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

B190941442

FACILITY: CWC Textron		**SRN / ID:** B1909
LOCATION: 1085 W. Sherman Blvd, MUSKEGON		**DISTRICT:** Grand Rapids
CITY: MUSKEGON		**COUNTY:** MUSKEGON
CONTACT: ROBERT R MEACHAM , MANAGER-SAFETY AND ENVIROMENTAL		**ACTIVITY DATE:** 09/11/2017
STAFF: Eric Grinstern	**COMPLIANCE STATUS:** Non Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Compliance Inspection		
RESOLVED COMPLAINTS:		

FACILITY DESCRIPTION

CWC Textron is an iron foundry located in the City of Roosevelt Park in Muskegon County. The facility sits on 53 acres and was constructed in 1942. The facility currently employs approximately 310 employees. The facility manufactures cam shafts, crank shafts, balance shafts and bearing caps. The major production operations are raw material handling, mold production, metal melting, pouring, cooling, shakeout and cast finishing.

Iron is melted in a cupola and held in two electric induction furnaces. The facility utilizes a green sand molding system and does not utilize cores. Currently, a majority of the iron produced is inoculated to produce ductile iron. The facility has numerous finishing operations.

REGULATORY OVERVIEW

The facility is a major source of criteria pollutants and operates under ROP No. MI-ROP-B1909-2013a. ROP No. MI-ROP-B1909-2013 was issued on January 7, 2013 after which a minor modification was approved and ROP No. MI-ROP-B1909-2013a was issued on March 16, 2016. The facility is a minor source of HAPs and is subject to the area source foundry NESHAP, Subpart ZZZZZ. The facility is considered a "large" area source under Subpart ZZZZZ.

COMPLIANCE EVALUATION

At the facility, staff consisting of Michelle Rogers and Ambrosia Brown (AQD Permits Section) accompanied Eric Grinstern (EG) on day one of the inspection (September 11, 2017). On the second day (September 12, 2017), the inspection coincided with stack testing being conducted on the cupola. Tyler Salamasick (Grand Rapids, AQD) accompanied EG on the second day of the inspection. The facility was represented by Robert Meacham, Manager of Environmental, Health and Safety.

SOURCE-WIDE CONDITIONS

Emission/Material Limits

The facility has source-wide limits to restrict emissions to less than the major source thresholds for HAPs. The facility is restricted to melting less than 99,000 tons per year of iron and is required to maintain records. The

facility is also required to maintain monthly and 12-month individual and aggregate HAP emission records to demonstrate compliance the 9 tpy (individual) and 22.5 tpy (aggregate) limits.

Review of facility records (attached) show that they melted 68,022 tons on a 12-month rolling average ending in August 2017.

Facility HAP emission records (attached) show the highest aggregate monthly HAP emission amount for the past 12 months occurred in October 2016, with 1.05 tons emitted. The highest 12-month rolling average occurred in August 2016, with 10.8 tons emitted. The individual HAP with the highest emission rate is manganese, with a 12-month emission total at 2.9 tons.

Note: The tons per year melt limit decreased from150,000 tons to 99,000 tons with the most recent modification to account for the installation of an auto-pour line.

EU-BULK-BOND

Storage silo and day storage bin which store bulk bond and have a pneumatic transport system. The silo and bin are each controlled by separate bin vent collectors.

The facility has a bond silo and a sea coal silo located on the north-side of the facility.
Each silo is controlled by a bin vent filter (Bond Silo BV#7, Sea coal BV#14)

Emission/Material Limits/Monitoring

The emission unit has an emission limit for particulate emissions. To assure compliance with the particulate limit the facility is required to use bin vent collectors, maintain a PM plan and perform VE observations on a weekly basis.

Review of daily emission inspection records provided by the facility (attached) showed no abnormal observations.

The facility previously submitted a PM plan. EG requested that the facility provide a current copy of the PM plan for the bin vent collectors.

Notes: Observation of silos showed no visible emissions during the inspection. The silos were not being filled at the time of the inspection.

EU-DUCTILE-IRON

Equipment used for preparation of ductile iron which includes magnesium treatment vessels, a desulfurization ladle with fluorspar addition and an Ajax holding furnace. The furnace is also used for gray iron. The ductile process is controlled by Dust Collector #5.

Dust collector #5 is a pulse jet baghouse that was installed in 2016, replacing an old baghouse.

Emission/Material Limits/Monitoring

The emission unit contains limits for particulate matter, opacity and fluorides.

