in the flexible group were operating at the time of the inspection.

Emission Limits - Particulate matter emissions from each emission unit is limited to 0.0095 pounds per 1,000 pounds of dry exhaust gas and visible emissions is limited to 5 percent opacity based on a six minute average. The methods used for demonstrating compliance with the limits are non-certified visible emissions observations and monitoring and recording the differential pressures across the baghouses. AQD staff did not observe any visible emissions from the baghouses at the time of the inspection. The differential pressures across baghouses in which the emission units were operating were within the ranges listed in the MAP.

Material Limits - There are no material limits associated with this flexible group; therefore, this section is not applicable.

Process/Operational Restrictions - The baghouses are required to be installed and operating properly. Proper operation is maintaining the differential pressures within the ranges specified in the MAP. Staff review of records and semiannual deviation reports indicate the baghouses have operated within the acceptable range for the previous 12 months with the exception of the baghouse that controls particulate emissions from EUCHANGE-LS and the baghouse which controls particulate matter emissions from EUROLLER-MILL.

EUCHANGE-LS: The semiannual deviation report indicated the differential pressure across the baghouse exceeded the range specified in the MAP on February 15 and 19 for a total of 16 hours. Pulse blowback of the baghouse was malfunctioning and repairs to the system resolved the issue.

EUROLLER-MILL: The semiannual deviation report indicated the differential pressure measured across the baghouse exceeded the range specified in the ROP nine times (12 hours total) over the course of four months. No visible emissions were observed during the periods of high differential pressure readings. Martin Marietta personnel determined the pulse blowback of the baghouse was not functioning as designed and repairs were made to resolve the issue.

Design/Equipment Parameters - Conditions of the ROP require that the baghouses be equipped with differential pressure gauges.

Testing/Sampling - Non-certified visible emission checks are required to be performed once per operating day. In the event that visible emissions are observed, a USEPA Method 9 observation by a certified reader is required to be performed and results are to be recorded and corrective action taken. No visible emissions have been present based on a review of records submitted and semiannual deviation reports.

Monitoring/Recordkeeping - Records of the baghouse differential pressures were made available to AQD staff upon request (attached).

Reporting - Annual certifications of compliance and semiannual deviation reports were previously reviewed and documented.

Stack/Vent Restrictions – The stacks listed in the ROP appeared to be constructed in accordance with the parameters of the ROP.

Other Requirements – There are no other requirements associated with this flexible group; therefore, this section is not applicable.

FG2+3PACKHS

FG2+3PACKHS consists of material handling equipment such as Gyradisc, screens, feed hoppers, belt conveyors, elevators, storage bins and silos, and loading and unloading equipment. Particulate matter emissions are controlled by two baghouses (25-0892 and 25123822).

Emission Limits – Particulate matter emissions are limited to 0.01 pounds per 1,000 pounds of exhaust gases and 0.054 pounds per hour, respectively. Visible emissions are limited to 0% opacity based on a six minute average. The methods used for demonstrating compliance with the emission limits are non-certified visible emissions observations and monitoring and recording the differential pressures across the baghouses. Records submitted by the company indicate the fabric filters operated within the range specified in the MAP and no visible emissions were observed during the previous 12 months. AQD staff did not observe any visible emissions at the time of the inspection. The differential pressures across baghouse nos. 25-0892 and 25123822 were 5 inches W.G. and 9 inches W.G., respectively. The observed differential pressures were within the ranges specified in the MAP.

Material Limits – There are no material limits associated with this flexible group; therefore, this section is not applicable.

Process/Operational Restrictions - The fabric filters are required to be installed and operating properly. Proper operation is maintaining the differential pressures within the ranges specified in the MAP. Staff review of records and semiannual deviation reports indicate each baghouse has operated within the acceptable ranges for the previous 12 months with the exception of 25-0892. On August 30, 2016, the differential pressure of the baghouse exceeded the range listed in the MAP. The emission unit was turned off and the cause of the deviation was related to plugged bags in the baghouse. Corrective action was taken and the emission unit was returned to service.

