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

N595759862

FACILITY: Real Alloy Recycling, LLC		SRN / ID: N5957
LOCATION: 267 N. Fillmore Rd, COLDWATER		DISTRICT: Kalamazoo
CITY: COLDWATER		COUNTY: BRANCH
CONTACT: Brady Myers , Regional HSE Manager		ACTIVITY DATE: 08/24/2021
STAFF: Amanda Chapel	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT:		
RESOLVED COMPLAINTS:		

Real Alloy Recycling, LLC (N5957) consists of two secondary aluminum plants, the north plant located at 368 West Garfield Ave and the south plant located at 267 North Fillmore Road, Coldwater Michigan, Branch County. These plants were formerly referred to as Real Alloy Specification, Inc. and Real Alloy Recycling, Inc. The plants constitute a single stationary source that has the potential to emit nitrogen oxides (NOx), particulate matter less than 10 microns (PM10), and hazardous air pollutants (HAPs) in the form of hydrogen chloride (HCl) above respective major source threshold levels and is currently permitted under Permit to Install No. (PTI) 63-19A. The most recent ROP issued to the facility was MI-ROP-N5957-2012e. PTI 63-19A combined both the north and south plants into one permit and included FGFACILITY limits for criteria pollutants. The facility was previously subject to prevention of significant deterioration (PSD) regulations per 40 CFR Part 52.21 for particulate matter but since the facility was issued PTI 63-19A and they took FGFACILITY limits for all criteria pollutants, they are no longer subject to PSD regulations. They are also subject to the requirements of EGLE-AQD administrative consent order No 2019-29 that was effective on 11/21/19.

The source operates certain process equipment that is subject to major source requirements of the Secondary Aluminum Production NESHAP, 40 CFR Part 63, Subpart RRR as follows:

North Plant (formerly Real Alloy Specification):

EUALFURN1 – 18,000 lb/hour reverberatory melting furnace

EUALFURN2 – 120,000 lb/hour reverberatory holding furnace (Group 2 operation only)

EUALFURN7/8 – 17,000 lb/hour combined capacity reverberatory melting furnaces (EUALFURN7 and EUALFURN8)

EUALDRYER3 – 15,000 lb/hour aluminum chip dryer

EUALSHREDDER – 25,000 lb/hour aluminum crusher/shredder

South Plant (formerly Real Alloy Recycling):

EUIMREVERBFURN – 15,000 lb/hour reverberatory melting furnace

EUIMROTFURN1/2 – 42,000 lbs/hour rotary melting furnaces, formerly separate (EUIMROTFURN1 and EUIMROTFURN2)

On August 24, 2021, AQD's Amanda Chapel (staff) arrived on site to conduct an unannounced air quality inspection at the Real Alloy facilities to determine compliance with 40 CFR Part 63, Subpart RRR and PTI No. 63-19A. The facility also has MI-ROP-N5957-2012e but all process equipment contained in the ROP has been updated and is contained in the PTI. The PTI went through public comment and will be rolled into the ROP upon renewal.

I entered the reception area of the south plant and located a staff member and let them know I was there to complete an unannounced air quality inspection. Real Alloy staff called Mr. Brady Myers and Mr. Shawn Osborne, the environmental manager for both facilities and the environmental compliance staff for the south plant. We entered a conference room to review emissions records, calibration information, and go over a list of the processes that I would like to view during the inspection. Staff requested material usage and emission reporting data for the past 12 months, most recent process weight and chlorine scale calibration dated, control device thermocouple calibration dates, baghouse draft fan RPM, bag leak detection calibration dates, and the most recent annual capture and collection inspection dates as required for all NESHAP subject emission units.

Currently, the north and south plants run two production shifts from Sunday to Friday 7-7 with a day and night crew and processing runs 2 8-hour shifts. There are weekend maintenance shifts on nights and the facility isn't running Friday through Sunday. Required PPE include foam lined safety glasses, hearing protection, hard hat, long sleeve shirt preferably FR compliant, and all jewelry must be removed or covered.

