

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

B182770910

<b>FACILITY:</b> EMPIRE IRON MINING PARTNERSHIP		<b>SRN / ID:</b> B1827
<b>LOCATION:</b> EMPIRE MINE RD, ISHPEMING		<b>DISTRICT:</b> Marquette
<b>CITY:</b> ISHPEMING		<b>COUNTY:</b> MARQUETTE
<b>CONTACT:</b> BRENT A KETZENBERGER , ENVIRONMENTAL ENGINEER		<b>ACTIVITY DATE:</b> 01/17/2024
<b>STAFF:</b> Lauren Luce	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> MAJOR
<b>SUBJECT:</b> Targeted Inspection FY24		
<b>RESOLVED COMPLAINTS:</b>		

**Facility: Empire Iron Mining Partnership (SRN: B1827)**

**Location: Empire Mine Road, Ishpeming, MI 49849**

**Contact: Brent Ketzenberger, Environmental Manager**

**Thomas O'Brien, Environmental Engineer, 906-475-3306**

### Facility Description

Empire Mine is a taconite ore mine located in the Marquette Iron Range, in the unincorporated community of Palmer in Richmond Township, Marquette County, Michigan. The mine is owned and operated by Cleveland-Cliffs Inc. (Cliffs), a major iron and steel producer based out of Cleveland, Ohio. Cliffs specializes in mining, pelletizing iron ore, and steelmaking operations. The facility is a low grade, open-pit iron ore mine with various material handling, crushing, milling, concentrating, pellet manufacturing, cooling, and handling equipment controlled by wet scrubbers, baghouse dust collectors, and dry electrostatic precipitators. The facility only mines and processes magnetite, a naturally occurring mineral that contains iron ore.

Production at the facility ceased on August 3, 2016, and the mine was indefinitely idled after the last stockpile of finished pellets were shipped. While there are currently no plans in place to begin production, the facility is being preserved in a care and maintenance mode to preserve its ability to restart when market conditions and pellet pricing support access of remaining ore reserves. The facility would need to undergo significant maintenance to restart production and a large waste-water treatment plant would need to be constructed in order to treat the water currently in the pit.

### Emissions

Emissions from mining and processing of taconite ore can include, but not limited to, PM, NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, and hazardous air pollutants (HAPs). The HAP emissions can be categorized by three types: metallic HAPs in the form of PM, acid gases (HCl and HF), and products of incomplete combustion. Fugitive dust PM emissions occur from mining areas, haul roads, tailing basins, material transfer points, pellet loading areas, and stockpiles.

### Emissions Reporting

Empire Mine is considered a major source and is required to report its annual emissions through the Michigan Air Emissions Reporting System (MAERS). However, the facility has been idled since 2016 so no emissions have been reported since then.

## Inspection

On January 17, 2024, AQD Staff (Lauren Luce) conducted a targeted inspection at Empire Mine in Richmond Township, MI. AQD Staff arrived at the facility and met with Brent Ketzenberger, Environmental Manager, and Thomas O'Brien, Environmental Engineer. It was explained that the purpose of the inspection was to ensure compliance with MI-ROP-B1827-2021 and all other state air pollution control rules and federal regulations.

A driving tour of the facility perimeter was provided. The mine appeared idled and not operating. As the facility and all equipment has been idled indefinitely since August 2016, entrances to the facility are gated and locked. Entrance roads are also not plowed. Facility staff stated a structural steel inspection would be required prior to entering the site and that power to the site was not active. Facility staff relayed that significant maintenance would be required to reopen the mine. A large waste-water treatment facility would also need to be built in order to treat the water currently in the pit. The company intends to keep the ROP while the facility is in idled status in the event they are able to restart operations. The facility continues to submit annual, semiannual, and required compliance reports including Gaseous and Opacity Excess Emission and Monitoring System Performance for EU-UNIT 2, 3, & 4 FURANCE, Subpart RRRRR Semi Annual Compliance Report via CEDRI, and Ozone Season Summary Report for EUKILN4. The facility has not been submitting reports for Boiler MACT compliance. This was brought to their attention and the facility stated they will start submitting Boiler MACT compliance reports beginning with their 3/15/24 semiannual reports.

## Compliance

Based on the inspection performed, Empire Mine appears to be in compliance with MI-ROP-B1827-2021. Since the facility is indefinitely idled and no equipment is in operation, verification of compliance with process/operational, testing, and monitoring conditions cannot occur at this time. If Empire resumes operation in the future, they will be required to test equipment within 180 days of startup and meet all requirements contained in the ROP.

NAME

DATE 2-29-2024

SUPERVISOR

