

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

N581444853

FACILITY: ASAMA COLDWATER MANUFACTURING, INC.		SRN / ID: N5814
LOCATION: 180 ASAMA Parkway, COLDWATER		DISTRICT: Kalamazoo
CITY: COLDWATER		COUNTY: BRANCH
CONTACT: Darrin Mynhier , Quality Manager - GCI		ACTIVITY DATE: 06/06/2018
STAFF: Rex Lane	COMPLIANCE STATUS: Compliance	
SUBJECT: GCI Inspection: MI-ROP-N5814-2015 (Section Two)		SOURCE CLASS: MAJOR
RESOLVED COMPLAINTS:		

Inspection 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 (SS) 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.

GCI operates shell core equipment and two LAEMPE cold box core machines. The cold box core machines use triethylamine (TEA) catalyst gas which is subject to regulation under 40 CFR Part 63, Subpart EEEEE (aka Iron and Steel Foundry NESHAP) because the entire stationary source is a major source of hazardous air pollutants (HAPs). TEA is a listed hazardous air pollutant (HAP). Produced shell cores are shipped to a foundry in Ohio. Produced cold box cores are shipped to ACM for use in their brake rotor green sand molds.

GCI Inspection:

On June 6, 2018, AQD staff (Rex Lane) conducted an unannounced inspection to determine the facility's compliance with ROP MI-ROP-N5814-2015, Section two. Staff arrived at 2:00 pm and contacted Mr. Darrin Mynhier, GCI, Quality Manager. Staff provided Mr. Mynhier with their credentials and business card and we went to a conference room for a pre-inspection discussion. The facility is subject to AQD administrative consent order No. 9-2013 which is required to be in effect a minimum of five years (8/6/18) and does not self-terminate. Paragraph 18 of the order explains the necessary actions that GCI must initiate to request order termination after 8/6/18. Staff discussed the equipment they would want to observe during the inspection, control device operation parameter review, and ROP records review.

Mr. Mynhier asked about what it would take to be de-coupled from the visible emission observation requirements on a semi-annual basis under the foundry MACT due to association with ACM's stationary source (SS). Mr. Mynhier indicated that the only contact they have with ACM involves the quality of produced cores and core mold plates for future brake rotors. 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. USEPA recently adopted a narrower interpretation of the term "common control". Since MDEQ-AQD made the original SS determination and our determination policy has not changed yet, staff suggested to Mr. Mynhier that GCI and/or ACM submit a written request to USEPA Region V to obtain a legal determination based on the new common control interpretation at the federal level. USEPA has also recently rescinded the MACT once in always in (OIAI) policy, however, this change is being challenged in litigation. Hypothetically, if GCI were able to obtain a separate source determination from USEPA with their federally enforceable VOC limit (1.54 tons/12-month rolling time-period for cold box machines) that makes the facility a minor source of HAPs along with the recent OIAI policy rescission, USEPA may also grant a release from applicable requirements associated with the foundry NESHAP.

GCI currently operates two 11 ½ hour shifts per day, Monday through Thursday. Staff asked Mr. Mynhier and he stated that the facility does not have any boilers, emergency generators or parts washers.

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

EU-SHELLCORE-S2:

Emission unit consists of seven shell core machines and a limited use core wash tank. One shell core machine was in operation during the inspection. The shell core machines vent uncontrolled emissions through ductwork that exhausts horizontally to the ambient air. Staff looked at horizontal exhaust on the north end of the building and did not observe any accumulated shell core sand residue. Emissions from the core wash tank are routed to an internally vented Torit dust collector. The core wash tank hasn't been used since June 2015 and Mr. Siler stated that they may remove the equipment and sell the dust collector. The facility primarily uses either 1% or 3.25% pre-coated resin sand that is delivered in super sacks and material usage is tracked monthly. The facility is tracking volatile organic compound (VOC) emissions on a 12-month rolling time-period as determined at the end of each calendar month using a new source review derived emission factor. Staff reviewed January 2017 – May 2018 VOC emission records submitted following the inspection which indicate compliance with the 1.0 ton/12-month rolling time-period emission limit. Highest rolling time-period value during this period was approximately 35% of the allowable limit.

EU-SILOS-S2:

Emission unit consists of two 75-ton capacity sand storage silos and associated sand handling and mixing equipment that is controlled by an 8,500 ft³/min. dust collector located outside on the east side of the building. The dust collector is operated continuously but only actively filters during sand truck deliveries. The facility typically uses between 150 – 180 tons of sand weekly and receives 40 – 50 ton deliveries every other day. During the inspection, a sand truck was filling the silos and no visible emissions were noted from the dust collector exhaust stack. The baghouse differential pressure at the time of the inspection was 6.0". The baghouse filters were last changed out on 5/17/18 at 48,451 hours of operation. The facility is tracking sand deliveries in tons on a monthly and 12-month rolling time-period basis. The facility is limited to 25,000 tons sand/12-month rolling time-period. The facility is limited to 2.50 tons particulate matter (PM)/12-month rolling time-period. Staff reviewed January 2017 – May 2018 sand usage and PM emission records submitted following the inspection which indicate compliance with the respective limits. The highest rolling time-period value during this period was approximately 35% and 33% of the PM and sand usage limits, respectively. The source operates EU-SILOS under an AQD approved operation and maintenance and startup, shutdown and malfunction plan (3/24/15) as required by condition III.1. Condition VI.5 and VI.6 require the facility to conduct and record the results of weekly six-minute visible emission readings from EU-SILOS. Staff reviewed the weekly visible emission reading records for January – May 2018 and no issues or emissions were noted.

