

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

N581444669

FACILITY: ASAMA COLDWATER MANUFACTURING, INC.		SRN / ID: N5814
LOCATION: 180 ASAMA Parkway, COLDWATER		DISTRICT: Kalamazoo
CITY: COLDWATER		COUNTY: BRANCH
CONTACT: Chad Marsh , EHS Engineer		ACTIVITY DATE: 06/06/2018
STAFF: Rex Lane	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: ACM Inspection		
RESOLVED COMPLAINTS:		

Background:

In October 2012, the MDEQ, Air Quality Division (AQD) made a written determination that Asama Coldwater Manufacturing (ACM), a grey iron foundry located at 180 Asama Parkway, Coldwater, MI and an adjacent core manufacturing facility, Gokoh Coldwater Inc. (GCI) located at 100 Concept Drive, Coldwater, MI, were a single major stationary source under the Renewable Operating Permit (ROP) program. The facilities have maintained that operational controls remain separate between the entities along with other business functions. ROP MI-ROP-N5814-2015 was issued to the stationary source on 1/14/15 with two sections. ROP section one contains the terms and conditions that apply to ACM and ROP section two identifies the terms and conditions that apply to GCI.

ACM operates two grey iron foundries that produce brake components for Honda which are subject to 40 CFR Part 63, Subpart A and EEEEE (National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries. The existing George Fischer (GF) foundry named after its manual pour molding line commenced operation in 1997. The newer DISA foundry is named after its automated pour molding line commenced operation in 2007. ACM uses green sand molds utilizing a combination of western and southern bentonite clays as well as sea coal as a binder. The facility has also installed two brake rotor coating lines that are subject to 40 CFR Part 63, Subpart MMMM, Metal Parts Coating Operation NESHAP.

GCI operates shell core equipment and two LAEMPE cold box core machines that use TEA catalyst gas which is subject to regulation under 40 CFR Part 63, Subpart EEEEE. Produced shell cores are shipped to a foundry in Ohio. Cold box cores are shipped to ACM for use in green sand molds at their GF and DISA foundries.

On June 6, 2018, AQD staff (Rex Lane) conducted an unannounced inspection to determine the facility's compliance with ROP MI-ROP-N5814-2015 and NESHAP Subparts EEEEE and MMMM. Staff arrived at 9:30 am and contacted Mr. Chad Marsh, EHS Engineer and Mr. David Sutherland, HR manager. In December 2017, the facility was issued permit to install (PTI) No. 184-17 for two Reichmann grinders for automatic deburring of brake rotors which will be exhausted to a 70,000 acfm reverse air Waltz-Holtz fabric filter collector. The fabric filter collector will also be used for future in plant environmental control for compliance with the new OSHA silica standard. Staff noted on the drive into the facility that the dust collector and stack appeared to be near completion. Per Mr. Marsh, the fabric filter controls will be finished during the facility's summer shutdown (week of July 4th). Per Mr. Sutherland, the grinders will be installed the last week of July 2018. Staff provided Mr. Marsh with M-001 and C-001 forms to submit once the grinders become operational, a Rule 215(3) notification of change to our office and USEPA. Staff also asked about the October 2017 USEPA, Region V inspection of the facility and ACM supplied additional information afterwards and has had no further contact. Staff then provided Mr. Marsh with a list of requested records to complete the inspection activity report.

Required PPE includes safety glasses and boots, hearing protection and hard hat. During the inspection, the following processes were observed:

GF Foundry (Emission Units):

The GF foundry was not in operation at the time of the inspection. This foundry currently operates only on 1st shift five days per week based on customer demand. All associated air pollution control equipment was turned off except for the blast unit that was re-processing castings.

EUMPCC-S1:

Emission unit consists of two electric induction furnaces with an average daily melting capacity of 8 tons/hour

and casting and cooling equipment. Emissions are controlled by the 49,000 cfm # 608 four-cell baghouse that is equipped with bag leak detection (BLD) equipment. The pulse jet # 608 baghouse is equipped with photohelic pressure differential gauges that were last calibrated on 9/19/17 and are re-calibrated on an annual basis. The BLD system is equipped with an audible alarm. The low and high alarm set points for the BLD system is 60% and 80% of scale with an alarm delay of 30 seconds. The BLD system for all GF baghouses was last evaluated by Auburn Systems on 6/24/15. Per Mr. Marsh, Auburn Systems trained foundry staff in 2015 on how to operate and maintain the equipment and also that Auburn locked in the alarm delay and set points so they can't be changed accidentally. Emission testing was conducted in May 2015 and demonstrated compliance with emission limits for carbon monoxide (CO), particulate matter (PM) and volatile organic compounds (VOCs). The facility is required to conduct semi-annual Method 9 certified visible emission observations of the GF foundry structure under NESHAP, Subpart EEEEE. Method 9 readings were last done on 1/30/18 and demonstrated compliance with opacity limit. The 2nd semi-annual Method 9 reading is scheduled for 7/17/18. Emission unit is subject to 40 CFR Part 64 Compliance Assurance Monitoring (CAM) and staff reviewed preventative maintenance (PMA) records which indicate non-certified visible emission observations required are being recorded daily during first shift. PMA daily check sheets for the GF and DISA foundries are attached for the week of 5/20/18 and 5/27/18.

