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

B609363971

FACILITY: Cleveland Cliffs Iron Company		**SRN / ID:** B6093
LOCATION: 2701 North Lakeshore Boulevard, MARQUETTE		**DISTRICT:** Marquette
CITY: MARQUETTE		**COUNTY:** MARQUETTE
CONTACT:		**ACTIVITY DATE:** 06/29/2022
STAFF: Joe Scanlan	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: Unannounced inspection to determine compliance with PTI 335-77B		
RESOLVED COMPLAINTS:		

REGULATORY AUTHORITY

Under the Authority of Section 5526 of Part 55 of NREPA, The Department of Environment, Great Lakes, and Energy (EGLE) may upon the presentation of their card, and stating the authority and purpose of the investigation, enter and inspect any property at reasonable times for the purpose of investigating either an actual or suspected source of air pollution or ascertaining compliance or noncompliance with NREPA, Rules promulgated thereunder, and the federal Clean Air Act.

FACILITY DESCRIPTION

The Cleveland Cliffs Iron Company (CCI) operates the Marquette Range Coal Facility. The facility is in an industrial shipping/railroad complex near the Presque Isle Park on Lakeshore Boulevard in the city of Marquette, Marquette County. The facility includes the Ship Unloading Facility (SUF) and associated conveyors, truck loading, and facility yard and roadways. The SUF is utilized to offload coal and limestone from vessels during the Great Lakes shipping season, typically March 25 through January 15. Once stockpiled, coal and limestone are loaded into trucks and hauled to the iron ore processing mill at the Tilden Mine where they are used in the pelletizing of iron ore.

PROCESS DESCRIPTION

Coal and limestone are delivered via standard, belt-type, self-unloading vessels commonly used on the Great Lakes. These vessels are equipped with their own conveyors and dust suppression systems for material unloading. Vessel operators are instructed to position their unloading conveyor boom within the partially enclosed receiving hopper of the Ship Unloading Facility (SUF) in order to minimize fugitive dust (SC IV.5). Both vessel and SUF personnel visually observe the unloading process to ensure fugitive dust is minimized.

The facility has material limits of 750,000 tons per year of coal (SC II.1) and 1,400,000 tons per year of limestone (SC II.2) during a 12-month rolling time period. Coal and limestone are first unloaded from the vessel into the 500 ton receiving bin. Both the vessel and the receiving bin dust suppression systems are utilized as necessary, to control fugitive dust during this step (SC III.2).

The material then flows out of the receiving bin onto an enclosed conveyor system and travels up to the radial stacker conveyor (SC IV.3). The stacker is equipped with a luffing boom, capable of vertical movement to minimize free fall drop height (SC IV.4). Dust suppression spray nozzles in the receiving bin and at the top of the radial stacker conveyor are utilized as necessary to control fugitive dust (SC III.2).

If dust suppression systems are not effectively controlling fugitive dust, vessel unloading may be delayed until necessary repairs and/or adjustments are made.

Stockpiling Procedure

A track-type dozer is used under the SUF's radial stacker conveyor boom to contour the delivered coal and limestone for stockpiling. The coal is stockpiled utilizing rubber-tired dozers, track-type dozers and earth movers (SC IV.2).

Stockpile Configuration

Height and slope angles of the stockpiles are constructed to minimize erosion and compacted to minimize fugitive dust and eliminate any potential for spontaneous combustion. When stockpile height and inventory levels are optimum, the exterior slopes are compacted and treated with an encrusting agent to assist in minimizing fugitive dust and preventing water and wind erosion. During the stockpiling process, the consistency of the coal/limestone and wind conditions are monitored, and water is applied as necessary to control fugitive dust. Water application is performed by water trucks equipped with turret-mounted water cannons and front, back, and side-mounted pressurized spray systems. (SC III.3, SC III.4, SC III.5, SC III.6)

The storage pile ground configuration is laid out in a manner such that an adequate separation between the pile's north and east boundary and the fence line is maintained. The height of the coal storage pile is not to exceed 60 feet and the pile's shape is maintained in a configuration that it forms a physical barrier around the perimeter of the active storage area, above the working level on which mobile equipment is normally operating (SC III.3). The outer slopes of the coal storage pile are maintained at an angle not to exceed 30 degrees (SC III.4). A ten-foot high fence on the northern and eastern boundary is maintained for fugitive dust control (SC IV.1).

