

*Maula
Levy Plant 3
B4364*

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

B436463161

FACILITY: EDW C LEVY CO PLANT 3		SRN / ID: B4364
LOCATION: 100 WESTFIELD, ECORSE		DISTRICT: Detroit
CITY: ECORSE		COUNTY: WAYNE
CONTACT: Matt Perko , Corporate Environmental Engineer		ACTIVITY DATE: 06/09/2022
STAFF: Katherine Koster	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MAJOR
SUBJECT: FY 2022 - Targeted Inspection		
RESOLVED COMPLAINTS:		

REASON FOR INSPECTION: Targeted Inspection

INSPECTED BY: Katie Koster, AQD

PERSONNEL PRESENT: Brian Clark, Plant Manager; Zyaid Suftan, Levy; Matt Perko, Levy Corporate Environmental

CONTACT INFO

SAFETY EQUIPMENT: Hard hat, safety glasses, steel toed boots, greens, high vis vest

FACILITY BACKGROUND

Edward C. Levy Co. Plant 3 is a support facility for U.S. Steel – Great Lakes Works (USSGLW) operations. All of the plant operations are entirely dependent on US Steel. The facility operates 24 hours a day, 7 days a week, and handles and processes slag such as basic oxygen furnace (BOF) slag, desulfurization byproduct (kish) slag, runway/pit slag, caster slag, and other miscellaneous slag and debris generated by the mill. Blast furnace slag is not processed here; it is loaded into Levy trucks on Zug Island and transported to Levy Plant 1. All metallics in the materials are separated, crushed, screened, and returned to USS. The non-metallic portion of the slag is screened and separated into different sizes and sold by Levy. This happens in the slag plant emission unit. However, US Steel idled most of their operations in March 2020. As such, operations at this facility have been significantly curtailed.

REGULATORY ANALYSIS

Although this site is a support facility and AQD considers it part of the same stationary source with USSGLW, it was negotiated through a court order that the facility be issued its own renewable operating permit (ROP).

While the two facilities are considered the same source for Title V applicability, individual Title V permits are issued to Edw. C. Levy Co., Plant 3 and USSGLW separately. Edw. C. Levy Co., Plant 3 was originally intended to be aggregated in the USSGLW's Title V permit as a section. However, through negotiations that arose from the court judgment of the suit filed by the company against the AQD contesting the aggregation of the Levy Plant 6 with Severstal North America, Inc. (use to be Rouge Steel Company) ROP, Edward C. Levy Company agreed to submit a separate ROP application for Edward C. Levy Company Plant 3 and was issued an ROP of its own."

The facility is operating under its own Wayne County fugitive dust SIP consent order No. 17-1993 revised September 9, 1994. ROP MI-PTI-B4364-2015 was issued as a renewal on December 2, 2015.

New Source Performance Standards (NSPS)/NESHAPS

It appears that the facility is not subject to Subpart OOO. Slag is not considered a non-metallic mineral. See applicability determination in facility file.

I reviewed the list of the NSPS source categories. The regulation for metallic mineral processors (Subpart LL) relates to mining and recovery of materials from ore which is not the situation at Plant 3.

There are three generators that were included in the ROP Title V renewal that are subject to the RICE MACT and/or NSPS IIII.

PROCESS OVERVIEW

Edw. C. Levy Co. Plant 3 consists of the following major operations:

The slag processing plant (EUSLAGPLANT) is a 350 ton per hour slag processing operation including one grizzly feeder, four screens, two crushers, and up to twenty conveyors and stackers. It is equipped with water spray systems for air pollution control.

The scrap beneficiation processing plant (EUFEBENEFICATION) is a 150 ton per hour operation where the desulfurization slag (kish) is separated into metallics and non-metallics and screened into two main sizes for USS. Processing equipment includes one grizzly feeder, three screens, and up to eleven conveyors and stackers. It is equipped with water spray systems for air pollution control. Formerly referred to as the kish debris plant in the SIP consent order No. 17-1993.