EUSANDSYSTEM-S1:

Emission unit consists of green sand mold making, shakeout and sand processing equipment. Sand, bentonite clay, water, sea coal and return sand is used to produce molds for the GF foundry. Emissions are controlled by the 65,000 cfm # 610 baghouse that is equipped with BLD equipment. The pulse jet # 610 baghouse has one cell that is equipped with a photohelic pressure differential gauge that was last calibrated on 9/19/17 and is re-calibrated on an annual basis. The low and high alarm set points for the BLD system is 60% and 80% of scale with an alarm delay of 30 seconds. Emission testing was conducted in May 2015 and demonstrated compliance with emission limits for CO, PM and VOCs. Staff reviewed records which indicate daily non-certified visible emission observations required by CAM are being recorded daily during first shift.

EUSHOTBLAST-S1:

Emission unit consists of a shot blast machine that is equipped with a mechanical pre-cleaner. Emissions are controlled by the 7,500 cfm # 603 baghouse that is equipped with BLD equipment. The shot blast equipment was in operation during the inspection. The pulse jet # 603 baghouse has one cell that is equipped with a photohelic pressure differential gauge that was last calibrated on 9/19/17 and is re-calibrated on an annual basis. Observed pressure drop reading was 5.5" which is within the recommended range (1.5 – 6.5") per the facility's OMM plan. The BLD system is equipped with an alarm system. The current BLD reading was 3.8 pico Amps (pA). The low and high alarm set points for the BLD system is 60% and 80% of scale with an alarm delay of 20 seconds. Staff reviewed records which indicate daily non-certified visible emission observations required by CAM are being recorded daily during first shift. No visible emissions were observed from the # 603 baghouse stack while staff was on the roof.

FG-RULE 290-S1:

Currently, the facility has only one Rule 290 subject emission unit. EUCONVEYOR is a casting cooling vibratory conveyor section for the GF foundry that is covered and vents to the 28,000 cfm # 437 baghouse that is equipped with bag leak detection (BLD) equipment. The conveyor was not in operation at the time of the inspection. The pulse jet # 437 baghouse has one cell that is equipped with a photohelic pressure differential gauge. The photohelic gauge was last calibrated on 9/19/17 and is re-calibrated on an annual basis. The BLD system is equipped with an alarm system. Records submitted for January 2017 - May 2018 indicate compliance with the controlled monthly PM10 emission limit.

DISA Foundry (emission units):

EU-MP-S1:

Emission unit consists of two electric induction furnaces with a 10-metric ton holding capacity each and a monorail pouring station with three ladles. The average daily melting capacity is about 16 tons/hour. Emissions are controlled by the 37,500 cfm # 602 baghouse that is equipped with BLD equipment. Both furnaces were in operation during the inspection. Material charged to the furnaces is stored indoors in individual bins and observed scrap materials consisted of pig iron, clean stampings and internal returns. No pre-heating of scrap is done prior to furnace charging. The pulse jet # 602 baghouse has one cell that is equipped with a magnehelic pressure differential gauge that was last calibrated on 9/19/17 and is re-calibrated on an annual basis. Observed pressure drop reading was 5.1" which is within recommended range (1.5 – 6.5") per the facility's OMM plan. The BLD system is equipped with an audible alarm system. The current BLD reading was 29.3 pA. The low and high alarm set points for the BLD system is 60% and 80% of scale with an alarm delay of 30 and 20 seconds,

respectively. Baghouse draft fan amperage was 150 amps during the inspection. Emission testing was conducted in May 2015 and demonstrated compliance with emission limits for CO, PM, PM-10 and VOCs. Procedures for igniting gases from mold vents in pouring areas and stations that use a sand mold system are described in the facility's approved OMM plan. The facility is required to conduct semi-annual Method 9 certified visible emission observations of the DISA foundry structure under NESHAP, Subpart EEEEE. Method 9 readings were last done on 1/30/18 and demonstrated compliance with opacity limit. The 2nd semi-annual Method 9 reading is scheduled for 7/17/18. No visible emissions were observed from the # 602 baghouse stack while staff was on the roof.

