

Michigan Department of Environmental Quality
Air Quality Division

State Registration Number
B1909

RENEWABLE OPERATING PERMIT

ROP Number
MI-ROP-B1909-20XX

December 4, 2018 - STAFF REPORT ADDENDUM

Purpose

A Staff Report dated September 24, 2018, was developed to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by Rule 214(1) of the administrative rules promulgated under Act 451. The purpose of this Staff Report Addendum is to summarize any significant comments received on the draft ROP during the 30-day public comment period as described in Rule 214(3). In addition, this addendum describes any changes to the draft ROP resulting from these pertinent comments.

General Information

Responsible Official:	Erik Jepsen, Vice President 231-739-2761
AQD Contact:	Eric Grinstern, Environmental Quality Specialist 616-558-0616

Summary of Pertinent Comments

Several comments were received from EPA during the 30-day public comment period. Comments were received on October 24, 2018 and are outlined below.

EPA Comment:

EU-POURING. Special Condition (SC) I includes 6 emission limits (lb/ton) for PM, PM10, PM2.5, CO, NOx, and VOC, with the underlying applicable requirements from a Permit to Install, pursuant to R 336.2804 and 40 CFR §52.21(d). The permit identifies SC VI.2 and SC VI.3 as the associated monitoring and testing for each of these emission limits. These monitoring requirements generally require the permittee to calculate and maintain records of 12-month rolling emission rates and to monitor and record the tons of metal melted, using several different averaging times. To ensure that the permit includes enforceable monitoring and recordkeeping sufficient to assure compliance with each emission limit in SC I, please identify the specific calculations, emission factors, and any additional monitoring parameters (including frequency and averaging of the monitored data) as necessary to determine compliance with each lb/ton limit. See 40 CFR §70.6(a)(3) and (c)(1).

AQD Response:

The emission limits for PM, PM10, PM2.5, NOx, VOC and CO are direct emission factors (pounds of pollutant emitted per ton of melt) derived from Michigan Air Emission Reporting System (MAERS) and the Casting Emission Reduction Program (CERP). EU-POURING is uncontrolled; therefore, no additional monitoring or recordkeeping would aid in assuring compliance with the emission limits. In order to demonstrate compliance with the emission limits, conditions were added to EU-POURING (V.1, V.2. and V.3) requiring compliance testing to verify emissions of PM, PM10, PM2.5, NOx, VOC and CO.

EPA Comment:

EU-DUCTILE-IRON. SC I.2 and SC 1.3 include a 2.25 lb/hr PM limit and a 9.855 tpy PM limit. The permit identifies SC III.2, SC VI.3, SC VI.4, and SC VI.5 as the associated monitoring and testing. These monitoring requirements generally require a Preventative Maintenance Plan, monitoring of pressure drop across the dust collector, and non-certified visible emissions readings. To ensure that the permit includes enforceable monitoring and recordkeeping sufficient to assure compliance with these lb/hr and tpy limits, please provide additional justification in the Staff Report regarding the existing monitoring, or supplement the monitoring in the permit as necessary, in accordance with 40 CFR §70.6(a)(3) and (c)(1).

AQD Response:

Emissions from EU-DUCTILE-IRON are controlled by Baghouse Number 5, which was installed new in 2016. The facility lists the rated particulate control efficiency of the baghouse at 98.99%. In 2017, the facility operated EU-DUCTILE-IRON for 4275 hours, resulting in the emission of 1.23 tons of particulate matter. Assuming a linear emission rate with the facility operating the process 8760 hours a year, the resulting emissions would be 2.52 tons. Therefore, proper operation of the baghouse will assure compliance with the permitted particulate emission limit of 9.855 tpy.

EPA Comment:

EU-DUCTILE-IRON. SC 1.5, SC 1.6, and SC 1.7 include fluoride limits of 1.40 milligrams per cubic meter (corrected to 70 degrees Fahrenheit and 29.92 inches), 0.263 lb. per hour, and 1.15 tpy. The permit identifies SC VI.1 as the associated monitoring and testing, which requires quarterly fluorspar feed rate monitoring and total fluorspar used per month. To ensure that the permit includes enforceable monitoring and recordkeeping sufficient to assure compliance with these mg/m³, lb/hr, and tpy limits, please provide additional justification in the Staff Report regarding the existing monitoring, or supplement the monitoring in the permit as necessary, in accordance with 40 CFR §70.6(a)(3) and (c)(1).