EU-LAEMPE#1AND#2-S2:

Emission unit consists of two Laempe cold box core machines and two 1.5 MMBtu/hour natural gas fired core ovens. Sand and phenolic based resin blend (Part A – 30%; Part B – 65%; Part C – 5% by weight) are mixed together and set using TEA gas catalyst. TEA emissions are controlled by two 3,850 cfm Dakota packed tower acid scrubbers. On 5/30/13, an emission test was conducted on both acid scrubber exhaust stacks which demonstrated compliance with the TEA emission limit under condition I.2.

Per 40 CFR Part 63, Subpart EEEEE, the permittee is required to re-test the Dakota acid scrubbers for compliance every five years. Prior to the re-test that was completed on 5/8/18 (test report due by 7/8/18), the facility changed out the mist eliminator pads, packing and spray nozzles in both scrubbers. Mr. Mynhier stated that the re-test was performed under lower scrubber flow rates and then put back to the scrubber operational parameter ranges established during the 2013 test listed below:

Cold Box Line # 1 (West Line); Scrubber # 1 (42" diameter):

Flow rate: ≥ 50 gpm; Scrubber Blowdown pH: ≤ 4.5 S.U.; Differential Pressure: 2 – 10" water; Duct Damper: 75% open

Cold Box Line # 2 (East Line); Scrubber # 2 (48" diameter):

Flow rate: ≥ 65 gpm; Scrubber Blowdown pH: ≤ 4.5 S.U.; Differential Pressure: 2 – 10" water; Duct Damper: 75% open

During the inspection, Scrubber # 1 had a scrubber flow rate of 55.8 gal./min. (gpm), a blowdown pH of 4.16 S.U. (three-hour average pH: 3.99), a suction pressure (magnehelic) of 2.38" and a photohelic differential pressure of 3.87". The most recent scrubber solution change-out on Scrubber # 1 occurred following the inspection on 6/14/18. Scrubber # 2 had a scrubber flow rate of 70.3 gpm, a blowdown pH of 1.37 S.U. (three-hour average pH: 1.37), a suction pressure (magnehelic) of 1.25" and a photohelic differential pressure of 3.50". The most recent scrubber solution change-out on Scrubber # 2 occurred following the inspection on 6/20/18. Each scrubber is equipped with a data logger that continuously monitor process suction pressure

(magnehelic), scrubber differential pressure, flow rate and blowdown pH and readings are recorded to an SD card every minute and averaged every fifteen minutes. The SD card data is downloaded every month and the data reviewed to make sure the fifteen-minute readings for pH and flow rate do not exceed the 3-hour average values established during the most recent performance test. GCI staff perform daily pre-shift checks on all production shifts for scrubber solution temperature, flow rate, pH, suction pressure and differential pressure.

EU-LAEMPE#1AND#2 is operated under an approved operation, maintenance and malfunction and startup, shutdown and malfunction (OMM/SSM) plan [3/24/15]. ROP permit conditions and the OMM/SSM plan requires monthly visual inspection records of process and control equipment, quarterly pH gauge and pressure sensor calibration records and semi-annual flow sensor calibration records. GCI calibrates all scrubber gauges and sensors on a quarterly basis with the most recent calibration date being 3/28/18. Staff reviewed daily, monthly and quarterly inspection records for the capture system and acid scrubbers. Completed copies of each inspection record type is attached to this inspection activity report. Per 40 CFR 63.7690(a)(7), the facility is required to perform semi-annual EPA Method 9 visible emission observations of the building. The last Method 9 observations were completed on 1/30/18. The facility is required to submit semi-annual compliance reports in accordance with 40 CFR 63.7751. The last semi-annual compliance report was dated 3/13/18 for the time period 7/1/17 – 12/31/17 which demonstrates compliance with condition VII.5. The compliance report states that there were no startups, shutdowns or malfunctions or deviations from the operating parameters established in the OMM Plan during the reporting period. Staff reviewed January 2017 – May 2018 resin A, B, C (not currently limited) and TEA usage and VOC emission records submitted following the inspection which indicate compliance with the respective limits. The highest rolling time-period value during this time period was 41% and 89% for resins A & B, 69% for TEA catalyst, and 44% for VOC emissions, respectively. The facility has indicated that they may apply to modify PTI No. 162-11A to adjust their allowable resin limits.

EU-MISCELLANEOUS-S2:

Emission unit consists of the use of materials ancillary to the core making process including daub/mud, glue/paste, coating, core box release agent and metal cleaners. Facility tracks material usage on a monthly basis and calculates monthly or 12-month rolling average VOC emission rate. Staff reviewed January 2017 – May 2018 material usage and VOC emission records submitted following the inspection. The highest VOC 12-month rolling time-period value was 4.45 tons or about 64% of the allowable limit.

During the plant walk through, staff observed natural gas fired space heaters along the south wall of the facility that is exempt from air use permitting requirements under Rule 282(2)(b)(i). The facility has also removed a liquid nitrogen tank and evaporator outside the south side of the building and replaced it with a new nitrogen gas generator system located west of the cold box machines and adjacent to the shell core machines. The nitrogen gas is used as a blowing agent in the cold box machines and the generation equipment is exempt from air use permitting under Rule 285(2)(II). The fabric filter collector for former ACM related grinding process operations is still disconnected and located outside the south side of the building and their future plans are to sell or scrap it out.

Staff left the facility at 4:20 pm. At the time of the inspection and based on a review of facility records obtained during and following the inspection, it appears that the facility is compliant with ROP MI-ROP-N5814-2015 (Section Two) and 40 CFR Part 63, Subpart EEEEE. -RIL

NAME _____

RIL

DATE _____

6/22/18

SUPERVISOR _____

MA 6/27/2018