Compliance with the emissions limits is demonstrated through a limitation on the amount of fluorspar used (54 pounds per hour – daily ave.) and the amount of ductile iron produced (24 tons/hr produced based on an 8-hour ave.). The facility is also required to maintain the baghouse with a particulate sensor and pressure drop gauge, as well as perform weekly VE readings.

The facility provided records (attached) for fluorspar usage, ductile iron production, baghouse pressure drop readings, particle sensor readings and VE observations.

Fluorspar records of the quarterly feed rate (2011- 6/2017) showed a pound per hour rate around 27 to 28. A high was recorded in October 2016, with a rate of 32.4 pounds per hour. All rates were below the 54 pounds per hour limit.

Ductile iron production records showed a high of 23 tons per hour, which is below the 24 ton per hour limit.

The facility is required to record the pressure drop on a daily basis and a VE observation weekly. The facility conducts both on a daily basis. The specified pressure drop range for Baghouse No. 5 is 1-10 inches. Review of pressure drop records for the monometer and controller showed readings between 3 and 8 inches for 2017. The facility is not required to record the particle sensor readings; however, they currently record the readings daily. The readings for 2017 were generally 0-1, with a single high reading of 9. Review of the daily VE observations showed no record of opacity problems.

The facility previously submitted a PM plan. EG requested that the facility provide a current copy of the PM plan for Dust Collector # 5.

Notes: Observation of Baghouse #5 showed no visible emissions during the inspection.
The pressure drop reading on 9/11/2017 was 4.0" on the gauge and 3.0 on the controller. The particle sensor had a reading of 1. The facility utilizes the east Ajax furnace during the production of ductile iron. Observation of ductile inoculation in the tundish ladle with capture by the "Super Sucker" showed very good capture.

EU-NEW-SAND

A bin which stores new sand having a pneumatic transport system. The bin is controlled by a bin vent filter.

Emission/Material Limits/Monitoring

The emission unit limits the emission of particulate matter.

Compliance with the particulate limit is based upon proper operation of the bin vent and following the PM plan. The facility is also required to perform weekly VE observations.

The facility provided records (attached) of daily VE observations for 2107. Review of the records showed no days were emissions were noted.

The facility previously submitted a PM plan. EG requested that the facility provide a current copy of the PM plan for the bin vent collector.

Notes: Observation of the EU-NEW-SAND showed that it was not being filled during the inspection and no visible emissions were observed from the silo.

EU-WEST-CUPOLA-1

Emissions from the cupola are controlled by two direct flame afterburners, wet cap, a high energy venturi scrubber and a high velocity mist eliminator. Emission unit includes charging operations. The emission unit is subject to CAM for particulate emissions.

Emission/Material Limits/Monitoring

The emission unit limits the emission of particulate matter. Compliance with the particulate limit is assumed through proper operation of the venturi and demister. Additionally, the facility is required to perform stack testing between 6 and 18 months prior to the expiration of the ROP for particulate as well as SOX, NOX, and CO. Compliance testing was being conducted on the second day of the compliance inspection.

The facility is required to maintain records of daily VE readings, charge records and hours of operation. The facility also must maintain water pressure rate records for the scrubber as well as pressure drop records for the scrubber and demister.

The facility provided copies (attached) of the records listed above for 2017.

VE observations: all entries state "white", meaning a steam plume. No opacity problems noted.

Charge records: the facility provided the charge record for the second day of the inspection, showing charge make up. Records demonstrate compliance with the source-wide melt limit of 99,000 tons per year. Review of facility records show that they melted 68,022 tons on a 12-month rolling average ending in August 2017.

Hours of operation: the facility provided records for the hours of operation for both ductile and grey iron production.

Venturi pressure drop: The facility specified pressure drop range is 30-56. Review of the facility records for 2017 showed all readings within this range, except for four days.
On August 31, September 5, 6 and 7, the readings were slightly below 30 inches of pressure drop. The readings were: 28.8, 28.6, 28.2 and 29.1 inches. Additionally, the pressure drop was 28.9" on the second day of the inspection, during stack testing. A subsequent reading later in the day showed a pressure drop of 42.0". The facility will be requested to provide a response regarding actions taken in to address the readings. Since pressure drop ranges were established for CAM monitoring, the facility will need to address accordingly.

Demister pressure drop: The facility specified pressure drop range is <2. Review of the facility records for 2017 showed all readings below 2".

Cupola water pump pressure: The facility specified range is 46-80 psi. Review of the facility records for 2017 showed all readings within this range.