EUALFURN1

Process emissions from EUALFURN1 are routed to a 60,000 CFM lime injected Baghouse No. 2 vented from SVALBH1. This is equipped with a bag leak detection (BLD) system. The permit has emission limits for both the furnace flue as well as the baghouse.

Pollutant	Limit	Vented Through	12-Month Rolling Emission
Hydrogen Chloride (HCl)	9.9 tpy	SVALBH1	0.17 tpy
Hydrogen Chloride (HCl)	9.9 tpy	SVALFURN1	9.17 tpy
Chlorine	1.36 tpy	SVALBH1	0.018 tpy
Chlorine	16.31 tpy	SVALFURN1	0.047 tpy
NOx	2.48 tpy	SVALBH1	0.581 tpy
NOx	9.90 tpy	SVALFUFRN1	2.72 tpy

SO2	4.95 tpy	SVALBH1	0.734 tpy
PM10	2.48 tpy	SVALBH1	0.871 tpy
PM10	8.09 tpy	SVALFURN1	4.997 tpy
PM2.5	2.48 tpy	SVALBH1	0.871 tpy
PM2.5	8.09 tpy	SVALFURN1	4.997 tpy
PM	2.48 tpy	SVALBH1	0.627 tpy
PM	13.12 tpy	SVALFURN1	8.1 tpy
THC, as propane	2.48 tpy	SVALBH1	1.528 tpy
THC, as propane	2.97 tpy	SVALFURN1	0.214 tpy
HF	2.43 tpy	SVALFURN1	0.321 tpy

The highest emissions were all in June or July of 2021. The HCl emissions from SVALFURN1 were the closest to the emission limit. The EGLE-AQD administrative consent order No 2019-29 contains requirements for the facility to maintain compliance with PM and PM10 emission limits for the reverberatory melting furnace and PM10 limits for the flue of the reverberatory melting furnace for SVALFURN1. As required by the permit and the consent order, the facility appears to be incompliance with the required permit limits.

The furnace appeared to operating during the inspection. The molten level was at 35.5" which is above the 15" arch height, as required by the permit. NESHAP labels for all reverberatory furnaces on the north side are located on the production floor. The weigh scales for the north plant were all last calibrated on 6/10/2021. The thermocouples for Furnace 1, 7, and 8 were calibrated on 7/14/2021. The annual capture and collection system was inspected on 1/11/2021 for all furnaces on the north side.

The chlorine room is between baghouse #1 and #2 and is used to store the liquid chlorine cylinders and evaporator system that is used to supply chlorine gas to EUALFURN1 and EUALFURN7/8 for fluxing and demagging aluminum scrap. These cylinders are weighed continuously to keep track of chlorine usage in each furnace. During the inspection, the chlorine scale #1 read 3050 pounds and scale #2 read 3414. The alarm setpoint in the room is 3 ppm. The dates of the scale calibrations were listed beneath the readouts and said 6/10/21 which was confirmed above in an email from Mr. Shaun Osborne. There are three evaporators that are designed to a specific furnace. Evaporator #1 serves EUALFURN1 and evaporators #2 and #3 serve

EUALFURN7 and EUALFURN8 respectively. The chlorine concentration are continuously monitored inside the room and an alarm will be triggered is it exceeds the ppm setpoint.

The control ID for the baghouse is Baghouse #2, which is a lime injected 60,000 cfm shaker type baghouse with a BLD system vented through SVALBH1. During the inspection, the lime tube was free flowing with a dial setting of 3. The 8-hour maintenance check records were available on site and viewed during the inspection. The 15-minute baghouse inlet temperature was 116 degrees F and the 3-hour average inlet temperature was also 116 degrees F with a maximum temperature of 136 degrees F. The baghouse pressure drop was 6.33" and baghouse draft fan 249 amps. BLD reading was 4.05%, setpoint for the BLD was 14%, and the delay alarm set for 120 seconds. There were no visible emissions seen during the inspection.

The facility performs a monthly BLD response test, electronic drift test, and probe cleaning on all control equipment that is equipped with BLD equipment. The BLD equipment automatically runs a zero and span calibration.

