DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

B701364707

FACILITY: Huron Casting, Inc (Blue Diamond Steel Casting)		**SRN / ID:** B7013
LOCATION: 7050 HARTLEY ST. & 125 STURM RD, PIGEON		**DISTRICT:** Bay City
CITY: PIGEON		**COUNTY:** HURON
CONTACT: Daryl Mendrick , EHS Director		**ACTIVITY DATE:** 09/13/2022
STAFF: Adam Shaffer	**COMPLIANCE STATUS:** Non Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: On site inspection		
RESOLVED COMPLAINTS:		

An onsite inspection and records review was conducted by Air Quality Division (AQD) staff Adam Shaffer (AS) of Huron Casting, Inc and Blue Diamond Steel Casting site located in Pigeon, MI. Applicable records were requested to verify compliance with Renewable Operating Permit No. MI-ROP-B7013-2018a and Permit to Install (PTI) No. 187-19. An in-person inspection to verify onsite compliance was completed on September 13-14, 2022.

Facility Description

The Huron Casting, Inc and Blue Diamond Steel Casting facility is one stationary source that consists of two steel foundries Huron Casting, Inc. (HC) located 7050 Hartley Street Pigeon MI, and Blue Diamon Steel Casting (BD) located at 125 Sturm Road Pigeon, MI. The facility is a major source for Carbon Monoxide (CO) and has taken opt-out limits for volatile organic compounds (VOCs), particulate matter (PM) and hazardous air pollutants (HAPs). The facility is in operation under ROP No. MI-ROP-B7013-2018a and PTI No. 187-19. Additionally, the company is under Consent Order AQD No. 4-2017. The company is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries Area Sources (Subpart ZZZZZ).

Offsite Compliance

Based on the timing of the inspection, the 2021 Michigan Air Emissions Reporting System (MAERS) Report was submitted on February 23, 2022, and later reviewed. The 2021 MAERS Report was failed twice in order to fix errors and attach supporting documentation. After further review, it appears that the resubmitted 2021 MAERS Report overall appears to be acceptable. It was noted that the 2020 and 2021 MAERS Reports had been submitted in a timely manner, however, the ROP Certification Reports had not been submitted. This was explained to company staff and the reports were later submitted by the company. Moving forward, the ROP certification reports, specifically for the MAERS Reports shall be submitted in a timely manner.

HC & BD are required to submit semi-annual and annual compliance reports per Part A General Conditions 19-23 of MI-ROP-B7013-2018a. Additionally, HC & BD are required to submit semi-annual compliance reports per the NESHAP Subpart ZZZZZ. Semi-annual and annual compliance reports were reviewed since the previous inspection on January 8, 2020. The compliance reports were concluded to be acceptable. Minor errors were noted in the NESHAP Subpart ZZZZZ semi-annual reports, however, the issues were concluded to not be a violation. After further review the reports submitted appeared acceptable.

Compliance Evaluation

A request was sent to Mr. Daryl Mendrick, EHS Director, on July 18, 2022, for various records required by MI-ROP-B7013-2018a. Due to mail issues records were later collected in person on August 4, 2022, and will be discussed further in this report.

Huron Casting Inspection (Day 1)

An onsite inspection of the facility was completed on September 13, 2022. AQD staff AS arrived in the area at 8:50am. Weather conditions at the time were mostly sunny skies, temperatures in the middle 50's degrees Fahrenheit and winds from the southeast at 0-5mph. While offsite, no emissions were noted, and process odors were noted coming from the BD site. No recent odor complaints have been received with regards to the HC / BD sites. Upon arriving onsite, AS met with Mr. Mendrick who provided a tour of the site and answered site specific questions. Requested records were provided by Mr. Mendrick.

As mentioned above, HC is a steel foundry. The various stages of onsite operations were viewed during the course of the site inspection.

MI-ROP-B7013-2018a

Source Wide Conditions (For HC and BD sites)

This facility is subject to a source wide PM10 emission limit of 59.6 tons per year (tpy) per a 12-month rolling time period. Records were requested and reviewed for select time periods. For the month of May 2022, approximately 1.47 tons of PM10 was reported emitted from HC and 2.08 tons of PM10 emissions were reported emitted for BD. As of May 2022, 40.88 tpy of PM10 emissions were reported emitted combined for HC and BD per a 12-month rolling time period which is within the permitted limit. Previous 12-month rolling time periods reviewed also appeared to be within the permitted limit.

This facility is subject to a source wide PM2.5 emission limit of 11.9 tpy per a 12-month rolling time period. Records were requested and reviewed for select time periods. For the month of May 2022, approximately 0.25 tons of PM2.5 was reported emitted from HC and 0.53 tons of PM2.5 emissions were reported emitted for BD. As of May 2022, 9.20 tpy of PM2.5 emissions were reported emitted combined for HC and BD per a 12-month rolling time period which is within the permitted limit. Previous 12-month rolling time periods reviewed also appeared to be within the permitted limit.

This facility is subject to a VOC emission limit of 50 lb/ton of binder used based on a monthly average. Records were requested and reviewed for select time periods. Upon review and speaking with company staff, it appears that the 50 lb/ton binder limit is what is used for demonstrating compliance with this emission limit as well as calculating VOC emissions. After further review this appears acceptable at this time.

This facility is subject to a VOC emission limit of 98 tpy per a 12-month rolling time period. Records were requested and reviewed for select time periods. For the month of May 2022, 0.557 tons of emissions were reported and as of May 2022, 6.10 tpy of VOCs were reported emitted per a 12-month rolling time period which is well within the permitted limit. Previous 12-month rolling time periods reviewed also appeared to be within the permitted limit.

This facility is subject to individual / aggregate HAP emission limits of 8.9 tpy and 22.4 tpy respectively per a 12-month rolling time period. Records were requested and reviewed for select time periods. For the month of May 2022, 0.2750 tons of aggregate HAPs were reported emitted. As of May 2022, 3.00 tpy of aggregate HAPs were reported emitted per a

12-month rolling time period which is well within the permitted limits. Previous 12-month rolling time periods reviewed also appeared to be within the permitted limit.

This facility is subject to a CO emission limit of 4.8 lbs / ton of melt based on a monthly average. Records were requested and reviewed for select time periods. Upon review and speaking with company staff it appears that the 4.8 lbs / ton is what is used for demonstrating compliance with this emission limit and what is used to calculate CO emissions. After further review, this appears acceptable at this time.

This facility is subject to a CO emission limit of 345.6 tpy per a 12-month rolling time period. Records were requested and reviewed for select time periods. For the month of May 2022, 12.45 tons of CO emissions were emitted. As of May 2022, 145.59 tpy of CO emissions were reported emitted per a 12-month rolling time period. Previous 12-month rolling time periods reviewed also appeared to be within the permitted limit.

This facility is subject to a material limit for melted metal of 144,000 tpy per a 12-month rolling time period. Records were requested and reviewed for select time periods. For the month of May 2,328.6 tons of metal was melted at HC and 2,365.6 tons of metal was melted in BD. As of May 2022, 54,010.3 tpy of metal was melted for both sites combined per a 12-month rolling time period which is within the permitted limit. Previous 12-month rolling time periods reviewed also appeared to be within the permitted limit.

The HC site is subject to a material limit for melted metal of 72,000 tpy per a 12-month rolling time period. Records were requested and reviewed for select time periods. As mentioned above for May 2022, 2,328.6 tons of metal was melted at HC. As of May 2022, 27,643.3 tpy of metal was melted per a 12-month rolling time period which is within the permitted limit. Previous 12-month rolling time periods reviewed also appeared to be within the permitted limit.

The BD site is subject to a material limit for melted metal of 72,000 tpy per a 12-month rolling time period. Records were requested and reviewed for select time periods. As mentioned above for May 2022, 2,365.6 tons of metal was melted at BD. As of May 2022, 26,367 tpy of metal was melted per a 12-month rolling time period which is within the permitted limit. Previous 12-month rolling time periods reviewed also appeared to be within the permitted limit.

The facility is subject to a natural gas material limit of 1,026 MMcf per a 12-month rolling time period. Records were requested and reviewed for select time periods. For the month of May 2022, 14.882 MMcf was used by HC and 13.481 MMcf was used at the BD site. As of May 2022, 380.074 MMcf was used by both sites combined which is within the permitted limit. Previous 12-month rolling time periods reviewed also appeared to be within the permitted limit.

This facility is subject to a binder usage limit of 3,870 tpy for FG-MOLDLINE, FG-BDSV03, FG-BDSV04, and FG-BDSV05 combined based on a 12-month rolling time period. For the month of May 2022, approximately 106 tons of binder was used. As of May 2022, 1,186 tpy of binder was used per a 12-month rolling time period which is within the permitted limit. Previous 12-month rolling time periods reviewed also appeared to be within the permitted limit.

Per Special Condition (SC) III.1, the permittee shall not operate each emission unit that is subject to an emission limit of more than 7,000 hours per year based on a 12-month rolling

time period. Records were requested and reviewed for select time periods. For the month of May 2022, the highest hours of operation were for EU-07 at 511 hours. As of May 2022, the highest hours of operation were 6,099 hours per a 12-month rolling time period for EU-07 which is within the permitted limit. Previous 12-month rolling time periods reviewed also appeared to be within the permitted limit.

Per SC III.2, the permittee shall not operate any of the 29 baghouses at the facility unless a Malfunction Abatement Plan (MAP) has been submitted to the AQD District Supervisor within 180 days of permit issuance, and is implemented and maintained. Both the HC and BD sites are in operation with MAPs. Additional specifics shall be discussed further below.

Per SC VI.2-7, the permittee shall keep track of various applicable records to verify compliance with emission / material limits discussed above. Records were requested and reviewed for select time periods. Based on the records reviewed, the company appears to be keeping track of applicable records.

Huron Casting Inc – Section 1

EU-01

This emission unit is for the A-line east pouring line, Mag drum and shot air wash.

Onsite Observations

Per SC I.4, visible emissions from EU-01 shall not exceed a six-minute average of five percent opacity. Based on the observations made at the time of the inspection, and records reviewed, this condition appears to be being met.