At the kish wetting station (EUKISHPOTDUMP), kish pots are transferred from USSGLW's No. 2 BOP iron skimming station to Levy's watering station where pots are quenched with water for a minimum of 24 hours to cool the kish and control particulate matter when kish pots are dumped and emptied at the kish pot dump station. There are a total of 10 watering stations that comprise the kish wetting station. USSGLW was issued a permit to install for the kish wetting station but it is installed at Levy Plant 3. Also, the day-to-day operation and maintenance of this station is handled by Levy. USSGLW claims that compliance responsibility of this station with all the applicable air pollution regulations lies with Levy Plant No. 3.

There are two basic oxygen furnace (BOF) slag pits (EUBOFSLAGPIT), with water spray systems for air pollution control. A skull knocking station is in between the two pits. Dust boss misters are installed at the knock station as well as one for each pit at the stockpile while loading into the grizzly feeder.

The following processes are sources of air emissions that meet R336.1290 exemption criteria according to the facility:

The drop ball crane process (EUDROPBALLCRANE) consists of dropping a large steel ball from a crane onto scrap steel to break it into small pieces to be reused at the USSGLW steel mill. There are two pits with one crane each; one for BOF skull breaking and the other for kish skull breaking.

The debris plant (EUDEBRISPLANT) is made up of 1-200 ton per hour hopper, 1-200 ton per hour grizzly feeder, and 1-200 ton per hour conveyor with 4 transfer points. The material is watered at the Euclid watering station prior to being fed into the debris plant for fugitive dust control. This is formerly referred to as the mill scale plant in the SIP consent order.

The recycle material operation (EURECYCLEMATOPERATION) is made up of 1-100 ton per hour hopper, and 1-100 ton per hour conveyor with 2 transfer points (aka the pot slagger). Levy puts seven tons of slag in the bottom of the pot for protection. The slag acts as a cushion as molten steel can burn a hole right through the pot.

The material transfer conveyor system (EUMATRANSFERCONVEYOR) is made up of 1-200 ton per hour conveyor with 4 transfer points.

Cold cleaners that meet the applicable requirements of R336.1281(2)(h) are installed.

INSPECTION NARRATIVE

AQD inspector, Katie Koster, arrived at Levy Plant 3 on June 9, 2022. I met with Matt Perko, Levy Corporate, Brian Clark, Levy Plant 3 Plant Manager, and Ziyad Suftan, Levy. Levy Plant 3 solely services US Steel and processes mostly basic oxygen furnace slag, kish, and other miscellaneous slag from the main plant. US Steel indefinitely idled all iron and steel making operations on or around March 31, 2020. As such, Levy Plant 3 began curtailing its operations. Levy is still considering this to be a permanent idle by US Steel.

At this time, the company is still operating the slag plant and runs US Steel or Cleveland Cliffs material through it. The water truck is still in operation at the required frequency as reported by Levy. Tall berms in and around the site, visible from West Jefferson, are iron and steel fines for which there is no market. According to Levy, some of the material has been stockpiled for 20-30 years. The piles have developed a hard crust layer and some have vegetation growing on them. Based on my observations, they do not appear to be a fugitive dust source.

I drove around the site with Levy staff. They showed me many areas where piles and equipment had been removed. Levy personnel and I discussed operations while standing outside and observing the property. Notes from the inspection:

- All pot carriers, loaders, cranes, scrap trucks, PT cruisers, and haul trucks are gone
- Cut down pot dump hill
- Dump stations are all gone
- Water is turned off at the kish watering
- Iron plant down – only one tower up
- Mill slag – some from Cliffs, some from US Steel, is still being processed in EUSLAGPLANT

- **Bringing in material from Cliffs because the magnet separation is better at Plant 3**
- **Current operations are day shift, Monday through Friday**
- **Drop ball crane in use when they find a big piece of steel**
- **Got rid of generator for iron plant**
- **Slag plant has 17 conveyors currently**
- **C90 down permanently, C80 running 2-3 times per week (these are the cranes)**
- **EUDEBRISPLANT has been removed**

APPLICABLE RULES/PERMIT CONDITIONS EVALUATED

Facility is operating under MI-ROP-B4364-2016. This ROP includes conditions from fugitive dust SIP Consent Order 17-1993 revised 9/9/94. I requested and reviewed the records in the attached email.