Facility certified in their most recent semi-annual NESHAP excess emissions/summary report dated 3/15/2021 that during the entire reporting period, all monitoring and associated recordkeeping requirements in the ROP were met and no deviations from these requirements or other terms or conditions occurred. This includes the molten metal level was maintained about the archway height between the charge well and the furnace hearth during reactive fluxing.

EUALFURN2

EUALFURN2 is a reverberatory holding furnace with 120,000 lbs holding capacity and no charge well. There is no pollution control equipment associated with this furnace, so emissions are vented uncontrolled from SVALFURN2. This is a Group 2 operation furnace only.

Pollutant	Limit	Vented Through	12-Month Rolling Emission
NOx	2.01 tpy	SVALFURN2	1.56 tpy
PM	1.53 tpy	SVALFURN2	0.308 tpy
PM10	1.53 tpy	SVALFURN2	0.575 tpy
PM2.5	1.53 tpy	SVALFURN2	0.575 tpy
THC, as propane	1.01 tpy	SVALFURN2	0.862 tpy

The highest emissions were all in November of 2021. NOx appears to be the pollutant the closest to the emission limit, about 78% of the limit. The weigh scale was last calibrated on 6/10/2021

and the last annual NESHAP capture and collection system inspection date is 1/11/2021. There were no visible emissions seen from the furnace during the inspection.

The EGLE-AQD administrative consent order No 2019-29 contains requirements for the facility to maintain compliance with PM and NOx emission limits for the flue of EUALFURN2, which is denoted as SVALFURN2 for the vent. As required by the permit and the consent order, the facility appears to be incompliance with the required permit limits.

EUALFURN7/8

This emission unit consists of two reverberatory melting furnaces, EUALFURN7 and EUALFURN8, which have become commonly controlled. These furnaces have a combined hourly charge of 17,000 pounds. Emissions from natural gas are controlled by a 90,000 CFM lime-injected baghouse, SVALFURN7/8 (Baghouse #1). Emissions from fluxing and melting are controlled by a 65,000 CFM lime-injected baghouse vented through SVALBH7/8 (Flue baghouse F7N and F8).

Pollutant	Limit	Vented Through	12-Month Rolling Emission
Hydrogen Chloride (HCl)	12.00 tpy	SVALBH7/8	5.060 tpy
Hydrogen Chloride (HCl)	12.00 tpy	SVALFURN7/8	1.379 tpy
NOx	4.5 tpy	SVALBH7/8	1.518 tpy
NOx	12.00 tpy	SVALFUFRN7/8	1.898 tpy
SO2	6.0 tpy	SVALBH7/8	1.898 tpy
PM	4.5 tpy	SVALBH7/8	0.329 tpy
PM	4.5 tpy	SVALFURN7/8	1.328 tpy
PM10	4.5 tpy	SVALFURN7/8	3.416 tpy
PM2.5	8.1 tpy	SVALBH7/8	0.455 tpy
PM2.5	4.5 tpy	SVALFURN7/8	3.416 tpy

THC, as propane	27 tpy	SVALBH7/8	10.626 tpy
THC, as propane	3.0 tpy	SVALFURN7/8	0.430 tpy

Material	Limit	Equipment	Highest Daily/Monthly Usage
Feed/Charge	60,000 tpy	SVALFURN7/8	25,301 pounds
Feed/Charge	480,000 lbs/day	SVALFURN7/8	207,400 pounds
Beryllium	0.01% of feed/charge	SVALFURN7/8	0 pounds

The highest emissions were all in June or July of 2021. The PM2.5 emissions from SVALFURN7/8 were the closest to the emission limit. The EGLE-AQD administrative consent order No 2019-29 contains requirements for the facility to maintain compliance with PM, PM10, NOx, and SOx emission limits for the EUALFURN7/8. As required by the permit and the consent order, the facility appears to be incompliance with the required permit limits. According to Mr. Likens, the facility has not processed any Beryllium.