Per SC III.1, the permittee shall not operate EU-01 unless the associated baghouse is installed, maintained and operated in a satisfactory manner. The baghouse was observed during the course of the site inspection. A pressure drop monitor was observed and read 3.2” at the time of the inspection which appears acceptable. Based on the observations made at the time of the inspection, the baghouse appeared to be operating in a satisfactory manner.

Per SC IV.1, the permittee shall equip and maintain Baghouse #774 with a bag leak detection system. Additionally, the permittee shall not operate Baghouse #774 unless the bag leak detection system is installed and operating properly. A bag leak detection system was observed to be installed and assumed to be operating in a satisfactory manner.

One stack is listed in association with this emission unit and was observed during the course of the site inspection. Though the dimensions were not measured they appeared to be consistent with what is listed in MI-ROP-B7013-2018a.

Offsite Review

Per SC I.1-3, this emission unit is subject to hourly PM, PM10 and PM2.5 emission limits. Based on the observations made at the time of the inspection and records observed, HC appears to be meeting these emission limits.

Per SC VI.1, the permittee shall continuously monitor the pressure drop across the baghouse and record on a daily basis. Records were requested and provided for select time periods. Per the MAP, the acceptable pressure drop reading range for Baghouse #774

associated with this emission unit is 1” – 9” of water column. Based on the records reviewed, no apparent issues were noted and HC appears to be keeping track of daily pressure drop readings.

Per SC VI.2, the permittee shall perform and record the results of a non-certified visible emissions check on EU-01 at least once monthly, during operation, when EU-01 is venting to the atmosphere. If visible emissions are identified, then applicable measures shall be taken per SC VI.2. Records were requested and reviewed for select time periods. After further review, there appeared to be no apparent issues noted during the monthly visible emission checks. This appears acceptable.

EU-02

This emission unit is for a Vibramill, A-line Shake-out sand elevator and conveyor, A-line shot leg.

Onsite Observations

Per SC I.4, visible emissions from EU-02 shall not exceed a six-minute average of five percent opacity. Based on the observations made at the time of the inspection, and records reviewed, this condition appears to be being met.

Per SC III.1, the permittee shall not operate EU-02 unless the associated baghouse is installed, maintained and operated in a satisfactory manner. The baghouse was observed during the course of the site inspection. A pressure drop monitor was observed and read 6.5” at the time of the inspection which appears acceptable. Based on the observations made at the time of the inspection, the baghouse appeared to be operating in a satisfactory manner.

Per SC IV.1, the permittee shall equip and maintain Baghouse #788 with a bag leak detection system. Additionally, the permittee shall not operate Baghouse #788 unless the bag leak detection system is installed and operating properly. A bag leak detection system was observed to be installed and assumed to be operating in a satisfactory manner.

One stack is listed in association with this emission unit and was observed during the course of the site inspection. Though the dimensions were not measured they appeared to be consistent with what is listed in MI-ROP-B7013-2018a.

Offsite Review

Per SC I.1-3, this emission unit is subject to hourly PM, PM10 and PM2.5 emission limits. Based on the observations made at the time of the inspection and records observed, HC appears to be meeting these emission limits.

Per SC VI.1, the permittee shall continuously monitor the pressure drop across the baghouse and record on a daily basis. Records were requested and provided for select time periods. Per the MAP, the acceptable pressure drop reading range for Baghouse #788 associated with this emission unit is 1” – 9” of water column. Upon review of records, there appeared to be lengths of time that the baghouse was operating outside of the acceptable pressure drop range. This was brought to the attention and discussed with company staff. The response received appeared acceptable at this time.

Per SC VI.2, the permittee shall perform and record the results of a non-certified visible emissions check on EU-02 at least once monthly, during operation, when EU-02 is venting to the atmosphere. If visible emissions are identified, then applicable measures shall be taken per SC VI.2. Records were requested and reviewed for select time periods. After further review, there appeared to be no apparent issues noted during the monthly visible emission checks. This appears acceptable.

EU-TORCHES1-18

This emission unit is for cutting torches #1-18.

Onsite Observations

Per SC I.4, visible emissions from EU-TORCHES1-18 shall not exceed a six-minute average of five percent opacity. Based on the observations made at the time of the inspection, and records reviewed, this condition appears to be being met.

One stack is listed in association with this emission unit. The stack was not able to be viewed at the time of the inspection though company staff verified that nothing has been recently changed in regard to the stack dimensions. This was concluded to be acceptable.

Offsite Review

Per SC I.1-3, this emission unit is subject to hourly PM, PM10 and PM2.5 emission limits. Based on the observations made at the time of the inspection and records observed, HC appears to be meeting these emission limits.

Per SC V.1, verification of PM, PM10 and PM2.5 emission rates from EU-TORCHES1-18 by testing, at owner's expense, in accordance with department requirements, may be required. Based on the observations made during the inspection and records reviewed, no testing will be required at this time.

Per SC VI.1, the permittee shall perform and record the results of a non-certified visible emissions check on EU-TORCHES1-18 at least once monthly, during operation, when EU-TORCHES1-18 is venting to the atmosphere. If visible emissions are identified, then applicable measures shall be taken per SC VI.1. Records were requested and reviewed for select time periods. After further review, there appeared to be no apparent issues noted during the monthly visible emission checks. This appears acceptable.

EU-05

This emission unit is for the Vibramill, Shot Air Wash, B-line east end pouring line.

Onsite Observations

Per SC I.4, visible emissions from EU-05 shall not exceed a six-minute average of five percent opacity. Based on the observations made at the time of the inspection, and records reviewed, this condition appears to be being met.

Per SC III.1, the permittee shall not operate EU-05 unless the associated baghouse is installed, maintained and operated in a satisfactory manner. The baghouse was observed during the course of the site inspection. A pressure drop monitor was observed and read 5.4" at the time of the inspection which appears acceptable. Based on the observations

made at the time of the inspection, the baghouse appeared to be operating in a satisfactory manner.

Per SC IV.1, the permittee shall equip and maintain Baghouse #791 with a bag leak detection system. Additionally, the permittee shall not operate Baghouse #791 unless the bag leak detection system is installed and operating properly. A bag leak detection system was observed to be installed and assumed to be operating in a satisfactory manner.

One stack is listed in association with this emission unit and was observed during the course of the site inspection. Though the dimensions were not measured they appeared to be consistent with what is listed in MI-ROP-B7013-2018a.

Offsite Review

Per SC I.1-3, this emission unit is subject to hourly PM, PM10 and PM2.5 emission limits. Based on the observations made at the time of the inspection and records observed, HC appears to be meeting these emission limits.

Per SC VI.1, the permittee shall continuously monitor the pressure drop across the baghouse and record on a daily basis. Records were requested and provided for select time periods. Per the MAP, the acceptable pressure drop reading range for Baghouse #791 associated with this emission unit is 1” – 9” of water column. Based on the records reviewed, no apparent issues were noted and HC appears to be keeping track of daily pressure drop readings.

Per SC VI.2, the permittee shall perform and record the results of a non-certified visible emissions check on EU-05 at least once monthly, during operation, when EU-05 is venting to the atmosphere. If visible emissions are identified, then applicable measures shall be taken per SC VI.2. Records were requested and reviewed for select time periods. After further review, there appeared to be no apparent issues noted during the monthly visible emission checks. This appears acceptable.

EU-06

This emission unit is for sand coating / handling and reclaim operations.

Onsite Observations

Per SC I.4, visible emissions from EU-06 shall not exceed a six-minute average of five percent opacity. Based on the observations made at the time of the inspection, and records reviewed, this condition appears to be being met.

Per SC III.1, the permittee shall not operate EU-06 unless the associated baghouse is installed, maintained and operated in a satisfactory manner. The baghouse was observed during the course of the site inspection. A pressure drop monitor was observed and read 2.6” at the time of the inspection which appears acceptable. It was noted that the baghouse was running but the emission unit was not in operation. Speaking with staff this appeared to be to keep as much air collection going as possible. Based on the observations made at the time of the inspection, the baghouse appeared to be operating in a satisfactory manner.

Per SC III.2, the permittee shall not operate EU-06 unless a minimum temperature of 1,200° F for the calcining furnace is maintained. At the time of the inspection the calciner was not in operation.

Per SC III.3, the permittee shall not operate the calcining furnace in EU-06 unless a written operation and maintenance (O&M) plan for the furnace has been submitted to the AQD. An O&M plan has been historically submitted by the company. Based on observations made at the time of the inspection, HC appeared to be following the applicable requirements.

Per SC IV.1, the permittee shall equip and maintain both Baghouse #787 with a bag leak detection system. Additionally, the baghouse shall not operate unless the bag leak detection system is installed and operating properly. A broken bag leak detection system was observed on the unit and was assumed to be operating in a satisfactory manner.

One stack is listed in association with the emission unit. Though the dimensions were not measured they appeared to be consistent with what is listed in MI-ROP-Bb017-2018a.

Offsite Review

Per SC I.1-3, this emission unit is subject to hourly PM, PM10 and PM2.5 emission limits. Based on the observations made at the time of the inspection and records observed, HC appears to be meeting these emission limits.

Per SC II.1, the permittee shall not exceed a loss of one percent resin based on total weight for the resin coated sand in the mold/core making process from pouring through shakeout. The company most recently submitted test information to the AQD on June 23, 2022.Test results indicated a binder loss of 0.49% which appears to be acceptable.

Per SC VI.1, the permittee shall continuously monitor the pressure drop across the baghouse and record on a daily basis. Records were requested and provided for select time periods. Per the MAP, the acceptable pressure drop reading range for Baghouse #791 associated with this emission unit is 1” – 9” of water column. Based on the records reviewed, no apparent issues were noted and HC appears to be keeping track of daily pressure drop readings.

Per SC VI.2, the permittee shall continuously monitor the temperature of the calcining furnace utilizing temperature charts on a daily basis. Records were requested and reviewed for select time periods to verify that the temperature is adequately being monitored. Based on the records reviewed HC appears to be keeping track of applicable records.