EU-MCS-S1:

Emission unit consists of automated mold cooling conveyors and automated sand shakeout lines, including a flat deck shakeout system. Emissions are controlled by the 61,200 cfm # 606 baghouse that is equipped with BLD equipment and a regenerative thermal oxidizer (RTO) that was installed in July 2013 under AQD administrative consent order No. 14-2013 and PTI No. 280-06B. The RTO has two beds that switch over every three minutes. The pulse jet # 606 baghouse has one cell that is equipped with a magnehelic pressure differential gauge that was last calibrated on 9/19/17 and is re-calibrated on an annual basis. Observed pressure drop reading was 3.0" which is within the recommended range per the facility's approved OMM plan. The BLD system is equipped with an audible alarm system. The current BLD reading was 14.7 pA. The low and high alarm set points for the BLD system is 60% and 80% with an alarm delay of 90 seconds. Baghouse draft fan amperage was 116 which is slightly below the 125 – 165 range recommended by the facility's approved OMM plan. Emission testing was initially conducted in May 2015 and demonstrated compliance with emission limits for PM10, VOCs and CO.

A continuous emission monitoring system (CEMS) continuously monitors and records VOC emissions (i.e. assumes VOC = VOHAP) and calculates a rolling 3-hour average VOHAP concentration to determine compliance with 40 CFR 63.7690(a)(10). The first quarter cylinder gas audit was completed on 2/28/18 and the most recent RATA was 9/14/17. Facility's OMM plan was revised to reflect RTO operational parameters established during the most recent performance test (September 2013). At the time of the inspection, the instantaneous RTO combustion temperature was 1411 degrees F (31 degrees F above the combustion temperature established during the 2013 performance test). The instantaneous VOHAP concentration was 2.5 ppm and the 3-hour VOHAP concentration was 2.4 ppm which is 12% of the allowable limit under NESHAP Subpart EEEEE. The RTO inlet pressure photohelic gauge was 2.6" and the RTO outlet pressure photohelic gauge was 9.8". The PMA daily check sheets for the CEMS and RTO are attached for 5/16/18 through 5/29/18. No visible emissions were observed from the # 606 baghouse stack by staff during the inspection.

EU-SS-S1:

Emission unit consists of DISA vertical molding and related sand handling equipment. Emissions are controlled by the 56,900 cfm # 608 baghouse that is equipped with BLD equipment. The pulse jet # 608 baghouse has one cell that is equipped with a magnehelic pressure differential gauge that was last calibrated on 9/19/17 and is re-calibrated on an annual basis. Observed pressure drop reading was 4.8" which is within the recommended range per the facility's approved OMM plan. The baghouse draft fan amperage was 179 which was above the recommended range (120 – 145) listed in the facility's approved OMM plan. The BLD system is equipped with an audible alarm system. The current BLD reading was 43.9 pA. The low and high alarm set points for the BLD system is 60% and 80% with an alarm delay of 90 seconds. Emission testing was completed in May 2015 and demonstrated compliance with the PM10 and VOC emission limits. No visible emissions were observed from the # 608 baghouse stack by staff during the inspection.

EU-CCFBACK:

Emission unit consists of the back section of the casting cooling conveyors and a shot blast machine for the DISA foundry. Emissions are controlled by the 65,360 cfm # 604 baghouse that is equipped with BLD equipment. The pulse jet # 604 baghouse has one cell that is equipped with a magnehelic pressure differential gauge that was last calibrated on 9/19/17 and is re-calibrated on an annual basis. Observed pressure drop reading was 7.2" which is within the recommended range per the facility's approved OMM plan. The baghouse draft fan amperage was 173 which was above the recommended range (135 – 165) listed in the facility's approved OMM plan. The BLD system is equipped with an audible alarm system. The current BLD reading was 609.3 pA. The low and high alarm set points for the BLD system is 60% and 80% with an alarm delay of 90 seconds. Emission testing was completed in May 2015 and demonstrated compliance with the PM10 emission limit. No visible emissions were observed from the # 604 baghouse stack while staff was on the roof.