The furnace appeared to operating during the inspection. The molten level was 20" in EUALFURN8 and 15" in EUALFURN7 which is above or equal to the 15" arch height, as required by the permit. EUALFURN7 had just completed a tapping cycle and the facility was charging clean metal to increase the heel. The weigh scales for the north plant were all last calibrated on 6/10/2021. The thermocouples for Furnace 1, 7, and 8 were calibrated on 7/14/2021. The annual capture and collection system was inspected on 1/11/2021 for all furnaces on the north side.

Chlorine is supplied to these furnaces from the same room that supplies chlorine to EUALFURN1. The cylinders are weighed continuously to keep track of chlorine usage in each furnace. During the inspection, the chlorine scale #3 read 3326 pounds and scale #4 read 3333. The alarm setpoint in the room is 3 ppm. The dates of the scale calibrations were listed beneath the readouts and said 6/10/21. The chlorine concentrations are continuously monitored inside the room and an alarm will be triggered is it exceeds the ppm setpoint.

The control ID for the baghouses are Baghouse #1 and flue baghouse F7N and F8. Baghouse #1 control emissions from natural gas combustion and is a 90,000 CFM lime injected baghouse through SVALFURN7/8. Emissions from fluxing and melting are routed through this 65,000 CFM lime-injected baghouse, denoted as SVALBH7/8. During the inspection, the lime tube was free flowing to SVALFURN7/8 with a dial setting of 3. The 15-minute baghouse inlet temperature was 146 degrees F and the 3-hour average inlet temperature was also 132 degrees F with a maximum temperature of 169 degrees F. The baghouse pressure drop was 5.85" and baghouse draft fan 267 amps. BLD reading was 4.01%, setpoint for the BLD was 3%, and the delay alarm set for 147 seconds. Mr. David Likens and I looked at the alarms for the facility to determine if there was an

issue with the BLD and setpoint. There were no alarms set off from the high BLD. He was going to investigate the issue further but believed the high BLD reading was a temporary reading and would drop below the alarm setpoint. There were no visible emissions seen during the inspection.

There was no lime being used in SVALBH7/8 during the inspection. The lime dial was set to 0.5. The 8-hour maintenance check records were available on site and viewed during the inspection. The 15-minute baghouse inlet temperature for BH7 was 163.7 degrees F and the 3-hour average inlet temperature was 146.8 degrees F. The baghouse pressure drop was 4.1" and baghouse draft fan 226 amps. BLD reading was 0.09%, setpoint for the BLD was 21%, and the delay alarm set for 60,000 seconds. There were no visible emissions seen during the inspection.

The 15-minute baghouse inlet temperature for BH8 was 259.6 degrees F and the 3-hour average inlet temperature was 250.2 degrees F. The baghouse pressure drop was 3.6" and baghouse draft fan 160.7 amps. BLD reading was 0.05%, setpoint for the BLD was 21%, and the delay alarm set for 60,000 seconds. There were no visible emissions seen during the inspection. It is recommended that the facility reevaluate the length of the BLD alarm on these baghouses. A 60,000 second alarm delay is well outside the recommended range of 30 seconds, as recommended by the EGLE CAM specialist.

Facility certified in their most recent semi-annual NESHAP excess emissions/summary report dated 3/15/2021 that during the entire reporting period, all monitoring and associated recordkeeping requirements in the ROP were met and no deviations from these requirements or other terms or conditions occurred. This includes the molten metal level was maintained about the archway height between the charge well and the furnace hearth during reactive fluxing.

A PTI application is in house currently to update emission limits for this emission unit to include PM10 limits for SVALBH7/8. The missing emission limit was discovered during a review of the facility's CAM plan which was required to be updated for the ROP renewal process. This limit should have been included and was omitted as an oversight. Once the limit is updated, the facility will submit an ROP application modification request.

EUALDRYER3

This is a rotating drum dryer capable of handling up to 15,000 pounds per hour of metal chips. Process emissions are routed to an afterburner, cyclone, and 43,000 CFM baghouse, vented through SVALDRY3OX aka Torit #2. The drum dryer seals are controlled by at 34,000 CFM baghouse, Torit #3, which also controls EUALSHREDDER.