Per SC VI.3, the permittee shall, on an annual basis during the month of May, independently verify by analysis the phenol content of each of the binders which were used in the previous month of April and that the loss of binder is no more than one percent in spent mold/core sand. Results shall be submitted to the AQD by June 30th of that year. The company most recently submitted the 2022 test results to the AQD on June 23, 2022. Test results appeared to show the phenol content and a resin loss of less than one percent each.

Per SC VI.2, the permittee shall perform and record the results of a non-certified visible emissions check on EU-06 at least once monthly, during operation, when EU-06 is venting to the atmosphere. If visible emissions are identified, then applicable measures shall be taken per SC VI.4. Records were requested and reviewed for select time periods. After further review, there appeared to be no apparent issues noted during the monthly visible emission checks. This appears acceptable.

EU-07

This emission unit is for sand coating / handling and reclaim operations, Vibramill.

Onsite Observations

Per SC I.4, visible emissions from EU-07 shall not exceed a six-minute average of five percent opacity. Based on the observations made at the time of the inspection, and records reviewed, this condition appears to be being met.

Per SC III.1, the permittee shall not operate EU-07 unless the associated baghouse is installed, maintained and operated in a satisfactory manner. At the time of the inspection, the Baghouse #1001 had been disconnected and was no longer in use. The areas Baghouse #1001 had controlled included a recycling room. The associated emissions from Baghouse #1001 were now controlled by Baghouse 484W. Company staff had stated that the total air flow to the one stack hadn't been changed. This appears acceptable at this time, however, this determination may need to be reevaluated and potential concerns found addressed. Both Baghouse #484E and 484W were observed during the course of the site inspection. Both baghouses had pressure drop monitors installed at the time of the inspection. A pressure drop reading of 1.6" was observed for Baghouse 484E and a pressure drop reading of 2.5" was observed for Baghouse 484W. After further review, the two remaining baghouses appeared to be operating in a satisfactory manner.

Per SC III.2, the permittee shall not operate EU-07 unless a minimum temperature of 1,200° F for the calcining furnace is maintained. At the time of the inspection the calciner was in operation and running at approximately 1,600°F. The unit appeared to be operating in a satisfactory manner.

Per SC III.3, the permittee shall not operate the calcining furnace in EU-07 unless a written O&M plan for the furnace has been submitted to the AQD. An O&M plan has been historically submitted by the company. Based on observations made at the time of the inspection, no issues were noted.

Per SC IV.1, the permittee shall equip and maintain both Baghouse #484 and #1001 with a bag leak detection system. Additionally, neither baghouse shall operate unless their respective bag leak detection systems are installed and operating properly. As mentioned above Baghouse #1001 has been disconnected and is no longer in use. Baghouse #484W and #484E both had bag leak detection units installed. The bag leak detection units were assumed to be operating properly.

One stack is listed in association with the emission unit. Though the dimensions were not measured they appeared to be consistent with what is listed in MI-ROP-Bb017-2018a.

Offsite Review

Per SC I.1-3, this emission unit is subject to hourly PM, PM10 and PM2.5 emission limits. Based on the observations made at the time of the inspection and records observed, HC appears to be meeting these emission limits.

Per SC II.1, the permittee shall not exceed a loss of one percent resin based on total weight for the resin coated sand in the mold/core making process from pouring through shakeout. The company most recently submitted test information to the AQD on June 23, 2022.Test results indicated a 0.49% binder loss which appears acceptable.

Per SC VI.1, the permittee shall continuously monitor the pressure drop across the baghouse and record on a daily basis. Records were requested and provided for select time periods. Per the MAP, the acceptable pressure drop reading range for Baghouse #484 & 1001 associated with this emission unit is 1" – 9" of water column. Based on the records reviewed, there appeared to be issues with Baghouse #484, and this was discussed at length with company staff. After further review, the responses received appeared acceptable at this time.

Per SC VI.2, the permittee shall continuously monitor the temperature of the calcining furnace utilizing temperature charts on a daily basis. Records were requested and reviewed for select time periods to verify that the temperature is adequately being monitored. Based on the records reviewed and observations made at the time of the inspection, HC appears to be keeping track of the temperature for the calciner furnace.

Per SC VI.3, the permittee shall, on an annual basis during the month of May, independently verify by analysis the phenol content of each of the binders which were used in the previous month of April and that the loss of binder is no more than one percent in spent mold/core sand. Results shall be submitted to the AQD by June 30th of that year. The company most recently submitted the 2022 test results to the AQD on June 23, 2022. Test results appeared to show the phenol content and a resin loss of less than one percent each.

Per SC VI.4, the permittee shall perform and record the results of a non-certified visible emissions check on EU-07 at least once monthly, during operation, when EU-07 is venting to the atmosphere. If visible emissions are identified, then applicable measures shall be taken per SC VI.4. Records were requested and reviewed for select time periods. After further review, there appeared to be no apparent issues noted during the monthly visible emission checks. This appears acceptable.

EU-08

This emission unit is for cut-off saws #1-9, grinders #1-13, 7 to 12 hand grinders, and 7 welders.

Onsite Observations

Per SC III.1, the permittee shall not operate EU-08 unless the associated baghouse is installed, maintained and operated in a satisfactory manner. The baghouse was observed during the course of the site inspection. A pressure drop monitor was observed and read 3.4" at the time of the inspection which appears acceptable. Based on the observations made at the time of the inspection, the baghouse appeared to be operating in a satisfactory manner.

Per SC IV.1, the permittee shall equip and maintain Baghouse #616 with a bag leak detection system. Additionally, the baghouse shall not operate unless the bag leak detection system is installed and operating properly. A bag leak detection system was noted for the unit and was assumed to be operating in a satisfactory manner.

Per SC VIII.1, the permittee shall not discharge the emissions from EU-08 directly into the atmosphere. The unit was observed being recirculated back into the building at the time of the inspection. This appears acceptable.

Offsite Review

Per SC I.1-3, this emission unit is subject to hourly PM, PM10 and PM2.5 emission limits. Based on the observations made at the time of the inspection and records observed, HC appears to be meeting these emission limits.

Per SC VI.1, the permittee shall continuously monitor the pressure drop across the baghouse and record on a daily basis. Records were requested and provided for select time periods. Per the MAP, the acceptable pressure drop reading range for Baghouse #616 associated with this emission unit is 1" – 9" of water column. Based on the records reviewed, there appeared to be no issues. After further review, HC appears to be adequately monitoring the pressure drop.

EU-09

This emission unit is for shot blast equipment.

Onsite Observations

Per SC I.4, visible emissions from EU-09 are limited to five percent opacity over a six-minute average. Based on the observations made at the time of the inspection, this appears to be being met.

Per SC III.1, the permittee shall not operate EU-09 unless the associated baghouse is installed, maintained and operated in a satisfactory manner. The baghouse was observed during the course of the site inspection. A pressure drop monitor was observed and read 3.6" at the time of the inspection which appears acceptable. Based on the observations made at the time of the inspection, the baghouse appeared to be operating in a satisfactory manner.

Per SC IV.1, the permittee shall equip and maintain Baghouse #618 with a bag leak detection system. Additionally, the baghouse shall not operate unless the bag leak detection system is installed and operating properly. A bag leak detection system was observed installed on the unit at the time of the inspection and was assumed to be operating in a satisfactory manner.

One stack is listed in association with this emission unit. Though the dimensions were not measured they appear to be consistent with what is listed in MI-ROP-B7013-2018a.

Offsite Review

Per SC I.1-3, this emission unit is subject to hourly PM, PM10 and PM2.5 emission limits. Based on the observations made at the time of the inspection and records observed, HC appears to be meeting these emission limits.

Per SC VI.1, the permittee shall continuously monitor the pressure drop across the baghouse and record on a daily basis. Records were requested and provided for select time periods. Per the MAP, the acceptable pressure drop reading range for Baghouse #618 associated with this emission unit is 1" – 9" of water column. Based on the records reviewed, there appeared to be no issues. After further review, HC appears to be adequately monitoring the pressure drop.

Per SC VI.2, the permittee shall perform and record the results of a non-certified visible emissions check on EU-09 at least once monthly, during operation, when EU-09 is venting to the atmosphere. If visible emissions are identified, then applicable measures shall be

taken per SC VI.2. Records were requested and reviewed for select time periods. After further review, there appeared to be no apparent issues noted during the monthly visible emission checks. This appears acceptable.

EU-10A

This emission unit is for a sand leg and mag drum, shot legs, and a vibratory mold dumper/conveyor.

Onsite Observations

Per SC I.4, visible emissions from EU-10A are limited to five percent opacity over a six-minute average. Based on the observations made at the time of the inspection, this appears to be being met.

Per SC III.1, the permittee shall not operate EU-10A unless the associated baghouse is installed, maintained and operated in a satisfactory manner. Both baghouses were observed during the course of the site inspection. A pressure drop monitor was observed on both units and read 4.6” for Baghouse #776 and 4.2” for Baghouse #864 at the time of the inspection which appears acceptable. Based on the observations made at the time of the inspection, the baghouses appear to be operating in a satisfactory manner.

Per SC IV.1, the permittee shall equip and maintain both Baghouse #864 and Baghouse #776 with a bag leak detection system. Additionally, the baghouses shall not be operated unless the bag leak detection systems are installed and operating properly. A bag leak detection system was observed on both units and was assumed to be operating properly.

One stack is listed in association with this emission unit. Though the dimensions were not measured they appear to be consistent with what is listed in MI-ROP-B7013-2018a.

Offsite Review

Per SC I.1-3, this emission unit is subject to hourly PM, PM10 and PM2.5 emission limits. Based on the observations made at the time of the inspection and records observed, HC appears to be meeting these emission limits.

Per SC VI.1, the permittee shall continuously monitor the pressure drop across the baghouse and record on a daily basis. Records were requested and provided for select time periods. Per the MAP, the acceptable pressure drop reading range for Baghouses #864 & #776 associated with this emission unit is 1” – 9” of water column. Based on the records reviewed, there appeared to be no issues. After further review, HC appears to be adequately monitoring the pressure drop.

