

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

B157749929

FACILITY: GREDE LLC - IRON MOUNTAIN		SRN / ID: B1577
LOCATION: 801 S CARPENTER AVE, KINGSFORD		DISTRICT: Upper Peninsula
CITY: KINGSFORD		COUNTY: DICKINSON
CONTACT: Tyler Hill, General Manager		ACTIVITY DATE: 07/31/2019
STAFF: Joe Scanlan	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MAJOR
SUBJECT: Unannounced inspection to determine partial compliance with MI-ROP-B1577-2014A and ACO# 23-2016		
RESOLVED COMPLAINTS:		

This staff activity report is based on partial inspections during FY19 and as a general compliance update for this facility. The facility had a thorough compliance inspection performed by AQD staff Eric Grinstern on September 18, 2018. Refer to the SAR for that inspection for comprehensive details regarding facility description, regulatory requirements, emission unit descriptions and comprehensive compliance information.

Contacts at the facility are Mr. Tyler Hill, Plant Manager; Mr. Michael Hutchins, EH&S Supervisor; and Mr. Tom White, Maintenance Supervisor. The facility has contracted with GEI Consultants for assistance with environmental compliance. Mr. Paul Blindaur is the GEI staff assigned to the facility.

### COMPLIANCE

#### ROP RENEWAL

Marquette District Office AQD received a timely ROP renewal application from the facility on March 8, 2019. The facility was issued an application shield on March 22, 2019. The ROP renewal package is currently under technical review with District Staff. The ROP renewal will incorporate several items, including, but not limited to, Administrative Consent Order (ACO) 23-2016 and PTI# 68-19 (expected to be issued Oct. 2019).

#### FGMACT-EEEEEE OPACITY

To comply with 40 CFR Part 63 Subpart EEEEE (FGMACT-EEEEEE) opacity limits the facility is required to conduct visual emissions (VE) readings semi-annually and has contracted Badger Laboratories to conduct the testing. VE readings are typically performed in the morning beginning around 8 or 9 AM:

- October 1, 2018 -- minor opacity from the Cupola @ 1.5%. All other areas 0% opacity;
- April 1, 2019 -- minor opacity from the Cupola @ 2.7%. All other areas 0% opacity. AQD staff observed this test;
- October 1, 2019 -- results pending testing

Test reports show compliance with the 20% opacity limit.

#### FGMACT-EEEEEE STACK TESTS AND RESULTS

FGMACT-EEEEEE requires testing for PM, Metals, VOCs, SO<sub>2</sub> and CO on a 5-year basis. The facility was issued a VN on August 6, 2018 for missing the testing deadline of May 2017. To regain compliance, the facility hired Pace Analytical to conduct the emissions testing. Testing was conducted April 16-18, 2019 and April 23-25, 2019. Testing completed April 16-18 was monitored by AQD Technical Programs Unit (TPU) staff Mr. Jeremy Howe. District Staff (J.Scanlan) was on site during the testing that occurred April 23-25. Test results were received June 25, 2019. After thorough review of the test report prepared by Pace Analytical it was determined there were multiple issues with the testing, including cyclonic and straight run flow issues on multiple stacks, emission exceedances, and test protocol errors. See Mr. Howe's stack test report (ST 24701568) for more detailed information.

On July 31, 2019 I accompanied Mr. Eric Grinstern on an unannounced inspection primarily to determine

compliance of capture and collection systems for emission units that must meet the requirements of 40 CFR Part 63 Subpart EEEEE. During this inspection AQD staff observed the wet cap open while there was molten/ignited material in the cupola during an off-blast period. This was done to complete maintenance on the cupola baghouse. Upon further analyses of facility records, it was discovered that this was an ongoing practice and had occurred 160 times over 68 days during the dates reviewed. This resulted in numerous episodes of cupola emissions by-passing the baghouse and exceeding the PM limit for EU-P009 CUPOLA.