Pollutant	Limit	Vented Through	12-Month Rolling Emission
NOx	12.42 tpy	SVALDRYER3	4.705 toy
PM	8.07 tpy	SVALDRYER3	3.058 tpy

PM10	10.04 tpy	SVALDRYER3	3.803 tpy
PM2.5	10.04 tpy	SVALDRYER3	3.803 tpy
THC, as propane	13.46 tpy	SVALDRYER3	5.097 tpy

Material	Limit	Equipment	Highest Daily/Monthly Usage
Feed/Charge	41,400 tpy	SVALDRYER3	15,683 tpy
Feed/Charge	250,200 lbs/day	SVALDRYER3	218,160 lbs

The facility processes unpainted metal chips only in this emission unit. The scale calibration date is 6/10/21 and annual capture and collection system certification date is 1/11/21, The thermocouple calibration date for Torit #2 and Torit #3 is 5/31/21 and BLD most recent inspection date is July 16, 2021. The drum dryer temperature was 564 degrees F, the afterburner 15-minute average 1,484 degrees F, and 3-hour average temperature 1,482 degrees F.

The baghouse inlet 15-minute average was 384 degrees F and 3-hour average temperature 383 degrees F. The bypass cap was closed and Mr. Likens was going to investigate if the bypass had been completely removed from the system. The baghouse pressure drop read 9.71" and the draft fan was 160 amps. The BLD reading was 0.3% during the inspection with a BLD setpoint of 5%. The BLD alarm delay was set to 61 seconds. No visible emissions were observed during the inspection.

EUALSHREDDER

This is a 25,000 pound per hour shredder with emissions controlled by a 34,000 CFM baghouse (Torit #3) which also collects seals emissions from the chip dryer, as discussed above.

Pollutant	Limit	Vented Through	12-Month Rolling Emission
PM10	2.74 tpy	SVALSHREDDER	0.204 tpy
PM2.5	2.74 tpy	SVALSHREDDER	0.204 tpy
PM	2.74 tpy	SVALSHREDDER	0.160 tpy

NOx	1.09 tpy	SVALSHREDDER	0.177 tpy
THC, as propane	2.74 tpy	SVALSHREDDER	0.222 tpy

Material	Limit	Equipment	Highest Daily/Monthly Usage
Feed/Charge	54,750 tpy	SVALSHREDDER	17,734 tpy
Feed/Charge	450,000 lbs/day	SVALSHREDDER	431,500 pounds

The highest emissions were all in October 2020 for this emission unit and the highest single day weight processed was on April 26, 2021. This process was not operating during the inspection.

The scale was most recently calibrated on 6/10/2021 and the thermocouple calibrated on 5/31/2021. The annual capture and collection inspection date was 1/11/2021 and the bag leak detection calibrated on June 18, 2021. The baghouse inlet 15-minute average was 117 degrees F and the 3-hour average was 114 degrees F with a maximum temperature of 118 degrees F. The baghouse pressure drop was 3.65" with the draft fan running at 116 amps. BLD readings were 0.65% with a setpoint of 9% and an alarm delay of 142 seconds.

EUALDROSS

These are the dross handling operations at the north plant where are emissions are vented through a 50,000 CFM pulse jet baghouse (Torit #1) with no BLD system. This was not operational at the time of the inspection.

Pollutant	Limit	Vented Through	12-Month Rolling Emission
PM	0.50 tpy	SVALDROSS	0.471 tpy
PM10	3.50 tpy	SVALDROSS	3.274 tpy
PM2.5	3.50 tpy	SVALDROSS	3.274 tpy

All the high emissions happened in October 2020. The fabric curtains that were hanging down from the collection hood over the loading area appeared to be in good condition. Since the dross handling was not operational during the inspection, there were some questions about an area where there appeared to be curtains removed. Mr. Likens speculated that they were interfering

with the loading operations. This was an area of about three curtains. No visible emissions could be evaluated and follow up was requested.