Per SC VI.2, the permittee shall perform and record the results of a non-certified visible emissions check on EU-10A at least once monthly, during operation, when EU-10A is venting to the atmosphere. If visible emissions are identified, then applicable measures shall be taken per SC VI.2. Records were requested and reviewed for select time periods. After further review, there appeared to be no apparent issues noted during the monthly visible emission checks. This appears acceptable.

FG-POUR

This flexible group is for the following emission units:

EU-POURINGA – This emission unit is for three electric induction furnaces, pouring line A and ancillary equipment controlled by Baghouse #790 that exhausts to the in-plant environment.

EU-POURINGB – This emission unit is for three electric induction furnaces, pouring line B and ancillary equipment controlled by Baghouse #554 and Baghouse #553 that exhaust to the in-plant environment.

Onsite Observations

Per SC III.1, the permittee shall not operate FG-POUR unless each associated baghouse is installed, maintained and operated in a satisfactory manner. The three baghouses associated with the emission units in this flexible group were all observed during the course of the site inspection. Additional specifics for each baghouse are provided below.

Baghouse #790 – A pressure drop meter was observed on the unit and in operation. A pressure drop reading of 4.6” was observed at the time of the inspection. The unit appeared to be operating in a satisfactory manner.

Baghouse #553 - A pressure drop meter was observed on the unit and in operation. A pressure drop reading of 4.6” was observed at the time of the inspection. The unit appeared to be operating in a satisfactory manner.

Baghouse #554 - A pressure drop meter was observed on the unit and in operation. A pressure drop reading of 2.6” was observed at the time of the inspection. The unit appeared to be operating in a satisfactory manner.

Per SC IV.1, the permittee shall equip and maintain Baghouses #790 / #554 / #553 with a bag leak detection system. Additionally, the baghouses shall not operate unless the bag leak detection systems are installed and operating properly. All three units were noted to have their own bag leak detection system installed and were assumed to be operating in a satisfactory manner.

Per SC VIII.1, the permittee shall not discharge the emissions from EU-POURINGA and EU -POURINGB directly into the atmosphere. During the inspection it was verified that emissions from the three baghouses are recirculated back into the facility.

Offsite Review

Per SC I.1-3, this emission unit is subject to hourly PM, PM10 and PM2.5 emission limits. Based on the observations made at the time of the inspection and records observed, HC appears to be meeting these emission limits.

Per SC VI.1, the permittee shall continuously monitor the pressure drop across each baghouse and record the reading on a daily basis. Records were requested and provided for select time periods. Per the MAP, the acceptable pressure drop reading range for the three baghouses associated with this flexible group is 1” – 9” of water column. Based on the records reviewed, there appeared to be no issues. After further review, HC appears to be adequately monitoring and recording the pressure drop for each baghouse.

FG-MOLDLINE

This flexible group is for the following emission units: EU-MOLDLINE-A, EU-MOLDLINE-B, EU-MOLDLINE-C, EU-TORCHES19-22, EU-03A, EU-03B. Additional information for each emission unit is listed below.

Molding machines #1-26 and cutting torches #19-22. No control.

A-line west end pouring line A-line cooling room; BH #789.

West end pouring line B, B-line cooling room; BH #792.

All equipment exhausts through SV-03.

Onsite Observations

Per SC I.4, the flexible group is subject to a five percent opacity limit over a six-minute average. Based on the observations made and records reviewed, this limit appears to be being met.

Per SC III.1, the permittee shall equip and maintain both Baghouse #789 and Baghouse #792 with a bag leak detection system. Additionally, each baghouse shall not be operated unless the bag leak detection system is installed and operating properly. Bag leak detection systems were noted for both units and were assumed to be operating in a satisfactory manner.

Per SC IV.1, the permittee shall not operate EU-03A or EU-03B unless each associated baghouse is installed, maintained, and operated in a satisfactory manner. Both baghouses were observed during the course of the site inspection. A pressure drop monitor was observed on both units and read 5.1” for Baghouse #789 and 3.5” for Baghouse #792 at the time of the inspection which appears acceptable. Based on the observations made at the time of the inspection, the baghouses appear to be operating in a satisfactory manner.

One stack is listed in association with this flexible group. Though the dimensions were not measured they appeared to be consistent with what is identified in MI-ROP-B7013-2018a.

Offsite Review

Per SC I.1-3, this flexible group is subject to hourly PM, PM10 and PM2.5 emission limits. Based on the observations made at the time of the inspection and records observed, HC appears to be meeting these emission limits.

Per SC I.4, this flexible group is subject to an hourly phenol emission limit of 1.95 pounds. It appears that this emission limit is met through satisfactory operation of baghouses and limits on max phenol content. Based on the records reviewed and observations made, this emissions limit appears to be being met.

Per SC II.1, this flexible group is subject to a 1,480 tpy material limit of binder material per a 12-month rolling time period. Records were requested and provided for select time periods. For the month of May 2022, 55,311 lbs of material was used. As of May 2022, 336 tpy of material was used per a 12-month rolling time period which is well within the permitted limit. Previous 12-month rolling time periods reviewed also appeared to be within the permitted limit.

Per SC II.2, the maximum phenol content of any of the binder used for coating sand shall not exceed 1.1 percent by weight. The company most recently submitted the 2022 test results to the AQD on June 23, 2022. Test results appeared to indicate a phenol content of 0.28% by weight which is acceptable.

Per SC V.1, verification of PM10, PM2.5 and/or phenol emission rates from SV-03 by testing, at owner's expense, in accordance with Department requirements, may be required. Based on the observations made at the time of the inspection, testing shall not be requested at this time.

Per SC VI.2, HC shall keep monthly / 12-month rolling time period records of sand usage rate and binder usage rates. Additionally, the company shall keep a copy of the Certificate of Analysis of the binders, and calculations verifying the actual phenol in percent by weight. Records were requested and provided for select time periods. Based on the records reviewed, HC appears to be keeping track of the applicable items.

Per SC VI.3, the permittee shall on an annual basis during the month of May, independently verify by analysis the phenol content of each of the binders that were used during the entire month, and the loss of binder is no more than one percent in spent mold/core sand. The results shall be submitted to the AQD within 60 days of testing. The company most recently submitted test information to the AQD on June 23, 2022. The test results appeared to indicate a loss of binder to be 0.49% and a phenol content of 0.28%. The results were concluded to be acceptable.

Per SC VI.4, the permittee shall continuously monitor the pressure drop across each baghouse and record the pressure drop on a daily basis. Records were requested and provided for select time periods. Per the MAP, the acceptable pressure drop reading range for Baghouse #789 and Baghouse #792 associated with this flexible group is 1" – 9" of water column. Based on the records reviewed, there appeared to be no issues. After further review, HC appears to be adequately monitoring the pressure drop.

Per SC VI.3, the permittee shall perform and record the results of a non-certified visible emissions check for the applicable emission units at least once monthly, during operation, when venting to the atmosphere. If visible emissions are identified, then applicable measures shall be taken per SC VI.3. Records were requested and reviewed for select time periods. After further review, there appeared to be no apparent issues noted during the monthly visible emission checks. This appears acceptable.

Blue Diamond Inspection (Day 2)

An onsite inspection of the facility was later completed on September 14, 2022. AQD staff AS arrived in the area at 8:59am. Weather conditions at the time were mostly sunny skies, temperatures in the low 60's degrees Fahrenheit and winds from the northwest at 5-10mph. No emissions were noted coming from the BD site. Upon arriving onsite, AS met with Mr. Mendrick who provided a tour of the site and answered site specific questions. Requested records were provided by Mr. Mendrick.

As mentioned above, BD is a steel foundry. The various stages of onsite operations were viewed during the course of the site inspection.

Blue Diamond Steel Casting LLC – Section 2

EU-NBFURNACE

This emission unit is for a no-bake furnace line that consists of three electric induction furnaces: two 8-ton capacity melt furnaces, one electric arc ladle reheat station, and a vacuum degassing unit for an expected melting capacity of 200 tons per day. The furnaces are controlled by a 50,000 cfm baghouse (BH-01) and an 80,000 cfm baghouse (BH-22) with an exhaust re-circulated to an area behind the furnace hoods.

Onsite Observations

Per SC IV.1, the permittee shall equip and maintain Baghouse BH-01 with a bag leak detection system. Additionally, the permittee shall not operate Baghouse BH-01 unless the bag leak detection system is installed and operating properly. A bag leak detection system was noted for the system at the time of the inspection. In a follow up conversation with company staff, it was verified that BD uses a PM monitor instead of a bag leak detector to verify potential issues with the baghouse. After further review, the installation of a PM monitor appears to be due to applicable conditions per the NESHAP Subpart ZZZZZ and is acceptable at this time.

Per SC IV.2, the permittee shall equip and maintain Baghouse BH-22 with a bag leak detection system. Additionally, the permittee shall not operate Baghouse BH-22 unless the bag leak detection system is installed and operating properly. A bag leak detection system was noted for the system at the time of the inspection. In a follow up conversation with company staff, it was verified that BD uses a PM monitor instead of a bag leak detector to verify potential issues with the baghouse. After further review, the installation of a PM monitor appears to be due to applicable conditions per the NESHAP Subpart ZZZZZ and is acceptable at this time.

Both baghouses were observed with a pressure drop monitor and read 4.4” for Baghouse #BH-01 and 1.5” for Baghouse #BH-22 at the time of the inspection which appears acceptable. Based on the observations made at the time of the inspection, the baghouses appear to be operating in a satisfactory manner.

Per SC VI.III the permittee shall not discharge the emissions from EU-NBFURNACE directly into the atmosphere. It was verified that emissions are recirculated back into the facility.

Additionally, a hood to capture emissions was noted being used for a furnace in operation.

Offsite Review

Per SC I.1-3, this emission unit is subject to hourly PM, PM10 and PM2.5 emission limits. Based on the observations made at the time of the inspection and records observed, BD appears to be meeting these emission limits.