EU-EMERGEN1-S1:

Emission unit consists of a 500 kW Onan diesel fired emergency power generator that was installed with the new DISA foundry. The emergency generator is subject to 40 CFR Part 60, Subpart IIII. ACM staff stated that preventative maintenance is done by an outside contractor on an annual basis (last serviced July 2017). The diesel engine is certified by the manufacturer to meet EPA's 2016 Tier 2 emission standards. The facility produced the safety data sheet from their fuel supplier which demonstrates that ULSD No. 2 fuel oil which contains less than 0.0015% sulfur content (< 15 ppm S) is used in the engine. The engine is equipped with an electronic non-resettable hour meter and the current reading is 493.8 hours. The engine undergoes readiness testing on a weekly basis and operational hours are tracked by use type. Operations log for January 2017 through May 2018 is attached.

EU-EMERGEN2-S1:

Emission unit consists of a 50 kW Kohler natural gas fired emergency power generator that was installed with the existing foundry and it also services the paint lines. The emergency generator is subject to 40 CFR Part 63, Subpart ZZZZ based on its installation date. ACM staff stated that preventative maintenance is done by an outside contractor on an annual basis (last serviced July 2017). The generator is equipped with an electronic non-resettable hour meter and the current reading is 258.6 hours. The engine undergoes readiness testing on a weekly basis and operational hours are tracked by use type. Operations log for January 2017 through May 2018 is attached.

FG-FOUNDRY-S1:

Flexible group consists of all emission units associated with the GF foundry. Staff reviewed attached facility records for calculation of compliance with emission limits for PM, CO, VOCs, and metal melt rate for January 2017 – May 2018. The highest 12-month rolling average for the period of record reviewed indicates compliance with all emission and melt rate limits. The facility is maintaining monthly records for metal melt rate, hours of operation and calculating the CO and VOC emission rates based on the permit emission factors listed in Condition VI.2 which are higher than the emission factors established during testing in May 2015. The facility is required to conduct semi-annual Method 9 certified visible emission observations of the GF foundry structure under NESHAP, Subpart EEEEE. Method 9 readings were last done on 1/30/18 and demonstrated compliance with opacity limit. The 2nd semi-annual Method 9 reading is scheduled for 7/17/18. The facility operates under an approved OMM plan, a startup, shutdown and malfunction plan and has submitted written certification in their OMM plan that states that the facility purchases and uses only charge material that does not include post-consumer automotive body scrap or other specified materials listed in 40 CFR 63.7700(b). The facility submits ROP semi-annual compliance reports and monitoring and reporting deviations from ROP terms and conditions.

FG-COLDCLEANERS-S1:

ACM staff indicated that the cold cleaner in the casting department continues to use Mirachem 500 which contains 16 grams VOC/liter with a vapor pressure < 0.1 mm Hg. Current State definition rule for VOC doesn't exclude low vapor pressure organic compounds unless it has been demonstrated not to be photochemical reactive. This unit continues to be subject to Rule 707. Staff provided Mr. Marsh with some new MDEQ operational label stickers. Staff did not observe the cold cleaner for this inspection.

FGCAM UNITS-S1:

This flexible group consists of equipment subject to 40 CFR 64.6, Compliance Assurance Monitoring (CAM) including EUMPPC-S1, EUSANDSYSTEM-S1, EU-SS-S1, EU-MCS-S1 and EU-CCFBACK-S1. These emission units use a control device to achieve compliance with a federally enforceable PM limitation or standard and have potential pre-control PM emissions over 100% of the major source threshold amount. The facility is required to perform and record the results of daily non-certified visible emission checks and record differential pressure readings daily for each baghouse. The daily records are scanned and stored electronically once per week for each foundry. Staff reviewed records for the week of the inspection and scanned records for 5/16/18 – 5/29/18 (attached) were reviewed following the inspection. Each baghouse is equipped with appropriate pressure drop monitoring equipment and the gauges are calibrated on an annual basis with calibration sticker placed on the gauge. The facility is submitting CAM monitoring deviations and monitor downtime certification reports on a semi-annual basis. The facility certified that there were no excursions/exceedances or monitor downtime during the last reporting period (7/1/17 – 12/31/17).

FG-NEWFOUNDRY-S1:

Flexible group consists of all emission units associated with the DISA foundry. Staff reviewed attached facility records for calculation of compliance with emission limits for PM10, CO and VOCs, and metal melt rate for

January 2017 – May 2018. The records indicate compliance with respective emission limits and the metal melt rate limit. The facility is maintaining monthly records for metal melt rate and calculating PM10, CO and VOC emission rates based on the higher of emission factors listed in Condition VI.8 or the emission factors established during the most recent performance test. The facility is required to conduct semi-annual Method 9 certified visible emission observations of the DISA foundry structure under NESHAP, Subpart EEEEE. Method 9 readings were last done on 1/30/18 and demonstrated compliance with opacity limit. The 2nd semi-annual Method 9 reading is scheduled for 7/17/18. The facility operates under an approved OMM plan, a startup, shutdown and malfunction plan and has submitted written certification in their OMM plan that states that the facility purchases and uses only charge material that does not include post-consumer automotive body scrap or other specified materials listed in 40 CFR 63.7700(b). The facility maintains all required records for the CEMS required under the foundry NESHAP. The last quarterly cylinder gas audit was done on 2/28/18. The facility has installed, operates and maintains BLD equipment per NESHAP Subpart EEEEE requirements. The facility has certified that there were no deviations from NESHAP Subpart EEEEE requirements during the last reporting period (7/1/17 – 12/31/17).