AQD Response:

Compliance with the fluoride emission limits is assured through the material usage limit of 54 pounds of fluorspar per hour. The facility's current feed rate goal is 50% of the usage limit. Since 2011, quarterly feed rate testing has shown a maximum rate of 32 pounds per hour and an average feed rate of 25 pounds per hour. If the feed rate was to increase in the future to an amount close to the material usage limit, the frequency of the fluorspar feed rate testing might need to be increased. Under normal operating conditions, the fluorspar feed rate decreases over time due to wear of the auger.

EPA Comment:

EU-WEST-CUPOLA-1, EU-MP-RBB, EU-ACS-SAND, and EU-SHAKEOUT. The control equipment indicator ranges for pollutant specific emission units (PSEUs) subject to Compliance Assurance Monitoring include wide ranges that can be typical when setting initial ranges prior to testing and subsequently establishing specific ranges that are indicative of compliance for a specific emission limit. Have the PSEUs been tested to verify the indicator ranges necessary to assure compliance with the associated particulate matter limits? Please address whether the indicator ranges in the permit for these CAM subject units have been verified and consider whether additional requirements for testing and verification of the indicator ranges is appropriate, in accordance with 40 CFR §64.3(a)(2) and §64.4.

AQD Response:

The facility was requested to evaluate the established indicator ranges to determine if they could be narrowed and to provide justification.

EU-WEST-CUPOLA-1

Cupola venturi scrubber: current pressure drop range: 30 – 56”, cupola demister: current pressure drop range: 0-3”, water pressure to venturi scrubber: current range: 46-80 psi, during blasting. No proposed change to established ranges. Historic stack testing with pressures in these ranges have shown compliance with air permitting emission limits.

EU-MP-RBB

Dust collector #1: current pressure drop range: 5-12 inches. Proposed pressure drop range: 7-12 inches. Reasoning for range: older dust collector with high air to cloth ratio.

Dust collector #6: current pressure drop range 5-12 inches. Proposed pressure drop range: 7-12 inches. Reasoning for range: older dust collector with good air to cloth ratio.

Dust collector #13: current pressure drop range 5-13 inches. Proposed pressure drop range: 8-12 inches. Reasoning for range: older dust collector with very high air to cloth ratio.

EU-ACS-SAND

Dust collector #19: current pressure drop range 2-10 inches. Proposed pressure drop range: 3-7 inches. Reasoning for range: new dust collector in 2012, good air to cloth ratio.

EU-SHAKEOUT

Dust collector #6: current pressure drop range 5-12 inches. Proposed pressure drop range: 7-12 inches. Reasoning for range: older dust collector with good air to cloth ratio.

Dust collector #12: current pressure drop range 5-15 inches. Proposed pressure drop range: 14-19 inches. Reasoning for range: older dust collector with high air to cloth ratio, designed for high pressure suction of one specific process.

Dust collector #17: current pressure drop range 5-12 inches. Proposed pressure drop range: 7-12 inches. Reasoning for range: new dust collector in 2006 with good air to cloth ratio.

Dust collector #20: current pressure drop range 2-10 inches. Proposed pressure drop range: 3-7 inches. Reasoning for range: new dust collector in 2018 with good air to cloth ratio.

EPA Comment:

FG-MACT-ZZZZZ. This flexible group addresses the applicable requirements for 40 CFR Subpart ZZZZZ, Iron and Steel Foundries Area Sources. Please review the following MACT provisions as they apply to this source and revise the permit conditions as necessary to ensure that the permit includes all applicable requirements, in accordance with 40 CFR §70.6 and Subpart ZZZZZ. As written in the draft permit, some of the underlying applicable requirements are incomplete or paraphrased.