Design/Equipment Parameters - Conditions of the ROP require that the fabric filters to be equipped with a differential pressure gauge.

Testing/Sampling - Non-certified visible emission checks are required to be performed once per operating day. In the event that visible emissions are observed, a USEPA Method 9 observation by a certified reader is required to be performed and results are to be recorded and corrective action taken. No visible emissions have been present based on a review of records submitted and semiannual deviation reports.

Monitoring/Recordkeeping - Records of the fabric filter system differential pressures were made available to AQD staff upon request (attached).

Reporting - Annual certifications of compliance and semiannual deviation reports were previously reviewed and documented.

Stack/Vent Restrictions – There are no stack or vent restrictions associated with this flexible group; therefore, this section is not applicable.

Other Requirements – There are no other requirements associated with this flexible group; therefore, this section is not applicable.

FG-GROUP-B

FG-GROUP-B includes material handling equipment in the #2 and #3 packhouse area and the #4 packhouse area, consisting of two screens, one feed hopper, five conveyors, six storage bins and silos, and one load out spout. Particulate emissions from the flexible group are controlled by two baghouses (25-0890 and 25-1020). The emission units were not operating at the time of the inspection.

Emission Limits – Particulate matter emissions from each emission unit are limited to 0.01 pounds per 1,000 pounds of exhaust gases. The methods used for demonstrating compliance with the emission limits are non-certified visible emissions observations and monitoring and recording the differential pressures across the baghouses. Records submitted by the company indicate the fabric filters operated within the range specified in the MAP and no visible emissions were observed during the previous 12 months.

Material Limits – There are no material limits associated with this flexible group; therefore, this section is not applicable.

Process/Operational Restrictions - The fabric filters are required to be installed and operating properly. Proper operation is maintaining the differential pressures within the ranges specified in the MAP. Staff review of records and semiannual deviation reports indicate the baghouse has operated within the acceptable ranges for the previous 12 months.

Design/Equipment Parameters - Conditions of the ROP require that the fabric filters to be equipped with a differential pressure gauge.

Testing/Sampling - Non-certified visible emission checks are required to be performed once per operating day. In the event that visible emissions are observed, a USEPA Method 9 observation by a certified reader is required to be performed and results are to be recorded and corrective action taken. No visible emissions have been present based on a review of records submitted and semiannual deviation reports.

Monitoring/Recordkeeping - Records of the fabric filter system differential pressures were made available to AQD staff upon request (attached).

Reporting - Annual certifications of compliance and semiannual deviation reports were previously reviewed and documented.

Stack/Vent Restrictions – There are no stack or vent restrictions associated with this flexible group; therefore, this section is not applicable.

Other Requirements – There are no other requirements associated with this flexible group; therefore, this section is not applicable.

FG-GROUP-C

FG-GROUP-C is comprised of material handling operations consisting of 67 conveyors, 13 weigh belts, 11 elevators, four mills, 16 bins, one mixer, two bagger/sackers, five feed hoppers, two screens, one packer, and 13 chutes. Particulate emissions from the emission units are controlled by five baghouses (25-0709, 25-0808, 25-0706, 25-0707, 25-0799).

Emission limits – Particulate emissions are limited to 0.10 pound per 1,000 pounds of dry exhaust gases. The methods used for demonstrating compliance with the emission limits are non-certified visible emissions observations and monitoring and recording the differential pressures across the baghouses.

Material Limits – There are no material limits associated with this flexible group; therefore, this section is not applicable.

Process/Operational Restrictions - Each baghouse is required to be installed and operating properly. Proper operation is maintaining the differential pressures within the ranges specified in the MAP. Staff review of records and semiannual deviation reports indicate each baghouses have operated within the acceptable ranges for the previous 12 months.

Design/Equipment Parameters – Conditions of the ROP require that each baghouse be equipped with a differential pressure gauge.

Testing/Sampling – Non-certified visible emission checks are required to be performed once per operating day. In the event that visible emissions are observed, a USEPA Method 9 observation by a certified reader is required to be performed and results are to be recorded and corrective action taken. No visible emissions have been present based on a review of records submitted and semiannual deviation reports.