Facility Plant Manager Mr. Tyler Hill and GEI consultant Mr. Paul Blindaur met with AQD staff (J. Scanlan, E. Lancaster, J. Howe, E. Grinstern) on August 29, 2019 to discuss the failed stack test results and control system modifications to achieve emissions compliance, scheduling a retest for the stack testing, the violations observed during the July 31, 2019 inspection, and general compliance issues. It was explained to the facility representatives at this meeting that two violation notices would be issued:

- Failure to control emissions and exceedance of PM and PM10 limits from the cupola furnace; failure to operate control equipment properly (this VN was issued by E.Grinstern on Sept. 11, 2019 and addressed the MACT EEEEE capture and control requirements).
- Exceedance of CO emission limit from the cupola furnace during stack testing; exceedance of PM10 emission limit from the cupola furnace during stack testing; invalid SO2 stack test results for the cupola furnace; exceedance of PM emission limit from multiple stacks due to failure to meet EPA test Method 1 protocol for straight run and cyclonic flow requirements (this VN was issued by J.Scanlan on Sept. 9, 2019 and addressed the emission exceedances, invalid test results, and poor test method protocol from the failed stack testing performed in April of 2019).

Adequate responses to these two violation notices have not yet been received from the facility at the time of the writing of this activity report.

Prior to the meeting with AQD staff on August 29, 2019 the facility was proactively seeking an engineering consultant to thoroughly analyze duct and stack dimensions and flow and engineering controls for multiple emission units and had also already secured Kuttner North America LLC to conduct a ventilation study on the cupola to address opacity and CO issues. Results from the Kuttner study initiated some immediate modifications showing promising results regarding enhanced cupola ventilation for improved CO and PM emission control. However the facility will need to redesign multiple stacks for EUP016 MAIN PLANT POURING AND COOLING and EUP036 MODULE POURING AND COOLING prior to retesting. No date has been scheduled for the test.

#### **SEMI-ANNUAL REPORTING**

On Sept. 16, 2019 AQD District staff received the Semi-Annual Report Certification submitted by the facility. There were 136 deviations reported between January 1 and June 30, 2019 where the wet cap was opened on the cupola to perform maintenance on the baghouse. The facility noted in the report submittal that opening the wet cap on the cupola for necessary baghouse maintenance is considered normal operation and the facility does not view this action as a deviation--they are reporting these occurrences at the request of AQD.

#### **PTI# 68-19**

In April of 2019 the facility submitted an application for a Permit to Install (PTI) to install an additional baghouse to control emissions from EUP018 MAIN PLANT SHAKEOUT. The Hermann Model B1 fabric filter baghouse will have 330 filters with a 99% control efficiency. The baghouse will exhaust through a new stack. This will improve indoor air quality by capturing uncontrolled emissions from the shakeout area and will operate alongside the Torit Baghouse #1 and the Linsmeyer baghouse. It is expected AQD will issue PTI# 68-19 in October 2019 and the PTI will be rolled into the new ROP during the current renewal process after a minor modification of the existing ROP.

#### **OPERATIONS AND MAINTENANCE & FUGITIVE DUST PLANS**

The facility is in the process of updating their Operations and Maintenance (O&M) and Fugitive Dust

Plans as part of ongoing enforcement proceedings. Additionally, the new baghouse permitted under PTI# 68-19 will need to be added to the O&M plan within 60 days of issuance of the PTI.

ADDITIONAL ENFORCEMENT ACTIONS

A violation notice was sent on November 30, 2018 for baghouse malfunction and failure to capture air contaminants related to the September 18, 2018 inspection (see Grinstern Sept. 18, 2018 SAR for details). A response was received by the company on January 4, 2019. Due to incurring additional violations the facility was recommend for escalated enforcement by District Staff December of 2018. Negotiations are ongoing between AQD and the facility regarding an additional ACO relating to the Sept. 18, 2018 violation as well as subsequent violations that have occurred since then.

NAME J. J. [Signature]

DATE 9/30/19

SUPERVISOR [Signature]