The baghouse pressure drop was 0" and the fan was not pulling in any air as the emission unit was not operating during the inspection. The visible emissions and pressure drop are recorded at least once every four hours during operation.

EUALCRUCIBLES

This emission unit contains ten gas-fired crucible stations rated at 1.5 MMBtu/hour each with no pollution control. During the inspection there were no crucibles being fired or filled. The facility reports that crucibles have been in low demand. During the records review portion of the inspection, the crucible emissions were not available. This was provided after the inspection and will be added to the facility wide recordkeeping spreadsheet.

Pollutant	Limit	Vented Through	12-Month Rolling Emission
NOx	6.441 tpy	SVALCRUCIBLES	2.55 tpy

The highest emissions were in July of 2021. The facility is also tracking all natural-gas usage throughout the facility, by emission unit.

Exempt equipment

The facility has a cold cleaner located in the maintenance area. The lid was closed while not in use and operations sticker was on the inside of the lid. The cold cleaner is maintained by Safety Kleen and uses Safety Kleen Premium Solvent which is 100% light petroleum distillate solvent.

CAM Subject Units – North Plant

The facility is required to comply with compliance assurance monitoring (CAM) requirements. In the ROP, this consists of emission units that use a control device to achieve compliance with a federally enforceable emission limitation or standard for particulate matter. The permittee submitted a new CAM plan received on August 28, 2021 as the request of the Department. The applicable emission units on the north side are EUALDRYER3, EUALFURN1, EUALFURN7/8, EUALSHREDDER, and EUALDROSS. The permittee operates and maintains a BLD system for the baghouses associated with CAM, except for the EUALDROSS. The BLD system automatically runs a daily zero and span calibration. Any calibration errors will trigger the BLD system to alarm and send an email to management who notify the maintenance staff to evaluate the system.

The furnace and dryer baghouses on the north side are equipped with a high inlet temperature audio/visual blue light alarm that is tested monthly for functionality by the maintenance staff.

The facility also has computer software (ie Ignition) that looks at predicted 15-minute temperature average and well send an email to management and maintenance staff if inlet temperatures may approach limit established during the most recent performance test. The permittee submits a semi-annual report of monitoring, any deviations and/or monitoring downtime during the reporting period.

EUIUMHOTDROSS

This process is a salt cake/hot dross handling and loadout. Emissions are controlled by a 40,000 CFM baghouse vented through SVIMDROSSBH. This was operational during the inspection.

Pollutant	Limit	Vented Through	12-Month Rolling Emission
PM	3.942 tpy	EUIMHOTDROSS	0.011 tpy
PM10	3.942 tpy	EUIMHOTDROSS	2.578 tpy
PM2.5	3.942 tpy	EUIMHOTDROSS	2.578 tpy

Fabric curtains that hang down from the dust collection hood appeared to be in good condition. No visible emissions were noted from the baghouse at the time of the inspection nor from the entrance to the dross handling area. The baghouse pressure drop read 13" and the fan RPMs were 1465. The monitoring records were available during the inspection. Visible emissions are noted at least daily and pressure drop once per shift.

EUIMREVERBFURN

This is a reverberatory melting furnace with a charge capacity of 15,000 pounds per hour. Emissions from natural gas are emitted uncontrolled from the flue. Emissions from fluxing and melting are controlled by a 70,000 CFM lime-injected baghouse and are vented from SVIMREVBH.

Pollutant	Limit	Vented Through	12-Month Rolling Emission
Hydrogen Chloride (HCl)	1.2 tpy	SVIMREVBH	0.485 tpy
Hydrogen Chloride (HCl)	4.94 tpy	SVIMREVFLUE	0.801 tpy
NOx	1.2 tpy	SVIMREVFLUE	0.482 tpy