Monitoring/Recordkeeping – Records of the baghouse differential pressures were made available to AQD staff upon request (attached).

Reporting – Annual certifications of compliance and semiannual deviation reports were previously reviewed and documented.

Stack/Vent Restrictions – There are no stack or vent restrictions associated with this flexible group; therefore, this section is not applicable.

Other Requirements – There are no other requirements associated with this flexible group; therefore, this section is not applicable

FG-GROUP-D

FG-GROUP-D consists of material handling equipment made up of one bin, one load out spout, additive silos, and a rail car unloading station. Three baghouses are used to control particulate matter emissions (25-0881, 25-0880, 25-0879). The emission units were not operating at the time of the inspection.

Emission limits – Particulate emissions are limited to 0.0095 pound per 1,000 pounds of dry exhaust gases and visible emissions are limited to 10 percent opacity based on a six minute average. The methods used for demonstrating compliance with the emission limits are non-certified visible emissions observations and monitoring and recording the differential pressures across the baghouses.

Material Limits – There are no material limits associated with this flexible group; therefore, this section is not applicable.

Process/Operational Restrictions - Each baghouse is required to be installed and operating properly. Proper operation is maintaining the differential pressures within the ranges specified in the MAP. Staff review of records and semiannual deviation reports indicate each baghouses have operated within the acceptable ranges for the previous 12 months.

Design/Equipment Parameters – Conditions of the ROP require that each baghouse be equipped with a differential pressure gauge.

Testing/Sampling – Non-certified visible emission checks are required to be performed once per operating day. In the event that visible emissions are observed, a USEPA Method 9 observation by a certified reader is required to be performed and results are to be recorded and corrective action taken. No visible emissions have been present based on a review of records submitted and semiannual deviation reports.

Monitoring/Recordkeeping – Records of the baghouse differential pressures were made available to AQD staff upon request (attached).

Reporting – Annual certifications of compliance and semiannual deviation reports were previously reviewed and documented.

Stack/Vent Restrictions – There are no stack or vent restrictions associated with this flexible group; therefore, this section is not applicable.

Other Requirements – There are no other requirements associated with this flexible group; therefore, this section is not applicable.

FGLIMESYSTEM

Material handling operations located in the Hydrate Area for dolomitic lime processes. The flexible group consists of seven conveyors, three elevators, and two silos. Four baghouses are used to control particulate emissions from the emission units (25-1050, 25-1051, 25777777, 25133855).

Emission limits – Particulate emissions are limited to 0.0095 pound per 1,000 pounds of dry exhaust gases and visible emissions are limited to 10 percent opacity based on a six minute average. The methods used for demonstrating compliance with the emission limits are non-certified visible emissions observations and monitoring and recording the differential pressures across the baghouses. No visible emissions were observed by AQD staff at the time of the inspection. The differential pressures at the time of the inspection were within the ranges specified in the MAP. The differential pressures observed during the inspection were:

25-1050: 1 inches W.G.
25-1051: 8 inches W.G.
25777777: 2 inches W.G.
25133855: 9 inches W.G.

Material Limits – There are no material limits associated with this flexible group; therefore, this section is not applicable.

Process/Operational Restrictions - Each baghouse is required to be installed and operating properly. Proper operation is maintaining the differential pressures within the ranges specified in the MAP. Staff review of records and semiannual deviation reports indicate each baghouse has operated within the acceptable ranges for the previous 12 months.

Design/Equipment Parameters – Conditions of the ROP require that each baghouse be equipped with a differential pressure gauge.

Testing/Sampling – Non-certified visible emission checks are required to be performed once per operating day. In the event that visible emissions are observed, a USEPA Method 9 observation by a certified reader is required to be performed and results are to be recorded and corrective action taken. No visible emissions have been present based on a review of records submitted and semiannual deviation reports.

Monitoring/Recordkeeping – Records of the baghouse differential pressures were made available to AQD staff upon request (attached).

Reporting – Annual certifications of compliance and semiannual deviation reports were previously reviewed and documented.