EMISSIONS

Particulate matter, consisting primarily of limestone and coal dust emissions, is the primary pollutant of concern. Fugitive sources include the transfer of coal and limestone aggregate, truck loading, vehicle traffic, and wind erosion from coal and limestone aggregate storage piles. The amount of fugitive emissions generated during the transfer of coal and limestone depends primarily on the surface moisture content of these materials.

EMISSIONS REPORTING

The company is not required to report annual emissions to Michigan Air Emissions Reporting System (MAERS) for PTI 335-77B.

REGULATORY ANALYSIS

The facility operates under Permit to Install 335-77B.

COMPLIANCE HISTORY

The Marquette Range Coal Facility has not had any complaints or compliance issues. The SUF was last inspected in 2018 during an inspection of the WE Energies Presque Isle Power Plant. At that time, it was owned and operated by WE Energies; PTI 335-77 had been incorporated into MI-ROP-

B4261-2013c. Upon decommissioning of the Presque Isle Power Plant in March of 2019 and voiding of the ROP, ownership and operation of the SUF was transferred to CCI and PTI 335-77B was issued to the company in May of 2019.

INSPECTION

On June 29, 2022, AQD Staff (Joseph Scanlan) conducted a targeted inspection of the CCI Marquette Range Coal Facility, located in the city of Marquette, Marquette County. AQD Staff arrived at the facility and met with contractor A. Lindberg & Son's employee Nick Manzoline, who was responsible for managing fugitive dust and site maintenance on the date on my inspection. It was explained that the purpose of the inspection was to ensure compliance with PTI 335-77B and all other applicable air pollution control rules and federal regulations.

The inspection began by discussing facility layout and permitted equipment. A tour of the SUF and grounds was then provided. Nick Manzoline had documentation of material throughput and Stormwater and Dust Site Inspection Report records on site, however I requested additional copies of these records via email from CCI Environmental Engineer Tom O'Brien. The completed records request was received via email on 8/9/2022 and were found to be adequately complete (SC VI.1).

During the 12-month rolling time frame of July 2021 through July 2022, the facility has transferred 176,842 tons of coal (SC VI.1) and 18,623 tons of limestone (SC VI.3). This is well below the throughput limits of 750,000 tpy for coal (SC II.1) and 1,400,000 tpy for limestone (SC II.2).

Marquette Range Facility Material Throughput

	Monthly (Short Tons)		12 Month Rolling	
Month	Limestone	Coal	Limestone	Coal
July 2021			23,996	18,623
August			23,996	18,623
September	59996		83,992	18,623
October			83,992	18,623
November			83,992	18,623
December			83,992	18,623
January			83,992	18,623
February			83,992	18,623
March			83,992	18,623
April			83,992	0
May			83,992	0
June	25669		85,665	0
July 2022	91177		176,842	0
	Annual Limits:		1,400,000	750,000

CCI developed a Nuisance Minimization Plan for Fugitive Dust within the 180-day required time frame (SC III.1). The facility uses watering trucks for fugitive dust control of loader traffic and haul

trucks. The facility and yard were well kept; no visible emissions were observed during the inspection. Facility staff conduct and record weekly visible emission observations as required and records are attached to this report (SC VI.4).

COMPLIANCE

Based on this inspection and records reviewed, the CCI Marquette Range Coal Facility appears to be in compliance with PTI 335-77B and all other applicable air pollution control rules and federal regulations.

NAME _____ DATE 8-16-2022 SUPERVISOR _____