Sourcewide Fugitive Dust Requirements. NOT IN OPERATION. Facility not operating at the time of the inspection so none of these conditions were evaluated.

To minimize the fugitive emissions from the loading of trucks and the transporting of material off-site, the following operating practices shall be adhered to:

o All trucks transporting finished product that has the potential to emit fugitive particulate matter, or material for the landfill, shall be tarped before leaving the property.

o Drop heights of the front end loader bucket will be no more than two (2) feet above sideboard of the trucks.

o All trucks transporting finished product, or material for the landfill, shall pass through the truck wheel wash before leaving the property, weather permitting.

o Additional water can be added to the finished product stockpiles, with the use of portable rainbirds, if emissions from load-out exceed 5% opacity.

PENDING. Company submitted proposed demonstration to AQD as part of the recent ROP renewal application. It will be reviewed during the renewal process. The facility is currently applying calcium chloride dust suppressant and it is applied at the same frequency. See attached log. Control of emissions due to vehicle movement about the stockpiles shall be accomplished by applying lignosulfonate or an equivalent or more effective material to the traveled areas among the piles. If lignosulfonate is used, the application rate shall be 5 gal/100 sq. ft., the diluted ratio shall be 3:1, and the application frequency shall be once every three (3) weeks. The actual square footage to be controlled shall be dependent upon the amount of material in storage. If a dust suppressant other than lignosulfonate is used, facility shall submit the demonstration required in SC IX.1.B.1.

NOT IN OPERATION. Spilled material under conveyors shall be attended to on an ongoing basis. Spillage on roadways shall be removed daily. A truck operator who has spilled material onto the road shall be notified so that appropriate action can be taken to prevent future incidences.

B. STOCKPILE AREAS and ACTIVITIES.

1. **NOT IN OPERATION.** There is no slag from the slag pits anymore. Raw slag shall be watered prior to transfer by front end loader to the grizzly/feeder at the beginning of the process plant. Water is added to the material at a rate of 4.0 gallons per ton of slag processed.
2. **NOT IN OPERATION.** Load-out emissions shall be controlled by limiting drop height of the bucket to a maximum of two (2) feet above the sideboard of the truck.

C. ROADWAYS AND PARKING LOTS

1. Paved roads

1. **IN COMPLIANCE.** Paved roads were being watered at the time of my inspection. Paved roads shall be cleaned daily during operating hours, weather permitting, with a power flush truck.
2. **IN COMPLIANCE.** No track out was observed while on site. Westfield was wet when I arrived. Track-out shall be cleaned up daily when it occurs.
3. **IN COMPLIANCE.** Speed limit signs are posted. Speed limit on paved roads is 15 MPH.

1. Unpaved Roads

- a. **PENDING.** Company submitted proposed demonstration to AQD as part of the recent ROP renewal application. It will be reviewed during the renewal process. The facility is currently applying calcium chloride dust suppressant. As such discretion is being applied. Unpaved roads shall be treated with a lignosulfonate (or equivalent) dust suppressant. If lignosulfonate is used, the application frequency shall be once every three weeks at an application rate of 1.0 gallons per square yard and a dilution ratio of 3:1. If a dust suppressant other than lignosulfonate is used, facility shall submit the demonstration required in SC IX.1.B.1.
- b. **IN COMPLIANCE.** Speed limit signs are posted. Speed limit on unpaved roads is 5 MPH.

VI. MONITORING/RECORDKEEPING

1. **IN COMPLIANCE.** Records include the required data. See attached log. The permittee shall record the data and information specified in Appendix 4, Section 4.1- Required Records for Fugitive Dust Sources and shall keep the record for a period of at least two years, and records shall be made available to AQD upon written or verbal request. The permittee may use alternate formats with the approval by the AQD District Supervisor for recording equivalent information without the need to modify or amend this permit.

