

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

A780948184

FACILITY: U S STEEL GREAT LAKES WORKS		SRN / ID: A7809
LOCATION: 1 QUALITY DR, ECORSE		DISTRICT: Detroit
CITY: ECORSE		COUNTY: WAYNE
CONTACT: Alexis Piscitelli , Environmental Manager		ACTIVITY DATE: 03/25/2019
STAFF: Katherine Koster	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MEGASITE
SUBJECT: FY2019 Targeted Inspection - Iron Ore Screening		
RESOLVED COMPLAINTS:		

**Reason for Inspection: Targeted Inspection – Ore Screening and Zug Island Fugitive Dust**

**Level of Inspection: PCE**

**Inspected by: Katie Koster, AQD**

**Personnel Present: Nathan Ganhs, Environmental Engineer**

**Facility phone number: 313-749-3857, 313-378-1612 (cell)**

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#### FACILITY BACKGROUND

United States Steel, Great Lakes Works (USS – GLW) is an integrated steel mill in operation since August 1930. It is located just south of the City of Detroit. The site consists of approximately 1100 acres that span along the Detroit River through the cities of Ecorse and River Rouge. The facility includes the Main Plant Area, the 80-inch Hot Strip Mill, and the iron making and coke making operations on Zug Island.

This inspection report focuses on the ore screening operations on Zug Island.

#### COMPLAINT/COMPLIANCE HISTORY

No complaints have been received related to the emission units evaluated in this report.

#### OUTSTANDING CONSENT ORDERS

Company is operating under a SIP Consent Order for fugitive dust (SIP Consent Order No. 27-1993).

#### OUTSTANDING LOVs

There are no outstanding LOV's related to the equipment that was inspected.

#### INSPECTION NARRATIVE

I arrived at US Steel Great Lakes Works on March 25, 2019 and met with Mr. Nathan Ganhs, Environmental Engineer. We went to Zug Island to observe the ore screening operations and potential fugitive dust areas. However, as it had recently rained, fugitive dust from roadways, lots, storage piles, and material handling was present.

The No. 1 Ore Dock is behind the B2 blast furnace. There is a boat unloading station here. According to Mr. Ganhs, there is always a portable screen at the No. 1 Ore Dock. The screen was in use screening ore pellets at the time of the inspection. The certified VE reader was making observations. I observed the process for several minutes. I did not observe any visible emissions from any points on the screening operation.

Next, we drove to the No. 3 Ore Dock. The fixed screen and the other portable screen are in the area. The portable screen was outside of the fixed screen area and has not been used for some time. There was some material handling occurring. A front end loader was moving pellets from storage to the screening area. It has recently rained so material was wet and there was standing water in the area.

I did not observe fugitive dust issues although as previously stated, it had recently rained. We went to Mr. Ganhs office and reviewed fugitive dust records. There is a daily and weekly check sheet showing what roads were inspected for fugitive dust on Zug Island. The road sweeper marks his route on a check sheet. Mr. Ganhs stated that USS is looking into changing the dust suppressant. Also, he will recreate Table 13, with a map and list of paved and unpaved roads and lots as I could not locate it in the facility file.

**RULES/PERMIT CONDITIONS EVALUATED – FROM ROP 199600132d and PTI 96-12A**

**EUFIXEDSCREEN** - 800 ton per hour stationary screening equipment with an electric powered engine used for the screening of iron ore pellets. The screening equipment includes a dump hopper and belt feeder, a feed hopper; feed conveyor system; a screen; a system of conveyors for screened pellet delivery to the B2 Conveyor, Ore Jenny, and/or storage pile via stacker; and a conveyor system to a fines collection bin.

(Conditions are paraphrased)

**I.1. IN COMPLIANCE.** Based on a review of VE readings taken by independent certified contractors, opacity has not exceeded the limit. VE's from the screening enclosure and screen transfer points shall not exceed 10% opacity, 6 minute average.

**II.1 UNKNOWN.** At the time of the inspection, facility was unable to provide daily records. Screening of iron ore pellets shall not exceed 800 tons per hour on a 24 hour block average.

**II.2 IN COMPLIANCE.** Shall not process asbestos or asbestos containing waste. Facility is only screening iron ore pellets.

**III.1&2 IN COMPLIANCE.** Fugitive dust plan appears to be in place based on records reviewed. Plan has not been determined to be insufficient at this time. Shall not operate screen unless fugitive dust plan is implemented and maintained. Shall update the plan if it is determined to be insufficient.

**IV.1 NOT IN COMPLIANCE.** Daily throughput could not be provided at the time of the inspection. Shall maintain belt scales which will record daily throughput rate.

**IV.2 IN COMPLIANCE.** Enclosure is installed and appears to be in satisfactory condition. Install and maintain screening enclosure.

**VI.2. NOT IN COMPLIANCE.** Daily throughput could not be provided at the time of the inspection. Shall keep records of amount of material processed through the FIXEDSCREEN on a 24 hour block basis.

**VI.3 and 4. IN COMPLIANCE.** Records were reviewed during the onsite inspection and the VE schedule was met. No corrective actions were necessary. Shall conduct non certified and certified readings on a weekly and monthly basis respectively and take corrective action if a VE exceedance is observed.

**IX.1 IN COMPLIANCE.** Equipment shall be labeled.

**IX.2 IN COMPLIANCE.** The Harsco screen is no longer on site. EUHARSCOSCREEN shall be permanently shut down prior to fixed screen operation.

**EUSCREENYARD** - Fugitive dust sources associated with the transport, handling, and screening of iron ore pellets associated with U.S. Steel's ore screening equipment.