Per SC V.1-3, upon request, several items consisting of verification of emission rates, hood capture system design specifications, and an initial smoke test to verify the capture efficiency may be required. Based on the observations made at the time of the inspection, no applicable items related to these conditions will be requested at this time.

Per SC VI.2, the permittee shall keep in a satisfactory manner monthly records of tons of steel melted for EU-NBFURNACE. Records were requested and reviewed for select time

periods. Based on the records reviewed, BD appears to be keeping track of applicable records.

Per SC VI.3, the permittee shall monitor and record, in a satisfactory manner, the negative pressure using a magnehelic gauge at the inlet side of the baghouse BH-01 for EU-NBFURNACE on a daily basis during operation of EU-NBFURNACE to verify that the hood system capture velocity as designed is achieve in practice. Additionally, the permittee shall conduct an initial and annual inspection and verification that negative pressure in the duct from the hood to the baghouse conforms with ACGIH minimum requirements. Records were requested and reviewed for select time periods. Based on the records reviewed, BD overall appears to be keeping track of applicable items.

EU-NBMOLD

This emission unit is for the mold making process that blends the sand and binder, prepares and cures the molds, and set the molds out on the casting lines. There is no control for this emission unit.

Onsite Observations

This emission unit was observed during the course of the inspection.

Per SC VIII, the permittee shall not discharge the emissions from EU-NBMOLD directly into the atmosphere. It was verified during the inspection that emissions are vented back into the plant.

Offsite Review

This emission unit is subject to a binder material limit of 1,550 tpy per a 12-month rolling time period. Records were requested and reviewed for select time periods. For the month of May 2022, approximately 9.3 tons of binder material was used and as of May 2022, 99 tpy of binder material was used per a 12-month rolling time period which is well within the permitted limit. Previous 12-month rolling time periods reviewed also appeared to be within the permitted limit. Additionally, BD appears to be keeping track of binder usage rates per SC VI.2.

EU-SHELLFURNACE

This emission unit is for a shell furnace line that consists of three 8-ton capacity electric induction furnaces for an expected melting capacity of 200 tons per day. The furnaces are controlled by a 50,000 cfm baghouse (BH-06) with the exhaust re-circulated back into the furnace hoods.

Onsite Observations

Per SC IV.1, the permittee shall equip and maintain Baghouse BH-06 with a bag leak detection system. Additionally, the permittee shall not operate the Baghouse BH-06 unless the bag leak detection system is installed and operating properly. At the time of the inspection a bag leak detection system was observed for the unit, however a green light was not noted on indicating the system was operating properly. Company staff attempted to but could not verify if the light had burned out and the unit was operating properly. In a follow up conversation with company staff, it was verified that BD uses a PM monitor instead of a bag leak detector to verify potential issues with the baghouse. After further

review, the installation of a PM monitor appears to be due to applicable conditions per the NESHAP Subpart ZZZZZ and is acceptable at this time.

Per SC VIII.1, the permittee shall not discharge the emissions from EU-SHELLFURNACE directly into the atmosphere. During the course of the inspection, it was verified that exhaust from the baghouse is recirculated back into the facility.

Offsite Review

Per SC I.1-3, this emission unit is subject to hourly PM, PM10 and PM2.5 emission limits. Based on the observations made at the time of the inspection and records observed, BD appears to be meeting these emission limits.

Per SC V.1, within 90 days of notification from the AQD, BD shall verify PM, PM10, and PM2.5 emission rates from EU-SHELLFURNACE by testing, at the owners expense. Based on the observations made at the time of the inspection and records reviewed, no testing is required at this time.

Per SC VI.2, the permittee shall keep in a satisfactory manner monthly records of tons of steel melted. Records were requested and reviewed for select time periods. Based on the records reviewed, BD appears to be keeping track of applicable records.

Per SC VI.3, the permittee shall continuously monitor the pressure drop across the baghouse and record on a daily basis. Records were requested and reviewed for select time periods. Based on the records reviewed, BD appears to overall be keeping track of daily pressure drop readings.

EU-NBTORCHES

This emission unit is for no-bake cutting torches with the exhaust emitted into the cutting area.

Onsite Observations

Per SC VIII.1, the permittee shall not discharge the emissions from EU-NBTORCHES directly into the atmosphere. Based on the observations made at the time of the inspection, no issues were noted.

EU-SHELLTORCHES

This emission unit is for shell cutting torches with the exhaust emitted into the cutting area.

Onsite Observations

Per SC VIII.1, the permittee shall not discharge the emissions from EU-NBTORCHES directly into the atmosphere. Based on the observations made at the time of the inspection, no issues were noted.

EU-FINISHING

This emission unit is for the finishing process that consists of grinders, shot blast, cut-off saws, wheelabrators, and welders. The process is controlled by a 30,000 cfm baghouse (BH-10) with the exhaust re-circulated back into the finishing area.

Onsite Observations

Per SC III.1, the permittee shall not operate EU-FINISHING unless enclosure and BH-10 are installed, maintained, and operated in accordance with the manufacturer's recommendations. The baghouse was observed during the course of the inspection and had a pressure drop monitor for the unit. On that day after speaking with company staff, the pressure drop readings recorded for the unit ranged from 5.75"-6.5". After further review, BH-10 appeared to be operating properly.

Per SC IV.1, the permittee shall equip and maintain Baghouse BH-10 with a bag leak detection system. Additionally, the permittee shall not operate the Baghouse BH-10 unless the bag leak detection system is installed and operating properly. A bag leak detection system was verified by company staff to be connected to the baghouse.

Per SC VIII.1, the permittee shall not discharge the emissions from EU-FINISHING directly into the atmosphere. During the course of the inspection, no issues were noted.

Offsite Review

Per SC I.1-3, this emission unit is subject to hourly PM, PM10 and PM2.5 emission limits. Based on the observations made at the time of the inspection and records observed, BD appears to be meeting these emission limits.

Per SC VI.1, the permittee shall continuously monitor the pressure drop across the baghouse and record on a daily basis. Records were requested and reviewed for select time periods. Based on the records reviewed, BD appears to overall be keeping track of daily pressure drop readings.

FG-BDSV01

This flexible group is for the emission units that exhaust through SV-01. EU-NBPOURANDCOOL, the no-bake pouring and cooling room consists of a pouring hood and enclosed cooling room which is controlled by a 40,000 cfm baghouse (BH-02). EU-SHELLCOOL, the shell cooling room encloses cast molds on a conveyor and is controlled by a 40,000 cfm baghouse (BH-07). The emission units for this flexible group are EU-NBPOURANDCOOL and EU-SHELLCOOL.

Onsite Observations

Per SC I.4, visible emissions from FG-BDSV01 shall not exceed a six-minute average of five percent opacity. Based on the observations made at the time of the inspection and records observed this appears to be being met.

Per SC IV.1, the permittee shall not operate the EU-NBPOURANDCOOL portion of FG-BDSV01 unless the enclosure and BH-02 are installed, maintained, and operated in accordance with the manufacturer's recommendations. A pressure drop monitor was noted for the baghouse during the course of the site inspection and had a reading of 2.9". Based on the observations made at the time of the inspection, BD appeared to be meeting this condition.

Per SC IV.2, the permittee shall not operate the EU-SHELLCOOL portion of FG-BDSV01 unless the enclosure and BH-07 are installed, maintained, and operated in accordance with the manufacturer's recommendations. A pressure drop monitor was noted for the baghouse

during the course of the site inspection and had a reading of 4.3". Based on the observations made at the time of the inspection, BD appeared to be meeting this condition.

Per SC IV.3, the permittee shall equip and maintain both Baghouse BH-02 and Baghouse BH-07 with a bag leak detection system. The permittee shall not operate either Baghouse BH-02 or Baghouse BH-07 unless their respective bag leak detection systems are installed and operating properly. Both baghouses were observed with bag leak detection systems at the time of the inspection and the green light indicating satisfactory operation was noted on for both units.

One stack is listed in association with this flexible group and was observed. Though the dimensions were not measured at the time of the inspection, they appeared to be consistent with what is identified in MI-ROP-B7013-2018a.

Offsite Review

Per SC I.1-3, this flexible group is subject to hourly PM, PM10 and PM2.5 emission limits. Based on the observations made at the time of the inspection and records observed, BD appears to be meeting these emission limits.

Per SC V.1, verification of PM, PM10 and PM2.5 emission rates from FG-BDSV01 by testing may be requested at the owner's expense. Based on the observations made at the time of the inspection, testing shall not be required at this time.

Per SC VI.1, the permittee shall perform and record the results of a non-certified visible emission check on FG-BDSV01 at least monthly, during operation, when FG-BDSV01 is venting to the atmosphere. If visible emissions are identified, then applicable measures shall be taken per SC VI.1. Records were requested and reviewed for select time periods. After further review, there appeared to be no apparent issues noted during the monthly visible emission checks. This appears acceptable.

FG-BDSV02

This flexible group is for emission units that exhaust through stack SV-02. The emission units for this flexible group are EU-SHELLCALCINER and EU-SHELLMOLD.

EU-SHELLCALCINER – The calciner is used to destroy the binder material in the mold facing and core sand from the shell line by heating it to 1,200°F (minimum) before the sand is returned to the shell sand system for recycling. The calciner is controlled by a 15,000 cfm baghouse (BH-09).

EU-SHELLMOLD – This is the mold making process that blends the sand and binder, prepares and cures the molds, and sets the molds out on the casting lines. The emissions from this process are captured with a hood with a flow rate of 71,000 cfm. Includes the 22 core machines which emit to the in-plant environment and two natural gas fired heat treat furnaces. Each heat treat furnace is rated at 9.9 MMBTU/hr.

Onsite Observations

Per SC I.4, this flexible group is subject to a visible emissions limit of five percent opacity per a six-minute average. Based on the observations made at the time of the inspection and records reviewed, this emission limit appears to be being met.

Per SC III.1, the permittee shall not operate the EU-SHELLCALCINER portion of this flexible group unless a minimum temperature of 1,200°F for the calcining furnace is maintained. At the time of the inspection, the calciner was in operation above 1,250°F. The temperature readings for the day were observed onsite and records for previous time periods were reviewed offsite. Based on the records reviewed and follow up with company staff, the calciner appeared to be being operated in a satisfactory manner.