NOx	1.2 tpy	SVIMREVBH	0.485 tpy
SO2	1.80 tpy	SVIMREVBH	0.630 tpy
PM10	0.75 tpy	SVIMREVBH	0.303 tpy
PM10	7.8 tpy	SVIMREVFLUE	1.942 tpy
PM	0.75 tpy	SVIMREVBH	0.303 tpy
PM	9.75 tpy	SVIMREVFLUE	0.376 tpy
PM2.5	0.75 tpy	SVIMREVBH	0.303 tpy
PM2.5	7.8 tpy	SVIMREVFLUE	1.942 tpy
THC, as propane	1.46 tpy	SVIMREVBH	0.589 tpy
THC, as propane	1.46 tpy	SVIMREVFLUE	0.589 tpy
HF	1.38 tpy	SVIMREVFLUE	0.153 tpy

Material	Limit	Equipment	Highest Daily/Monthly Usage
Feed/Charge	6,000 tpy	EUIMREVERBFURN	2300 tpy
Feed/Charge	200,000 lbs/day	EUIMREVERBFURN	83,168 lbs/day

The emissions were all highest in December of 2020. The EGLE-AQD administrative consent order No 2019-29 contains requirements for the facility to maintain compliance with NOx, PM10, and HCl emission limits for the EUIMREVERBFURN. As required by the permit and the consent order, the facility appears to be incompliance with the required permit limits.

The furnace was operational during the inspection. Molten level was confirmed to be 23.5". No visible emissions were observed from the baghouse during the inspection. The overall differential

pressure was 9.5". The current BLD reading was 3.18% with an alarm at 11% with a 24 second delay. During the inspection, the fan on the baghouse was running at 1675 RPM.

For the entirety of the south plant, the scales were last calibrated on 6/10/21 and the thermocouples were calibrated on 6/17/21. The annual capture and collection system evaluation date for the reverberatory furnace was on 6/9/21. The feed/charge scale is shared with the rotary furnaces and is located next to the rotary furnace control tower. The facility certified in their most recent semi-annual NESHAP excess emissions/summary report that the molten metal level was maintained above the archway height between the furnace charge well and hearth during reactive fluxing.

The chlorine room is used to store liquid chlorine cylinders and evaporator system that is used to supply chlorine gas to EUIMREVERBFURN for fluxing and demagging. Chlorine cylinders are weighed continuously to keep track of chlorine usage in the reverb furnace. There is one scale and one evaporator in this room. The scale was last calibrated on 8/12/21 and 6/16/231 before that. The current weight of the chlorine was 3314 pounds. The chlorine sensor was last calibrated on 12/14/20. Chlorine was not currently being used during the inspection. According to staff personnel, chlorine is used about once a month now.

During the inspection, the lime was free flowing in the tube. The dial setting was at 1.8. The lime-flow 8-hour maintenance checks were available and reviewed during the walk-through. The 15-minute baghouse inlet temperature was 118 degrees F and the 3-hour average was 118 degrees F, with an alarm setting of 178 degrees F.

EUIMROTFURN1/2

This emission unit consists of two formerly separate furnaces that have become commonly controlled (EUROTFURN1 and EUROTFURN2) with a combined capacity of 42,000 pounds. Emissions from EUIMROTFURN1/2 are vented through oxy-fuel burners and an 80,000 CFM line-injected baghouse.

Pollutant	Limit	Vented Through	12-Month Rolling Emission
Hydrogen Chloride (HCl)	3.6 tpy	EUIMROTFURN1/2	2.133 tpy
PM	18.11 tpy	EUIMROTFURN1/2	10.563 tpy
NOx	27.162 tpy	EUIMROTFURN1/2	9.771 tpy
SO2	45.27 tpy	EUIMROTFURN1/2	10.035 tpy
PM10	22.64 tpy	EUIMROTFURN1/2	13.204 tpy

PM2.5	22.64 tpy	EUIMROTFURN1/2	13.204 tpy
THC, as propane	40.74 tpy	EUIMROTFURN1/2	23.767 tpy

Material	Limit	Equipment	Highest Daily/Monthly Usage
Feed/Charge	90,540 tpy	EUIMROTFURN1/2	52,800 tpy
Feed/Charge	360 tons/day (720,000 lbs/day)	EUIMROTFURN1/2	441,000 lbs

The highest emissions were in October of 2020 and the highest feed charge usage per day was on July 10, 2021. Both furnaces were operating during the inspection, both melting scrap. No visible emissions were noted during the inspection. The overall baghouse differential pressure reading was 7.8". The BLD system was last calibrated on 2/26/21 and read 1.21% during the inspection with a setpoint of 14% and alarm delay of 46 seconds. The baghouse 15-minute temperature was 157 degrees F and the 3-hour average of 202 degrees F. The baghouse draft fan was pulling about 264 RPMs during the inspection. The lime was free flowing and the dial was set to 3.