The facility previously submitted a PM plan. EG requested that the facility provide a current copy of the PM plan for the cupola.

Testing

The facility last conducted stack testing on August 7, 2012, at which time compliance with the Title V and Subpart ZZZZZ emission limits was demonstrated.

The facility is required to conduct stack testing to demonstrate compliance with the particulate limit of 0.15 lbs./1,000 pounds of exhaust gas. As well as perform testing for SOx, NOx, and CO, which do not have an emission limit in the permit. Testing is required to be conducted between 6 and 18 months prior to the ROP expiration, which is June 24, 2018. The facility was conducting testing (Network Environmental) on the second day of the inspection.

Notes: Observation of the cupola exhaust showed some emission "tail-off". Emissions after the point of steam dissipation were less than 20%. Observation of the charge door on the first day of the inspection showed good capture with almost no "buffing". Day 2 of the inspection show some emissions from the charge door. Mr. Meacham attributed the emissions due to the operator bring up the cupola temperature at the time of the observation. The facility recently completed cleaning out one of the settling ponds used for cupola emission control water. The facility was scheduled to switch ponds for water usage, however a valve broke which prevented the switch prior to testing.

Control device readings during the inspection:

9/11/2017

Venturi pressure drop: 47.2"
Demister pressure drop: 1.5"
Cupola water pressure: 62 psi

9/12/2017

Venturi pressure drop: 28.9"/42.0"
Demister pressure drop: 1.75"/1.6"
Cupola water pressure: 62 psi

EU-MP-RBB

Knockoff operation #227, Spiral Elevator #228 and Rocker Barrel Blast (finish blast) Emission unit is subject to CAM for particulate emissions. Emissions are controlled by Dust collectors #1 and #13.

Emission/Material Limits/Monitoring

The emission unit has limitations for the emission of particulate matter and opacity.

Compliance with the particulate and opacity limits is assumed though operation of the baghouses, implementing a PM Plan, and performing daily VE observations. The facility is required to maintainrecords of the baghouse pressure drop readings, VE readings, as well as the particle sensor readings.

The facility provided records (attached) for baghouse pressure drop readings, particle sensor readings and VE observations for 2017.

Pressure drop readings: The facility established pressure drop range for Baghouse #1 is 5-12", while the pressure drop range for Baghouse #13 is 5-13". All the observed readings for Baghouse #1 baghouses were within the established ranges for 2017. Baghouse #13 had one reading on March 13, 2017 where the pressure drop was 4.5" on the manometer gauge. There were also several days the controller had low readings for the pressure drop. The facility documented the low readings in the semi-annual deviations reports along with the cause (frozen lines, water in lines). Since pressure drop ranges were established for CAM monitoring, the facility will need to address accordingly.

The particle sensors do not have an established range. The facility records show a high of 91.1 on one day for Baghouse #1, with most days having readings below 50. Baghouse #13 showed a high of 33 in 2017. Establishing appropriate operating ranges will be evaluated during the next Title V renewal.

VE observations: No opacity problems noted in the records for 2017.

The facility previously submitted a PM plan. EG requested that the facility provide a current copy of the PM plan for EU-MP-RBB.

Notes: Observation of Baghouse #1 and #13 during the inspection showed no visible emissions. The pressure drop reading on Baghouse #1 was 11" on the manometer gauge. Baghouse #13 had a pressure drop reading of 12.5 on the manometer gauge

EU-ACS-SAND

The ACS sand system includes the sand cooler #16, the sand muller, the sand distribution tower sand elevators #18 and #23 and the sand basement. Emission unit is subject to CAM for particulate emissions. All the processes are controlled by Dust Collector #19.

Emission/Material Limits/Monitoring

The emission unit has limitations for the emission of particulate matter. Compliance with the particulate emission unit is assumed through proper operation of the dust collector and operating according to a PM Plan. The facility is required to monitor and maintain records of daily VE observations and monitor and record the pressure drop across the collector once per day.

The facility provided records of pressure drop and VE observations for 2017.

The facility established operating range for the baghouse pressure drop is 1-10".
Review of the pressure drop records showed the manometer readings to be between 3.0" and 4.5".

The facility previously submitted a PM plan. EG requested that the facility provide a current copy of the PM plan for Baghouse #19.

Notes: Observation of Baghouse #19 during the inspection showed no visible emissions. The pressure drop reading on Baghouse #19 was 3.75" on the manometer gauge.

FG-PARTICULATE

Various particulate sources: EU-SHAKEOUT is subject to CAM for particulate emissions.