Per SC III.2, the permittee shall not operate the EU-SHELLCALCINER portion of FG-BDSV02 unless a written operation and maintenance plan for the furnace has been submitted to the AQD District Supervisor within 180 days of permit issuance and is implemented and maintained. Upon review a plan had been historically submitted by the company. The calciner appeared to be operating properly at the time of the inspection.

Per SC III.3, the permittee shall not combust any fuel, other than natural gas, in the heat treat furnaces in EU-SHELLMOLD. Speaking with company staff at the time of the inspection, it was verified only natural gas is used.

Per SC IV.1, the permittee shall not operate the EU-SHELLCALCINER portion of FG-BDSV02 unless the enclosure and BH-09 are installed, maintained and operated in accordance with the manufacturer's recommendations. A pressure drop monitor was noted for BH-09 and a pressure drop reading of 3.8" was read at the time of the inspection. This appears acceptable.

Per SC IV.2, the permittee shall equip and maintain Baghouse B-09 with a bag leak detection system. Additionally, the permittee shall not operate Baghouse BH-09 unless the bag leak detection system is installed and operating properly. A bag leak detection system was observed for the baghouse at the time of the inspection. A green light indicating the leak system was operating satisfactorily was observed. After further review this appears acceptable.

Per SC IV.3, the permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the temperature of the EU-SHELLCALCINER portion of FG-BDSV02 on a continuous basis. Based on the observations made at the time of the inspection and temperature records reviewed, BD appears to be meeting this condition.

One stack is listed in association with this flexible group. Though the dimensions were not measured they appeared to be consistent with what is listed in MI-ROP-B7013-2018a.

Offsite Review

Per SC I.1-3, this flexible group is subject to hourly PM, PM10 and PM2.5 emission limits. Based on the observations made at the time of the inspection and records observed, BD appears to be meeting these emission limits.

This flexible group is subject to a binder material limit of 840 tpy in the EU-SHELLMOLD portion per a 12-month rolling time period. Records were requested and reviewed for select time periods. For the month of May 2022, approximately 41 tons of binder was used. As of May 2022, 478 tpy of binder was used per a 12-month rolling time period which is within the permitted limit. Previous 12-month rolling time periods reviewed also appeared to be within the permitted limit.

Per SC V.1, upon request by the AQD, the permittee shall verify PM, PM10 and PM2.5 emission rates from FG-BDSV02, at the company's expense. Based on the observations made at the time of the inspection, no testing per this condition shall be requested at this time.

Per SC VI.2, the permittee shall keep, in a satisfactory manner, temperature records for the EU-SHELLCALCINER portion of FG-BDSV02, as required by SC IV.3. Records were requested and provided for select time periods. Based on the records reviewed, BD appears to be keeping applicable temperature records.

Per SC VI.3, the permittee shall keep monthly / yearly binder usage rate records for the EU-SHELLMOLD portion of FG-BDSV02, as required per SC II.2. Records were requested and provided for select time periods. Based on the records reviewed, BD appears to be keeping track of monthly / 12-month rolling time period binder usage rates.

Per SC VI.4, the permittee shall perform and record the results of a non-certified visible emissions check on FG-BDSV02 at least once monthly, during operation, when FG-BDSV02 is venting to the atmosphere. If visible emissions are identified, then applicable measures shall be taken per SC VI.4. Records were requested and reviewed for select time periods. After further review, there appeared to be no apparent issues noted during the monthly visible emission checks. This appears acceptable.

FG-BDSV03

The emission units for this flexible group are emitted through stack SV-03. The emission units for this flexible group are EU-NBCALCINER and EU-NBSAND.

EU-NBCALCINER – The calciner is used to destroy the binder material in the mold facing and core sand from the no-bake line by heating it to 1,200°F (minimum) before the sand is returned to the no-bake sand system for recycling. The calciner is controlled by a 6,500 cfm baghouse (BH-03).

EU-NBSAND – The no-bake sand system includes the vibramill, sand cooler, shakeout, cooling conveyor, sand tanks, and elevators. The sand system is controlled by a 40,000 cfm baghouse (BH-04).

Onsite Observations

Per SC I.4, this flexible group is subject to a visible emissions limit of five percent opacity per a six-minute average. Based on the observations made at the time of the inspection and records reviewed, this emission limit appears to be being met.

Per SC III.1, the permittee shall not operate the EU-NBCALCINER portion of FG-BDSV03 unless a minimum temperature of 1,200°F for the calcining furnace is maintained. At the time of the inspection, this unit was not in operation. Speaking with company staff, the unit is not run very often. Upon review of temperature records and speaking with company staff there appeared to be no issues during operation.

Per SC III.2, the permittee shall not operate the EU-NBCALCINER portion of FG-BDSV03 unless a written operation and maintenance plan for the furnace has been submitted to the AQD District Supervisor within 180 days of permit issuance and is implemented and maintained. A plan has been historically submitted for this area.

Per SC IV.1, the permittee shall not operate the EU-NBCALCINER portion of FG-BDSV03 unless the enclosure and BH-03 are installed, maintained and operated in accordance with the manufacturer's recommendations. As mentioned above, the unit was not in operation at the time of the inspection.

Per SC IV.2, the permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the temperature of EU-NBCALCINER portion of FG-BDSV03 on a continuous basis. A temperature monitor was noted for the calciner that appeared to be operating in a satisfactory manner.

Per SC IV.3, the permittee shall not operate the EU-NBSAND portion of FG-BDSV03 unless the enclosure and BH-04 are installed, maintained, and operated in accordance with the manufacturer's recommendations. A pressure drop monitor was noted for BH-04 and a pressure drop reading of 2.8" was read at the time of the inspection. This appears acceptable.

Per SC IV.4, the permittee shall equip and maintain both Baghouse BH-03 and Baghouse BH-04 with a bag leak detection system. Additionally, the permittee shall not operate either baghouse unless their respective bag leak detection systems are installed and operating properly. Bag leak detection systems were noted for both baghouses. Additionally, the bag leak detection system for BH-04 that was observed running had a green light on indicating the unit was operating satisfactorily.

One stack is listed in association with this flexible group. Though the dimensions were not measured they appeared to be consistent with what is listed in MI-ROP-B7013-2018a.

Offsite Review

Per SC I.1-3, this emission unit is subject to hourly PM, PM10 and PM2.5 emission limits. Based on the observations made at the time of the inspection and records observed, BD appears to be meeting these emission limits.

This flexible group is subject to a binder material limit of 1,550 tpy per a 12-month rolling time period. Records were requested and reviewed for select time periods. For the month of May 2022, approximately 9.37 tons of material was used. As of May 2022, 99 tpy of binder material was used which is well within the permitted limit. Previous 12-month rolling time periods reviewed also were well within the permitted limit.

Per SC V.1, upon request by the AQD, the permittee shall verify PM, PM10 and PM2.5 emission rates from FG-BDSV03, at the company's expense. Based on the observations made at the time of the inspection, no testing per this condition shall be requested at this time.

Per SC VI.2, the permittee shall keep, in a satisfactory manner, temperature records for the EU-NBCALCINER portion of FG-BDSV03, as required per SC IV.3. Records were requested and provided for select time periods. Based on the records provided, BD appears to be keeping track of the applicable temperature records.

Per SC VI.3, the permittee shall keep monthly / yearly binder usage rate records for FG-BDSV03, as required per SC II.1. Records were requested and provided for select time periods. As discussed above the records provided appear acceptable at this time.

Per SC VI.4, the permittee shall perform and record the results of a non-certified visible emissions check on FG-BDSV03 at least once monthly, during operation, when FG-BDSV03 is venting to the atmosphere. If visible emissions are identified, then applicable measures shall be taken per SC VI.4. Records were requested and reviewed for select time periods. After further review, there appeared to be no apparent issues noted during the monthly visible emission checks. This appears acceptable.

FG-BDSV04

The emission units for this flexible group are emitted through stack SV-04. The emission units for this flexible group are EU-SHELLSAND and EU-SHELLPOUR.

EU-SHELLSAND – The shell sand system includes the mechanical reclaim, dumper, shakeout conveyor, shot sand screen, vibramill, bucket elevators, and sand tanks. The sand system is controlled by a 35,000 cfm baghouse (BH-08).

EU-SHELLPOUR – This unit includes the pourline, shot separator, and shot cooler. All activities are controlled by a 50,000 cfm baghouse (BH-05).

Onsite Observations

Per SC I.4, this flexible group is subject to a visible emissions limit of five percent opacity per a six-minute average. Based on the observations made at the time of the inspection and records reviewed, this emission limit appears to be being met.

Per SC IV.1, the permittee shall not operate the EU-SHELLPOUR portion of FG-BDSV04 unless the enclosure and BH-05 are installed, maintained and operated in accordance with the manufacturer's recommendations. A pressure drop monitor was noted for BH-05 and a pressure drop reading of 3.9" was read at the time of the inspection. After further review, BD appears to be meeting the requirements of this condition.

Per SC IV.2, the permittee shall not operate the EU-SHELLSAND portion of FG-BDSV04 unless the enclosure and BH-08 are installed, maintained, and operated in accordance with the manufacturer's recommendations. A pressure drop monitor was noted for BH-08 and a pressure drop reading of 3.6" was read at the time of the inspection. After further review, BD appears to be meeting the requirements of this condition.

Per SC IV.3, the permittee shall equip and maintain both Baghouse BH-05 and Baghouse BH-08 with a bag leak detection system. Additionally, the permittee shall not operate either baghouse unless their respective bag leak detection systems are installed and operating properly. Both baghouses were noted to have bag leak detection systems and were assumed to be operating properly.

One stack is listed in association with this flexible group. Though the dimensions were not measured they appeared to be consistent with what is listed in MI-ROP-B7013-2018a.