2. **IN COMPLIANCE.** See attached log. The minimum of 5 days per week is being met and the facility is performing observations beyond the minimum required time period of March – October. The permittee shall perform a non-certified visible emission observation of the fugitive dust sources in SC III.A, B and C at least 5 days per week excluding non-operating days during March through October. The permittee shall initiate corrective action upon observation of visible emissions and shall keep a written record of each required observation and corrective action taken.

VII. REPORTING

4. IN COMPLIANCE. Facility has been submitting these reports since it was discussed during the prior inspection. A quarterly report shall be submitted by the permittee to AQD identifying each day in which an emission limit, operational requirement, or recording requirement, as specified in SIP No. 17-1993 (Revised 9/9/94) Exhibit A (Fugitive Dust Control Plan, Edward C. Levy Co. – Plant #3), was not met. This report shall, for each instance, explain the reason that the emission limit, operational requirement, or recordkeeping requirement was not met, the duration of the event, the remedial action taken, and a description of the steps which were taken to prevent a recurrence. These reports shall be submitted within 30 days following the end of the calendar quarter in which the data was collected.
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EUSLAGPLANT - ONLY PERMITTED EQUIPMENT OPERATING - Processing equipment associated with a 350 ton per hour slag processing operation located at Levy Plant 3. Processing equipment includes one grizzly feeder, four screens, two crushers and up to 20 conveyors and stackers.

POLLUTION CONTROL EQUIPMENT Water spray system

I. EMISSION LIMIT(S)

1. IN COMPLIANCE. See attached. No PM emissions exceeded 64.7 pounds per day from January 2021 – May 2022. PM shall not exceed the amount specified in Table 32 of R336.1331(1)2 based on a calendar day average.

PM10 emissions are limited to rate in Table 32. **IN COMPLIANCE** According to the 2021 MAERS, PM10 emissions were 64 lbs for 2021 and the plan operated 2080 hours. This results in an actual emissions rate of 0.03 lb/hr. The process weight rate was 33851 for 2021 (As reported in MAERS)/2080 hours operated/year which equals 16.3 tons/hr. According to Table 32, this corresponds to an allowed emission rate of roughly 25.2 lb/hr (at 15 tons/hr).

2. NOT IN OPERATION. Slag plant was not in operation during my inspection. However, based on the attached VE summary log, no readings above 5% opacity on a 3 minute average have been observed by the reader. Fugitive Dust is limited to 5% opacity on 3-minute average from any road, lot, storage pile, or material handling activity at a storage pile.

3. NOT IN OPERATION. Slag plant was not in operation during my inspection. However, based on the attached VE summary log, no readings above 20% opacity on a 3 minute average have been observed by the reader. Fugitive Dust is limited to 20% opacity on a 3-minute average from any other source.

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. NOT IN OPERATION. Raw slag delivered by Euclids from the steel mill shall be watered in the Euclids before it is stockpiled in the material handling stockpile.

2. UNKNOWN. Records indicate compliance with the minimum moisture although facility has not been sampling on a weekly basis for some periods of time as indicated in the Title V deviation reports. A spot check indicates that the 1/2 by zero product is meeting the minimum moisture requirement. The 3/4 by 1/2 generally is too, but the 3X is not. Below is an explanation I received from Ben Kroeger, prior Levy

corporate staff, on 8/16/17: The 3X and $\frac{3}{4}$ by $\frac{1}{2}$ are very coarse aggregate and do not readily retain water. However, due to their size and characteristics, they do not become airborne and fugitive dust is not a concern. At this time, this is acceptable to AQD. The moisture content of the raw slag during transfer by front end loaders from the material handling stockpile to the grizzly that feeds the plant shall range from 2 to 5 percent.

VI. MONITORING/RECORDKEEPING

1. **IN COMPLIANCE.** Readings are being taken at the required frequency by the contracted certified VE readers. Readings are stored in Levy's electronic recordkeeping system. The permittee shall perform a Method 9D certified visible emission observation of a representative operating part of EUSLAGPLANT including the grizzly feeder, crushers, screens, and all conveyors and all transfer points on conveyors at least once every two weeks for a minimum of 15 minutes during screening operations. The permittee shall initiate corrective action upon observation of visible emissions in excess of the applicable visible emission limitation and shall keep a written record of each required observation and corrective action taken.