**I.1 IN COMPLIANCE.** Based on a review of VE readings taken by independent certified contractors, opacity has not exceeded the limit. VE's are limited to 5% opacity on a 3 minute average for fugitive dust from wheel loaders, trucks, and storage piles.

**III.1&2 IN COMPLIANCE.** Fugitive dust plan appears to be in place. Shall not operate screen unless fugitive dust plan is implemented and maintained. Shall update plan if it determined to be insufficient.

**VI.1 and 2. IN COMPLIANCE.** Records were reviewed during the onsite inspection and the VE schedule was met. No corrective actions were necessary. Shall conduct non certified and certified readings on a weekly and monthly basis respectively and take corrective action if a VE exceedance is observed.

**VI.3 IN COMPLIANCE.** See attached records. Moisture content of unscreened iron ore pellets during screening from a representative storage pile where loaders are moving material shall be monitored and recorded once per quarter to verify moisture is at least 1.5%.

**FGPORTABLE** - Two sets of portable screening equipment used for the screening of iron ore pellets. The screening equipment includes a feed hopper, feed conveyor system, a screen, and two stacker conveyors for each portable screener.

**I.1 IN COMPLIANCE.** No VE exceedances have been observed by the certified readers. VE's are limited to 20% opacity on a 6 minute average.

**II.1 IN COMPLIANCE.** Shall not process asbestos or asbestos containing waste.

**II.2 UNKNOWN.** Facility has not been maintaining the daily average throughput records. Shall not process more than 350 tons per hour based on daily average through each screening unit.

**II.3 UNKNOWN.** An MSDS of Marathon ULSD was provided but this is insufficient documentation to demonstrate that this is the fuel in use. Company was informed that an associate delivery records should also be maintained. Shall burn only diesel fuel with max sulfur of 500 ppm by weight in the engine.

**III.1 IN COMPLIANCE.** Fugitive dust plan appears to be in place. Shall not operate screen unless fugitive dust plan is implemented and maintained.

**III.2 IN COMPLIANCE.** See attached records. Shall not operate the engine portion of FGPORTABLE combined for more than 16,785 hours per year on a 12 month rolling basis.

**IV. NOT IN COMPLIANCE.** Daily throughput could not be provided at the time of the inspection. Shall maintain belt scales which will record daily throughput rate for each EUPORTABLE 1 and EUPORTABLE2

**IV.2 IN COMPLIANCE.** Equipment appears to be operating in compliance with these requirements. The permittee shall not operate FGPORTABLE unless the units are installed, maintained, and operated in a satisfactory manner consistent with the manufacturer's specifications. Configuration and maintenance of the equipment in accordance with the manufacturer's specifications is sufficient to minimize particulate emissions and maintain a minimum particulate control efficiency of 85%.

**VI.2 NOT IN COMPLIANCE.** See attached records. The permittee shall keep records for EUPORTABLE1 and EUPORTABLE2 separately, of the amount of material processed per day and the hours of operation per day. Facility could only provide a monthly record at the time of inspection. The permittee shall keep records of the amount of material processed and hours of operation on file and make them available to the Department upon request.

**VI.3 and 4 IN COMPLIANCE.** Records were reviewed during the onsite inspection and schedule was met. No corrective actions were necessary. Shall conduct non certified and certified readings on a weekly and monthly basis respectively.

**VI.5 UNABLE TO DETERMINE.** An MSDS of Marathon ULSD was provided but this is insufficient documentation to demonstrate that this is the fuel in use. Company was informed that an associate delivery records should also be maintained. Shall burn only diesel fuel with max sulfur of 500 ppm by weight in the engine. The permittee shall keep records of, in a satisfactory manner, the maximum sulfur content of the fuel for each shipment of fuel received. If supplier certification is used for this purpose, records of certification must contain the name of the supplier.

**VI.6 IN COMPLIANCE.** See attached records. Shall monitor and record the hours of operation of each engine portion of FGPORTABLE on a monthly and 12-month rolling time period basis.

**VII.4 IN COMPLIANCE.** Notification received. Shall notify AQD within 30 days of completion of activity

**IX. 1 IN COMPLIANCE.** I observed labels on the screens while on site. Within 30 days of becoming operational, shall label each portable screen.

**FGSCREENING - Stationary and portable screening equipment for the U.S. Steel ore operations.**

**II.1 IN COMPLIANCE.** See attached records. The permittee shall not process through FGSCREENING more than 7,750,250 tons per year based on a 12-month rolling time period average, of that not more than 5,874,750 tons per year based on 12-month rolling time period basis shall be processed through FGPORTABLE.

**VI.2 IN COMPLIANCE.** See attached records. The permittee shall keep records of the amount of material processed through EUFIXEDSCREEN and FGPORTABLE on a monthly and 12-month rolling time period basis. The permittee shall keep records of the amount of material processed on file and make them available to the Department upon request.

**Appendix A 9-1. PLANS FUGITIVE DUST CONTROL PLAN for Ore Screening**

Did not fully evaluate the fugitive dust plan at this time. No visible emissions exceedances have been documented by the certified readers.

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**EXEMPT EQUIPMENT**

I did not observe any exempt equipment during this inspection.

**APPLICABLE FUGITIVE DUST CONTROL PLAN CONDITIONS**

No fugitive dust issues related to the operations were observed.

**MAERS REPORT REVIEW**

I did not request any edits to the emissions estimates in the 2018 MAERS report for these emission units.

**FINAL COMPLIANCE DETERMINATION**

At this time, it appears that the facility is not in compliance with the conditions evaluated in this report.

NAME Katresh

DATE 12/19/19

SUPERVISOR W.M.