- a. EU-WEST-CUPOLA-1 is the only emission unit identified in FG-MACT-ZZZZZ. Please verify the emission units and activities subject to Subpart ZZZZZ and identify them in this flexible group, as applicable.
- b. The pollution control equipment section of FG-MACT-ZZZZZ does not identify any of the dust collectors and baghouses
- c. §63.10885 - metallic scrap and mercury switches management
- d. §63.10895(b) - capture and collection system
- e. §63.10896 - operation and maintenance plan requirements
- f. §63.10897(a)(1)(i) and (ii) - PM control inspections (consider specifying instead of general reference to §63.10897(a))

- g. §63.10897(a)(4)(i), (ii), and (iii) - PM control inspections (consider specifying instead of general reference to §63.10897(a))
- h. §63.10897(d) - bag leak detection system monitoring (as applicable)
- i. §63.10897(e) - capture system monitoring
- j. §63.10897(f) - operation and maintenance plan requirements for monitoring
- k. §63.10897(g) - corrective action requirements
- l. §63.10898(b) - performance test frequency
- m. §63.10898(b) - performance test requirements ("in accordance with" provision is missing reference to §63.10898(d) through (g))
- n. §63.10898(i) - performance test frequency
- o. §63.10898(j) - performance test certification for capture system
- p. §63.10899(b)(1), (b)(2), and (b)(3) - recordkeeping for scrap
- q. §63.10899(b)(9) - bag leak detection recordkeeping (as applicable)
- r. §63.10899(b)(12) - corrective action recordkeeping
- s. §63.10899(b)(13) - inspection and maintenance recordkeeping for PM controls

AQD Response:

- a. EU-WEST-CUPOLA-1 is the only emission unit currently subject to the requirements of FG-MACT-ZZZZZ.
- b. No dust collectors or baghouses are listed in the pollution control equipment section of FG-MACT-ZZZZZ because the affected source does not have any subject emission units that have dust collector or baghouse control.
- c. Condition III.1. modified to require compliance with the metallic scrap management requirements contained in 40 CFR 63.10885(a)(1) or 40 CFR 63.10885(a)(2). Condition III.2 added to account for motor vehicle scrap requirements contained in 40 CFR 63.10885(b)(1), (2), or (3).
- d. Condition III.3. added to the ROP to address the capture and collection system requirements contained in 40 CFR 63.10895(b)).
- e. Condition III.4. modified to include more of the O&M plan requirements of 40 CFR 63.10896.
- f. Condition III.5., addresses all control device inspection requirements through high level reference of 63.10897(a).
- h. The affected source does not have any subject emission units with control devices that require bag leak detection systems.
- i. Condition III.6. modified to include high level reference requiring compliance with 40 CFR 63.10897(e).
- j. Condition VI.6. added to include the requirements of §63.10897(f).
- k. Condition VI.7. added to include the requirements of §63.10897(g).
- l. Condition V.1 modified to include language that subsequent testing must be conducted each time you elect to change an operating limit or make a process change likely to increase HAP emissions.
- m. Condition V.2 modified to add reference to §63.10898(d) through (g).
- n. Condition V.1. modified to include the need to retest each time a process change is make that will likely increase fugitive emissions. UAR for retesting added (40 CFR 63.10898(i)).

- o. Condition V.4. added requiring certification that the capture system operated normally during the performance test.
- p. Condition VI. 4. modified to including scrap recordkeeping requirements contained in 40 CFR 63.10899(b)(1),(2) and (3).
- q. Bagleak detection system recordkeeping – the facility does not have any subject emission units with baghouse control.
- r. Condition VI.7. added to include corrective action recordkeeping require by 40 CFR 10899(b)(12).
- s. Condition VI.8. modified to include 40 CFR 63.1089(b)(13)(i) through (iii).

Changes to the September 24, 2018 Draft ROP

Changes were made to the ROP in response to comments received by EPA on October 24, 2018.

Below is a summary of the changes made:

EU-Pouring: Compliance testing conditions added to verify emissions of PM, PM10, PM2.5, NOx, VOC and CO.

EU-MP-RBB, EU-ACS-SAND, EU-SHAKEOUT: Dust collector pressure drop indicator ranges decreased as outlined above.

FG-MACT-ZZZZZ: Conditions added/modified to add clarity regarding the MACT requirements as outlined above.