The annual capture and collection system inspections were on 6/6/2021 for EUIMROTFURN1 and 3/9/2021 for EUIMROTFURN2.

EUIMCURCIBLES

This flexible group contains eight gas-fired crucible stations rated at 1.5 MMBtu/hr each. These were not running during the inspection and staff indicated that these are not being consistently used on site as the industry demand is more for other products.

Pollutant	Limit	Vented Through	12-Month Rolling Emission
NOx	5.153 tpy	SVIMCRUCIBLES	1.952 tpy

The highest monthly emissions for this emission unit were in July 2021.

Exempt equipment

The facility has a cold cleaner located in the maintenance area. The lid was closed while not in use and operations sticker was on the inside of the lid. The cold cleaner is maintained by Safety Kleen and uses Safety Kleen Premium Solvent which is 100% light petroleum distillate solvent.

Rule 290 – Deox Line

The facility runs a deox casting operation which uses mold release at the South plant. Facility staff was able to provide the SDS for the mold release as well as contact the supplier who confirmed there are no volatiles or carcinogenic air contaminants in the mold release formulation. Only crystalline silica quartz is identified on the SDS. The facility also confirmed that less than 1000 pounds of the mold release is used at the facility. The deox line is not the only place the mold release is used, however, since less than 1000 lbs a month is purchased for the entire facility, less than 1000 lbs is used, monthly. Therefore, the facility will track usage of mold release, monthly, moving forward as well as keep the SDS and supplier documentation of the nature of ingredients on site.

FGFACILITY

These conditions are newly added to this permit to maintain the facility below PSD levels. These apply to all equipment, source-wide, and include all other permits, grandfathered equipment, and exempt equipment.

Pollutant	Limit	Vented Through	12-Month Rolling Emission
PM	87.6 tpy	FGFACILITY	23.4 tpy
PM10	84.4 tpy	FGFACILITY	33.5 tpy
PM2.5	83.4 tpy	FGFACILITY	33.5 tpy
NOx	99.3 tpy	FGFACILITY	22.5 tpy
CO	82.9 tpy	FGFACILITY	23.6 tpy
VOC	99.8 tpy	FGFACILITY	41.3 tpy

Emissions for this flexible group were the highest in October 2020 and June 2021. The facility is also monitoring the total maximum heat input of all exempt natural gas burning equipment along with all the natural gas used on site.

CAM Subject Units – South Plant

The facility is required to comply with compliance assurance monitoring (CAM) requirements. In the ROP, this consists of emission units that use a control device to achieve compliance with a federally enforceable emission limitation or standard for particulate matter. The permittee submitted a new CAM plan received on August 28, 2021 as the request of the Department. The applicable emission units on the north side are EUIMHOTDROSS, EUIMROTFURN1/2, and EUIMREVERBFURN. The permittee operates and maintains a BLD system for the baghouses associated with CAM, except for the EUIMHOTDROSS. The BLD system automatically runs a daily zero and span calibration. Any calibration errors will trigger the BLD system to alarm and send an email to management who notify the maintenance staff to evaluate the system.

The permittee submits a semi-annual report of monitoring, any deviations and/or monitoring downtime during the reporting period.

The facility appears to be in compliance with all requirements contained in PTI 62-19A, EGLE-AQD administrative consent order No 2019-29, and all other applicable state and federal air quality regulations.

NAME Duane Clapp DATE 9/15/21 SUPERVISOR RIL 9/20/21