2. **IN COMPLIANCE.** See attached records for January 2021 through May 2022. The permittee shall monitor and record the daily tonnage of material throughput for EUSLAGPLANT.

3. **IN COMPLIANCE.** See attached records for January 2021 through May 2022. The permittee shall calculate daily PM emissions based on the daily throughput and AQD agreed upon emission factors.

4. **NOT IN COMPLIANCE.** Facility has not been sampling on a weekly basis per Title V deviation reports. Note, company has not requested a reduction in sampling frequency. The permittee shall sample each finished product storage pile to determine the minimum moisture content by weight on a weekly basis. Records of the minimum moisture content shall be maintained. After six weekly samples, the permittee may petition the Department to reduce the sampling frequency to monthly. This petition must be submitted in writing and approved by the appropriate AQD District Supervisor.

EUFEBENEFICATION - Processing equipment associated with a 150 ton per hour iron (Fe) scrap beneficiation operation located at Levy Plant 3. Metallic materials are screened into various sizes. Processing equipment includes one grizzly feeder, two screens, and up to eleven conveyors and stackers. Equipped with water spray systems for air pollution

POLLUTION CONTROL EQUIPMENT Water spray system

IN COMPLIANCE. This emissions unit stopped operating as of 11/29/21 as noted in the attached. Note, historical records for 2021 of tons per year and hour are attached and indicate compliance with hours restriction and material throughput. Also, VE reading summary for January 2021 – November 2021 is attached. No VE exceedances were noted.

III. PROCESS/OPERATIONAL RESTRICTION(S)

3 - **NOT IN COMPLIANCE.** Water sprays were not in use when plant was operated based on attached table. The permittee shall not operate EUFEBENEFICATION

unless water spray bars located on the tail pulleys are installed and operating properly.

EUKISHPOT DUMP - Kish pots are dumped at the kish pot dump station for processing after they have been saturated with water for 24 hours at the kish pot watering station. Equipped with 10 water spray system at the kish pot watering station.

POLLUTION CONTROL EQUIPMENT Water sprays

This emissions unit stopped operating as of April 2, 2020. Components of the system are still in place. Kish pots are not on site and have been sent to other US Steel facilities according to Levy.

EUBOFLAGPIT - Basic Oxygen Furnace (BOF) slag pit with water spray systems for fugitive dust emission control.

POLLUTION CONTROL EQUIPMENT Water spray system

This emission unit has stopped operating as of March 31, 2020, and has been dismantled.

EXEMPT EMISSION UNITS - Equipment was evaluated during prior inspection. Below is updated information for some of the units:.

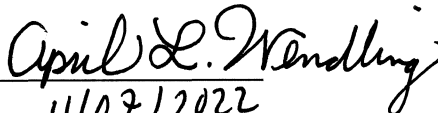
- The debris plant (EUDEBRISPLANT) is made up of 1-200 ton per hour hopper, 1-200 ton per hour grizzly feeder, and 1-200 ton per hour conveyor with 4 transfer points. The material is watered at the Euclid watering station prior to being fed into the debris plant for fugitive dust control. This is formerly referred to as the mill scale plant in the SIP consent order. DID NOT OPERATE IN 2021.
- The recycle material operation (EURECYCLEMATOPERATION) is made up of 1-100 ton per hour hopper, and 1-100 ton per hour conveyor with 2 transfer points (aka the pot slagger). Levy puts seven tons of slag in the bottom of the pot for protection. The slag acts as a cushion as molten steel can burn a hole right through the pot. THIS DID OPERATE. Emissions reported in MAERS for 2021 indicate compliance with R290.
- The material transfer conveyor system (EUMATRANSFERCONVEYOR) is made up of 1-200 ton per hour conveyor with 4 transfer points. DID NOT OPERATE IN 2021.
- No generators are in use at the moment according to Levy.

COMPLIANCE DETERMINATION

At this time, facility appears to be in non-compliance with some of the conditions evaluated above. A violation notice will be issued.

NAME 

DATE 10/28/22

SUPERVISOR 
11/07/2022