Offsite Review

Per SC I.1-3, this emission unit is subject to hourly PM, PM10 and PM2.5 emission limits. Based on the observations made at the time of the inspection and records observed, BD appears to be meeting these emission limits.

This flexible group is subject to a binder material limit of 840 tpy per a 12-month rolling time period. Records were requested and reviewed for select time periods. Upon review of the records provided, the company is combining the binder material usages of this flexible group with others. Even with the additional emissions, BD would still be within the 840 tpy material limit. After further review, the records appear to be acceptable at this time.

Per SC V.1, upon request by the AQD, the permittee shall verify PM, PM10 and PM2.5 emission rates from FG-BDSV04, at their expense. Based on the observations made at the time of the inspection, no testing per this condition shall be requested at this time.

Per SC VI.2, the permittee shall keep monthly / yearly binder usage rate records for FG-BDSV04, as required per SC II.1. Records were requested and provided for select time periods. As mentioned above, the records provided appear to be acceptable at this time.

Per SC VI.3, the permittee shall perform and record the results of a non-certified visible emissions check on FG-BDSV04 at least once monthly, during operation, when FG-BDSV04 is venting to the atmosphere. If visible emissions are identified, then applicable measures shall be taken per SC VI.3. Records were requested and reviewed for select time periods. After further review, there appeared to be no apparent issues noted during the monthly visible emission checks. This appears acceptable.

FG-BDSV05

The emission units for this flexible group are emitted through stack SV-05. The emission units for this flexible group are EU-SHELL2POUR, EU-SHELL2COOL and EU-SHELL2SAND.

EU-SHELL2POUR – This unit includes the pourline, shot separator, and shoot cooler. All activities are controlled by a 50,000 cfm baghouse (BH-18).

EU-SHELL2COOL – The shell cooling room encloses cast molds on a conveyor and is controlled by baghouses BH-19A and BH-19B, 30,000 dscfm each.

EU-SHELL2SAND – The shell sand system includes the mechanical reclaim, dumper, shakeout conveyor, shot sand screen, vibramill, bucket elevators, torch stations, and sand tanks. The sand system is controlled by a 40,000 cfm baghouse (BH-17).

<u>Onsite Observations</u>

Per SC I.4, this flexible group is subject to a visible emissions limit of five percent opacity per a six-minute average. Based on the observations made at the time of the inspection and records reviewed, this emission limit appears to be being met.

Per SC IV.1, the permittee shall not operate the EU-SHELL2SAND portion of FG-BDSV05 unless the enclosure and BH-17 are installed, maintained and operated in accordance with the manufacturer’s recommendations. A pressure drop monitor was noted for BH-17 and a pressure drop reading of 3.5” was read at the time of the inspection. After further review, BD appears to be meeting the requirements of this condition.

Per SC IV.2, the permittee shall not operate the EU-SHELL2POUR portion of FG-BDSV05 unless the enclosure (shell cooling room) and BH-18 are installed, maintained, and operated in accordance with the manufacturer’s recommendations. A pressure drop monitor was noted for BH-18 and a pressure drop reading of 3.9” was read at the time of the

inspection. After further review, BD appears to be meeting the requirements of this condition.

Per SC IV.3, the permittee shall not operate the EU-SHELL2COOL portion of FG-BDSV05 unless the enclosure (shell cooling room) and BH-19 are installed, maintained, and operated in accordance with the manufacturer's recommendations. It was noted that there are actually two separate baghouses for this unit (BH-19A / BH-19B). A pressure drop monitor was noted for both BH-19A and BH-19B, and a pressure drop reading of 3.8" and 3.0" respectively was read at the time of the inspection. After further review, BD appears to be meeting the requirements of this condition.

Per SC IV.4, the permittee shall equip and maintain Baghouse BH-17, Baghouse BH-18, and Baghouse BH-19 with a bag leak detection system. Additionally, the permittee shall not operate the baghouses unless their respective bag leak detection systems are installed and operating properly. Bag leak detection systems were noted for all four baghouses and green lights were observed for each unit indicating that the bag leak detection systems were operating properly.

One stack is listed in association with this flexible group. Though the dimensions were not measured they appeared to be consistent with what is listed in MI-ROP-B7013-2018a.

Offsite Review

Per SC I.1-3, this emission unit is subject to hourly PM, PM10 and PM2.5 emission limits. Based on the observations made at the time of the inspection and records observed, BD appears to be meeting these emission limits.

This flexible group is subject to a binder material limit of 840 tpy per a 12-month rolling time period. Records were requested and reviewed for select time periods. Upon review of the records provided, the company is combining the binder material usages of this flexible group with others. Even with the additional emissions, BD would still be within the 840 tpy material limit. After further review, this appears to be acceptable at this time.

Per SC V.1, upon request by the AQD, the permittee shall verify PM, PM10 and PM2.5 emission rates from FG-BDSV05, at their expense. Based on the observations made at the time of the inspection, no testing per this condition shall be requested at this time.

Per SC VI.2, the permittee shall keep monthly / yearly binder usage rate records for FG-BDSV05, as required per SC II.1. Records were requested and provided for select time periods. As mentioned above, the records provided appear to be acceptable at this time.

Per SC VI.3, the permittee shall perform and record the results of a non-certified visible emissions check on FG-BDSV05 at least once monthly, during operation, when FG-BDSV05 is venting to the atmosphere. If visible emissions are identified, then applicable measures shall be taken per SC VI.2. Records were requested and reviewed for select time periods. After further review, there appeared to be no apparent issues noted during the monthly visible emission checks. This appears acceptable.

FG-MACTZZZZZ (HC & BD)

This flexible group is for an affected source which is a new or existing iron and steel foundry, that is (or is part of) an area source of HAP emissions. Huron Casting, Inc.is an

existing large foundry and Blue Diamond Steel Casting is a large new foundry as defined by 40 CFR Part 63, Subpart ZZZZZ.

Onsite Observations

Per SC III.1, the permittee shall implement and maintain an approved plan to address the pollution prevention management practices for metallic scrap and mercury switches by the applicable compliance date specified in 40 CFR 63.10881. The plan shall include a metallic scrap management program and mercury requirements. Speaking with company staff, it was verified that the company on an annual basis renews an agreement between their suppliers of scrap that the materials provided do not contain mercury and is acceptable metallic scrap. Copies of the 2022 agreements between the suppliers and the company were reviewed at the time of the inspection. After further review this appears acceptable at this time.

Per SC IV.1, the permittee shall not operate any metal melting furnace at the iron and steel foundry unless a capture and collection system is installed, maintained, and operated in accordance with the American Conference of Governmental Industrial Hygienists standards or equivalent unless the furnace is specifically uncontrolled as part of an emissions averaging group. Compliance of this condition was not specifically reviewed at the time of the inspection and was assumed by AS to be being followed in a satisfactory manner.

Offsite Review

This flexible group specifically for HC is subject to an hourly average PM emission limit of 0.1 lb per ton of metal charged or an hourly average total metal HAP limit of 0.008 lb per ton of metal charged for any metal melting furnace at HC. This flexible group specifically for BD is subject to an hourly average PM emission limit of 0.8 lb per ton of metal charged or an hourly average total metal HAP limit of 0.06 lb per ton of metal charged for any metal melting furnace at BD.

Per SC V.1, specifically for HC, one of the emission limits shall be selected and compliance shall be verified every five years. The most recent stack test for the HC portion of the site was on 07/26/2016 and 07/27/2016. It has been more than five years since the last compliance test. This is a violation of MI-ROP-B7013-2018a, Section 1, FG-MACTZZZZZ, SC V.1; the NESHAP Subpart ZZZZZ; and the Consent Order AQD No. 4-2017, Sections 19-20.

Per SC V.1, specifically for BD, one of the emission limits shall be selected and compliance shall be verified every five years. The most recent stack test for the BD portion of the site was on 07/06/2016 and 07/06/2017. It has been more than five years since the last compliance test. This is a violation of MI-ROP-B7013-2018a, Section 2, FG-MACTZZZZZ, SC V.1; the NESHAP Subpart ZZZZZ; and the Consent Order AQD No. 4-2017, Sections 19-20.

Per SC I.2, the company shall not discharge to the atmosphere fugitive emissions from foundry operations that exhibit opacity greater than 20 percent. Compliance of this condition is demonstrated per SC V.2.

Per SC V.2, specially for HC, the permittee shall conduct each opacity test for fugitive emissions according to the requirements in 40 CFR 63.6(h)(5) and Table 1 of 40 CFR Part 63, Subpart ZZZZZ. The permittee shall conduct subsequent performance tests to

demonstrate compliance with the opacity limit in 40 CFR 63.10895 no less frequently than every 6 months and each time the permittee makes a process change likely to increase fugitive emissions. Upon review of records provided, tests appeared to have been completed through 2018, however, were not submitted to the AQD in a timely manner. Opacity tests for fugitive emissions have not been completed since 2019. The missed opacity tests for fugitive emissions is a violation of MI-ROP-B7013-2018a, Section 1, FG-MACTZZZZZ, SC V.2; the NESHAP Subpart ZZZZZ; and the Consent Order AQD No. 4-2017, Section 19.

Per SC V.2, specially for BD, the permittee shall conduct each opacity test for fugitive emissions according to the requirements in 40 CFR 63.6(h)(5) and Table 1 of 40 CFR Part 63, Subpart ZZZZZ. The permittee shall conduct subsequent performance tests to demonstrate compliance with the opacity limit in 40 CFR 63.10895 no less frequently than every 6 months and each time the permittee makes a process change likely to increase fugitive emissions. Upon review of records provided, tests appeared to have been completed through 2018, however, were not submitted to the AQD in a timely manner. Opacity tests for fugitive emissions have not been completed since 2019. The missed opacity tests for fugitive emissions is a violation of MI-ROP-B7013-2018a, Section 2, FG-MACTZZZZZ, SC V.2; the NESHAP Subpart ZZZZZ; and the Consent Order AQD No. 4-2017, Section 19.