Stack/Vent Restrictions – There are no stack or vent restrictions associated with this flexible group; therefore, this section is not applicable.

Other Requirements – There are no other requirements associated with this flexible group; therefore, this section is not applicable.

FGRULE290

This flexible group is comprised of emission units that are exempt from the requirements of Rule 201 pursuant to Rules 278 and 290. The emission units in this flexible group emit particulate matter and the emissions are controlled by baghouses.

Emission Limits – Particulate matter emissions are limited to 500 pound per month. Records provided by the facility indicate emissions from each emission unit are in compliance with the emission limit. In fact, records show the highest emissions were 320 pounds.

Material Limits – There are no material limits associated with this flexible group; therefore, this section is not applicable.

Process/Operational Restrictions – The special condition in this section explains that the provisions of Rule 290 applies to each emission unit that is operating pursuant to Rule 290.

Design/Equipment Parameters – There are no design or equipment parameters associated with this flexible group; therefore, this section is not applicable.

Testing/Sampling - There are no design or equipment parameters associated with this flexible group; therefore, this section is not applicable.

Monitoring/Recordkeeping – Records, including a description of the emission unit and particulate emissions, were available to AQD staff upon request (attached). Records were determined in compliance with the conditions of the ROP.

Reporting - Annual certifications of compliance and semiannual deviation reports were previously reviewed and documented.

Stack/Vent Restrictions - There are no stack or vent restrictions associated with this flexible group; therefore, this section is not applicable.

Other Requirements – There are no other requirements associated with this flexible group; therefore, this section is not applicable.

FGCOLDCLEANERS

Cold cleaners that are exempt from Rule 201 pursuant to Rule 278 and 281(h) or Rule 285(r)(iv). There are currently four cold cleaners at the facility subject to the requirements of this flexible group table.

Emission Limits – There are no emission limits associated with this flexible group; therefore, this section is not applicable.

Material Limits – The cleaning solvents used are not allowed to contain more than five percent of halogenated compounds. The attached material safety data sheet indicates the cleaning solvent does not contain any halogenated compounds.

Process/Operational Restrictions – The cold cleaners were not in use at the time of the inspection and AQD staff was unable to determine if cleaned parts were allowed to be drained for no less than 15 seconds or until dripping ceased.

The cold cleaners are leased and serviced by a contractor which performs the routine maintenance on the equipment.

Design/Equipment Parameters – The air/vapor interface of each cold cleaner is less than ten square feet and emissions are released to the general in-plant environment. Covers are installed on each cold cleaner and written instructions require the covers to be closed when the units are not in use. The Reid vapor pressure of the solvent is less than 0.3 psi and the solvent is not agitated or heated.

Testing/Sampling – There are no testing or sampling requirements associated with this flexible group; therefore, this section is not applicable.

Monitoring/Recordkeeping – Information regarding each cold cleaner (including the installation date, serial number, applicable Rule 201 exemption, and air/vapor interface) was available upon request (attached).

Reporting - Annual certifications of compliance and semiannual deviation reports were previously reviewed and documented.

Stack/Vent Restrictions - There are no stack or vent restrictions associated with this flexible group; therefore, this section is not applicable.

Other Requirements – There are no other requirements associated with this flexible group; therefore, this section is not applicable.

FG-MACTZZZZ

The flexible group consists of stationary reciprocating internal combustion engines located at an area source of hazardous air pollutant (HAP) emissions pursuant to 40 CFR 63 Subpart ZZZZ. Martin Marietta is considered an area source of air emissions as its potential to emit is less than 10 tons per year individual HAPs and less than 25 tons per year for aggregate HAPs. AQD has not been delegated authority to enforce 40 CFR 63 Subpart ZZZZ and staff has not made a determination of compliance with the regulation.

CONCLUSION

AQD staff has determined the facility to be in compliance with ROP No. MI-ROP-A3900-2015a based upon their review of records and observations made during the on-site inspection.

NAME Shane W. Cox

DATE 9/19/16

SUPERVISOR 