FG-COATING-S1:

Staff reviewed emission records and calculations for January 2017 – May 2018 for each Geomet coating line, EULine1 and EULine2. The highest monthly and 12-month rolling average VOC emissions were as follows; Line 1: 672 pounds/month and 3.3 tons/12-month rolling average; Line 2: 659 pounds/month and 3.4 tons/12-month rolling average which complies with the 2,000 pounds/month and 10 tons/12-month rolling average VOC emission limit per coating line. Per ACM staff, only water is used for purge and cleanup activities. HVLP spray applicator technology was evaluated during the 2014 inspection. While on the GF foundry roof, staff observed visible emissions (VEs) from the northeast exhaust stack for Line 2. Staff spoke to the paint manager, George about observed VEs and we went to the Line 2 spray booth. The brake rotors are electric induction heated to about 360 degrees C (680 degrees F) just prior to being sprayed with Geomet GMT1104 which is a high-solids content water-based coating. The water content flashes off upon contact with the hot rotors and George explained that the spray booth exhaust is ducted to a condensing filter box on the mezzanine above the spray booth and condensed liquid drains out of the box and is collected for proper disposal. We went up on the mezzanine and staff was shown the filter box and there was some pooled oil like liquid on the floor between the filter box and the draft fan housing for the exhaust stack. Visible emissions continued to be observed from the exhaust stack in question while on the ground near the paint shop emergency generator. There was insufficient contrast in the background sky to determine if visible emissions were only condensed water vapor. **Note:** Staff recommended to Messrs. Marsh and Sutherland that the Line 2 condensing filters be looked at further since visible emissions were not observed from Line 1 which was operating and based on the oil like liquid observed on the Line 2 mezzanine floor.

FG-SOURCE-S1:

Flexible group includes all metallic surface coating lines and all associated purge and cleanup operations at the stationary source. Currently, the stationary source has only two coating lines noted above that are covered under this flexible group. The highest 12-month rolling average VOC emission rate noted during the period of review was 6.7 tons/year or 22% of the applicable emission limit.

FG-MACT MMMM-S1:

Geomet coating lines, EULine1-S1 and EULine2-S1 are subject to the requirements of NESHAP Subpart MMMM. Data supplied by the coating manufacturer indicates that the only Geomet coating in use at the facility has an organic HAP content of 1.71 pounds/gallon of coating solids which is below the 1.9 pounds/gallon of coating solids NESHAP limit. The facility is using the compliant material option under 40 CFR 63.3891. The facility is complying with the no organic HAP content limit for each thinner/additive or cleanup material. The facility has certified that there were no deviations from NESHAP Subpart MMMM requirements during the last reporting period (7/1/17 – 12/31/17).

During the post-inspection meeting, there was a brief discussion on the stationary source (SS) determination status for ACM and GCI. Michigan's SS determination in 2012 was based on ACM and GCI being adjacent/contiguous; the LAEMPE cold box machines installed at GCI's facility being owned by American Honda and ACM being partly owned by American Honda constituted "common control"; and ACM and GCI both shared the same major 2-digit SIC code (33) in addition to all GCI produced cold box cores being sent to ACM. Mr. Sutherland said he was told recently that USEPA had adopted a new interpretation of the term "common control". Staff indicated that they were aware of this change and suggested that since MDEQ-AQD made the

original SS determination and our determination policy has not changed yet, ACM and GCI may want to submit a written request to USEPA Region V to obtain a determination based on the new interpretation for common control at the federal level. We also discussed when the next ROP renewal application was due (i.e. between 7/14/18 and 7/14/19) and the deadline to complete the next facility wide emission testing (i.e. May 2020).

Staff left the facility at 1:30 pm. At the time of the inspection and based on a review of records while on-site and submitted following the inspection, it appears that ACM is compliant with ROP MI-ROP-N5814-2015 and NESHAP, Subpart EEEEE and MMMM requirements. -RIL

NAME RIL DATE 6/22/18 SUPERVISOR ma wlat 6/22/18