Emission Units: EU-CLEAN, EU-FINISHING, EU-SHAKEOUT, EU-AJAX-FURN, EU-POURING, EU-COOLING

POLLUTION CONTROL EQUIPMENT

EU-CLEAN: 50,000 CFM DC#1, DC #5
EU-FINSHING: 15,000 CFM DC#2
EU-SHAKEOUT: 60,000 CFM DC#17, 50,000 CFM DC#6

Emission/Material Limits/Monitoring

The flex group limits the emission of particulate matter.

Compliance with the particulate limit is assumed through proper operation of the pollution control equipment and operating according to a PM Plan. The facility is required to monitor and maintain records of the following: daily VE observations and daily pressure drop across the fabric filters. Additionally, the facility monitors particle sensor readings from DC# 1 and DC# 6.

The facility provided records (attached) for baghouse pressure drop readings, and VE observations for 2017.

Review of facility records showed the following:

DC#1 – Facility established pressure drop range (5-12 inches) Reading for 2107 were within the established range. Readings were between 8 and 11.5 inches. The pressure drop during the inspection was 11" on the manometer. The facility did not document any opacity problems. No VE was noted during the inspection. The particle sensors do not have an established range. The facility records show a daily operating range generally between 20 and 50. Establishing appropriate operating ranges will be evaluated during the next Title V renewal.

DC#2 – Facility established pressure drop range (3-10 inches) Reading for 2107 were within the established range. Readings were between 8 and 11.5 inches. The facility did not document any opacity problems

Note: During the inspection, what appeared to be a buildup of particulate beneath the baghouse exhaust on the duct work was noted. No VE was noted during the inspection. The pressured drop during the inspection was 4.0" EG requested that the facility determine the cause of the buildup.

DC#5 – Same collector used for Ductile, see comments above.

DC#6 – Facility established pressure drop range (5-12 inches) Reading for 2107 were within the established range, except for three days during the week of January 9th. The gauge readings were 3.8", 3.8", and 3.9 inches. For the same days, the controller readings were 8.8", 7.8", and 8.3 ". The controller readings are consistent with the normal pressure drop readings. The facility documented the low readings along with the cause(frozen lines) in the semi-annual deviation report. The facility documented "slight" emissions from the baghouse on 8/31/2017, 9/5/2017, 9/6/2017 and 9/7/2017. Mr. Meacham stated that they see some steam coming the baghouse due to moisture in the molds. The particle sensors do not have an established range. The facility records show a daily operating range generally between 20 and 50, but also had a few days with reading in the 200 to 500+ range. Establishing appropriate operating ranges will be evaluated during the next Title V renewal. The pressure drop at the time of the inspection was 9.0" and the particle sensor reading was 620.

DC#17 – Facility established pressure drop range (5-12 inches) Reading for 2107 were within the established range. The gauge readings were in the range of 10" to 12". The facility documented no VE issues in 2017. The pressure drop reading at the time of the inspection was 12.5". The facility will be requested to provide a response regarding actions taken in response to the low reading. No VE was noted from the baghouse at the time of the inspection.

The facility previously submitted a PM plan. EG requested that the facility provide a current copy of the PM plan for FG-PARTICULATE.

Iron and Steel Foundry NESHSAP, Subpart ZZZZZ

The facility is subject to Subpart 5Z. The facility has submitted the required notifications under the NESHAP. The facility tested and demonstrated compliance with the emission limits in Subpart 5Z. The facility submits semi-annual certification reports in accordance with subpart 5Z.

Inspection of the facility's scrap showed no auto frag. Since the facility is producing primarily grey iron, they are using cleaning charge material.

Testing

The facility was conducting compliance testing on the second day of the inspection. Testing was being performed for the Title V requirements, as well as Subpart ZZZZZ. The facility last tested for Subpart ZZZZZ on August 7, 2012. Subpart ZZZZZ requires retesting every 5 years, therefore, the deadline for retesting was August 7, 2017. The facility was under the understanding that they would comply with the testing deadline if they conducted testing within the deadline of the Title V requirements. The facility missed the testing deadline for Subpart ZZZZZ by 36 days. A letter of violation will be issued for not testing within the 5-year requirement.

Conclusion

Based on the information and observations obtained during this inspection, the facility is in compliance with applicable air quality rules and regulations, with the exception of conducting testing 36 days after the deadline required by Subpart ZZZZZ. A VN will be issued addressing this violation.

NAME  DATE 9/29/17 SUPERVISOR