Per SC II.1, if applicable, the permittee shall not utilize a binder chemical formulation that uses methanol as a specific ingredient of the catalyst formulation for a warm box mold or core making mold. A safety data sheet (SDS) was provided of the binder material used. No methanol was listed in the material though it should be noted that parts of the composition are listed as proprietary. After further review, the SDS was determined to be acceptable at this time though moving forward the company shall have available more acceptable composition data of the binder material used.

Per SC VI.1a-d, the company shall prepare and operate at all times according to a written O&M plan for each control device for an emissions source subject to a PM, metal HAP, or opacity emissions limit in 40 CFR 63.10895. An O&M plan has been historically submitted by the company. Based on the onsite observations and records reviewed, no concerns were identified at this time.

Per SC VI.2, the permittee shall perform periodic inspections and maintenance of each PM control device for each metal melting furnace. The condition requires an initial and follow up periodic inspections. However, per SC VI.3. the company may install, operate, and maintain a bag leak detection system for each baghouse as an alternative to SC VI.2. It was noted that all baghouses with the exception of several baghouses that instead utilize a PM monitor per the NESHAP Subpart ZZZZZ had a bag leak detection system operating. The bag leak detection systems overall appeared to be being operated in a satisfactory manner. After further review this appears acceptable at this time.

Per SC VI.4 and SC VI.6, the company shall prepare a site-specific monitoring plan for each bag leak detection plan to be incorporated into the O&M plan. Additionally, the company shall perform monthly inspections of the equipment that is important to the performance of the total capture system. Records were requested and reviewed for select time periods for the baghouses. Based on the records reviewed, discussions with company staff and observations made at the time of the inspection, overall, no concerns were identified at this time.

Per SC VI.8, as applicable, the company shall keep various monthly records as identified in this condition. After further review of the records received and reviewed, no concerns were identified at this time.

FG-Rule 290

This flexible group is for any emission units that emit air contaminants and are exempt from Rule 201 pursuant to Rule 290.

There is one emission unit that was noted the company uses the Rule 290 exemption for and that is BD-Heat Treat Furnace. The unit was observed during the course of the inspection but was not in operation at the time of the walk through. Records were requested and provided for select time periods. Based on the records reviewed, the heat treat furnace appears exempt per Rule 290. It was pointed out and discussed with company staff the specifics regarding Rule 290.

PTI No. 187-19

This permit is for an MTU diesel generator (EUEMERGENCY). This unit is a 3,353-horsepower diesel-fired emergency engine with a 4.77-liter displacement. Startup of the unit was stated by staff to be in June 2021. The unit was observed on Day 1 of the site inspection and is located on the HC site.

This emission unit is subject to hourly NOx, CO and PM emission limits. EUEMERGENCY is a Tier 2 certified engine. Since the unit is a certified engine, compliance with the emission limits is met through satisfactory operation of the unit. Based on the observations made at the time of the inspection and follow up review, these emission limits are assumed to be being met.

Per SC II.1, the permittee shall burn only diesel fuel, in EUEMERGENCY with the maximum sulfur content of 15ppm (0.0015 percent) by weight. A purchase order of diesel fuel used was requested and provided indicating that the fuel meets this sulfur content limit.

Per SC III.1-2, the permittee shall not allow EUEMERGENCY to exceed 100 hours per calendar year for maintenance checks and readiness testing and emergency demand response. The permittee may operate EUEMERGENCY up to 50 hours per calendar year for non-emergency situations, but those hours are to be counted towards the 100 hours per calendar year for maintenance and testing and emergency demand response, as allowed in 40 CFR63.6640(f)(2). The unit was run a total of 13:06 hours in 2021 and as of May 2022, a total of 2:15 hours for 2022. The only time it appears the unit was run was for maintenance purposes. After further review, the company appears to be meeting the hour restrictions for the emergency engine.

Per SC III.3, the permittee shall install, maintain, and operate EUERMGENCY according to the manufacturer written instructions, or procedures developed by the owner/operator and approved by the engine manufacturer, over the entire life of the engine. Based on the observations made, it appears the unit overall is being operated properly.

Per SC III.4, if the permittee purchased a certified engine, according to procedures specified in 40 CFR Part 60 Subpart IIII, for the same year model, the permittee shall meet several requirements listed in this condition. At this time, it is assumed the company is operating the emergency engine in a satisfactory manner to be considered a certified engine.

Per SC III.5-6, the permittee shall not operate EUEMERGENCY for more than 500 hours per a 12-month rolling time period and no more than 200 hours per month. As discussed above and after review of monthly records provided, the company is well within the permitted limit for monthly and 12-month rolling time period hours of operation.

Per SC IV.1, the permittee shall equip and maintain EUEMERGENCY with a non-resettable hour's meter to track the operating hours. During the course of the inspection, EUEMERGENCY was observed but not in operation. A non-resettable hour's meter was observed and read 21:06 hours at the time of the inspection. This is consistent with the records provided.

Per SC IV.2, the nameplate capacity of EUEMERGENCY shall not exceed 2,500 kW, as certified by the equipment manufacturer. A nameplate was observed at the time of the inspection on the emergency engine and read 2,250 kW.

Per SC VI.1, the permittee shall keep for certified engines records of the manufacturer certification documentation. A certificate of conformity was noted attached to the PTI application for this permit.

Per SC VI.2a, for a certified engine the permittee shall keep records of the manufacturer's emission-related written instructions, and records demonstrating that the engine has been maintained according to those instructions, as specified in SC III.4. Records were requested and provided since the startup of the engine. After further review, the records provided appear acceptable.

Per SC VI.3-5, the permittee shall keep track of hours of operation, records of manufacturer documentation indicating the unit meets the applicable emission limitations in NSPS Subpart IIII, and records of the diesel fuel sulfur content. As discussed above, records had been requested and reviewed for select time periods. After further review, it appears that the company is keeping track of the applicable items.

Per SC VII.1-2, within 30 days after completion of the installation of EUEMERGENCY, the company shall notify the AQD District Supervisor in writing of the completion of the activity. Additionally, within 30 days following the initial startup, the company shall verify if the emergency generator shall be operated in a certified or non-certified manner. The company notified AQD staff on June 18, 2021, that the unit was ready for operation and that the unit would be operated in a certified manner. This appears acceptable.

One stack is associated with this emission unit. Though the measurements were not measured they appeared to be consistent with what is listed in PTI No. 187-19.

After further review, the company appears to overall be in compliance with the NSPS Subpart IIII.

Additional Observations

In the most recent ROP renewal application various exempt equipment was noted and observed during the course of the site inspection. No concerns were noted.

During the site inspection of the HC / BD sites several baghouses were observed in operation with pressure drop monitors and bag leak detections systems. The baghouses were used for control for various exempt equipment observed onsite. Pressure drop

readings observed were in the acceptable operating range of 1” - 9”. One bag leak detector observed did not have a light on indicating satisfactory operation. The baghouse was for exempt equipment. It was determined while onsite that the unit was operating properly but a light bulb had burned out. In a follow up call the company planned to order a replacement and fix the unit. This appears acceptable at this time. The remaining bag leak detection systems were assumed to be operating in a satisfactory manner.

During the course of the inspection of the HC site, the two pour lines were observed in operation. The ventilation for both pour lines was noted in the area of the B pour line. In order for emissions to be captured for the A pour line they would appear to have to travel a significant distance across the interior of the building. At this time, no further action is necessary, however, the capture efficiency of the emissions may need to be reevaluated.

Conclusion

Based on the facility walkthrough, observations made, and records received, HC / BD is not in compliance with the ROP No. MI-ROP-B2017-2018a, Consent Order AQD No. 4-2017, and the NESHAP Subpart ZZZZZ. The company appears to be in compliance with PTI No. 187-19 and remaining air quality rules. A violation notice (VN) will be issued for the following violations.

Per the NESHAP Subpart ZZZZZ, Huron Casting, Inc & Blue Diamond Steel Casting is required to demonstrate compliance with all applicable PM or total metal HAP emissions limits in 40 CFR 63.10895 for a metal melting furnace or group of all metal melting furnaces no less frequently than every 5 years.

- The most recent compliance test for the Huron Casting Inc portion of the site was on 07/26/2016 and 07/27/2016. It has been more than five years since the last compliance test. This is a violation of MI-ROP-B7013-2018a, Section 1, FG-MACTZZZZZ, SC V.1; the NESHAP Subpart ZZZZZ; and the Consent Order AQD No. 4-2017, Sections 19-20.
- The most recent stack test for the Blue Diamond Steel Casting portion of the site was on 07/06/2016 and 07/06/2017. It has been more than five years since the last compliance test. This is a violation of MI-ROP-B7013-2018a, Section 2, FG-MACTZZZZZ, SC V.1; the NESHAP Subpart ZZZZZ; and the Consent Order AQD No. 4-2017, Sections 19-20.

Per the NESHAP Subpart ZZZZZ, Huron Casting, Inc & Blue Diamond Steel Casting are required to conduct each opacity test for fugitive emissions according to the requirements in 40 CFR 63.6(h)(5) and Table 1 of 40 CFR Part 63, Subpart ZZZZZ. The permittee shall conduct subsequent performance tests to demonstrate compliance with the opacity limit in 40 CFR 63.10895 no less frequently than every 6 months. Opacity tests for fugitive emissions appear to have been completed from 2013 – 2017 for Huron Casting, Inc & Blue Diamond Steel Casting, however, test results were not submitted in a timely manner for several of the tests. Opacity tests for fugitive emissions have not been completed since 2019.

- The missed opacity tests for fugitive emissions is a violation of MI-ROP-B7013-2018a, Section 1, FG-MACTZZZZZ, SC V.2; the NESHAP Subpart ZZZZZ; and the Consent Order AQD No. 4-2017, Section 19 for the Huron Casting Inc site.

- The missed opacity tests for fugitive emissions is a violation of MI-ROP-B7013-2018a, Section 2, FG-MACTZZZZZ, SC V.2; the NESHAP Subpart ZZZZZ; and the Consent Order AQD No. 4-2017, Section 19 for the Blue Diamond Steel Casting site.

NAME Adam Shaffer DATE 09/30/2022 SUPERVISOR Chris Hare