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

B430635751

FACILITY: Gerdau Special Steel North America - Jackson Mill		**SRN / ID:** B4306
LOCATION: 3100 BROOKLYN RD, JACKSON		**DISTRICT:** Jackson
CITY: JACKSON		**COUNTY:** JACKSON
CONTACT: Ross Bradley , Environmental Manager		**ACTIVITY DATE:** 07/28/2016
STAFF: Michael Gabor	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Major / ROP Source. Full Compliance Evaluation (FCE) and Inspection (PCE) of Gerdau Special Steel North America - Jackson Mill, located at 3100 Brooklyn Road, Jackson, Michigan 49203.		
RESOLVED COMPLAINTS:		

Major / ROP Source. Full Compliance Evaluation (FCE) and Inspection (PCE) of Gerdau Special Steel North America - Jackson Mill, located at 3100 Brooklyn Road, Jackson, Michigan 49203.

State Registration Number (SRN): B4306

Facility Contacts

Ross Bradley (RB), Environmental Manager, 517-764-3967, Ross.Bradley@Gerdau.com.

Andre Wollmann (AW), Plant Manager, 517-764-3900, andre.wollmann1@gerdau.com.

Purpose

On July 28, 2016, I conducted a scheduled, announced inspection of the Gerdau Special Steel North America - Jackson Mill (GJ) facility located in Jackson, Michigan (Jackson County) at 3100 Brooklyn Road. Scott Miller (SM), Jackson District Supervisor, also joined me for this inspection. The purpose of the inspection was to determine the facility's compliance status with applicable federal and state air pollution regulations, particularly Michigan Act 451, Part 55, Air Pollution Control Act and administrative rules, and the conditions of GJ's Renewable Operating Permit (ROP) number MI-ROP-B4306-2015, issued February 12, 2015. This facility was last inspected on September 19, 2014. The facility's last stack test occurred on May 8, 2014, and compliance with PM, PM10, mercury (Hg), manganese (Mn), lead (Pb), NOx, VOC, and opacity limits were confirmed.

Facility Location

Several residential and commercial properties, including a preschool, are located about 1,000 feet south and southeast of the facility, while US-127 and open / agricultural fields are located west and north, respectively, of the facility.

Arrival & Facility Contacts

Some visible emissions (VE) were observed upon our arrival and parking at the facility, at approximately 9:00 am. The VE were coming from a torching operation occurring in the scarp yard, next to the main entrance / parking area. We proceeded to the facility office to request access for an inspection of the facility with RB. We asked RB to observe the torching operation prior to proceeding to his office. We informed him that it appears that the operation is not portable, etc. as Gerdau employees operated the torching activities and the fuel source was a permeant installation, and that it would need to be incorporated into its ROP during the next cycle.

I also described Air Quality Division's (AQD) recommended best management practices (BMP) for torching (I also shared via email after the inspection (attached)). Torching was done directly on dirt and so a bit of flame impingement and elevated quantities of VE and plumes of smoke were generated. We requested that they immediately implement AQD's BMP and to monitor their opacity to remain below their ROP's General Condition (GC) 11's 20% limit. We then were escorted by RB to his office, and were also joined by AW, for a pre-inspection conference.

Regulatory Applicability

The facility is a Major / ROP source for CO and had also accepted PM, NOx, SO2, CO, and VOC emission limits in order to remain below major source emission thresholds for these pollutants. The facility is regulated by ROP number MI-ROP-B406-2015. It is also subject to:

- Title 40 of the Code of Federal Regulations (CFR), Part 63, Subpart YYYYY (5Y), National Emission Standards for Hazardous Air Pollutants (NESHAP) for Electric Arc Furnace (EAF) Steelmaking Facilities. This MACT includes requirements to limit mercury and other contaminants in the steel scrap, and a PM and PM10 emission limit of 0.0052 gr/dscf of exhaust gases and 6 % opacity limit for the facility's electric arc furnaces (EAFs).
- Title 40 of the CFR, Part 63, Subpart ZZZZ, NESHAP for Reciprocating Internal Combustion Engines (RICE) (AKA RICE MACT).
- Title 40 of the CFR, Part 64, Compliance Assurance Monitoring (CAM), with the following CAM monitoring parameters for FG-EAF/LMF/VAD: VE readings, baghouse (BH) pressure drop monitoring, and BH inspection and maintenance activities.

The facility reports its emissions to MAERS and is designated as a Fee Category I source.

Emission Unit (EU) / Flexible Group (FG) Details

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-HTOV001	30 MMBTU/hr natural gas fired heat treat furnace PTI 24-06	7/1/1981	FG-FACILITY
EU-ROOFMONITOR	This emission unit is comprised of the melt shop roof monitor. The roof monitor is a covered vent at the apex of the roof line of the melt shop. The emissions emitted from the roof monitor are fugitive emissions that escape the roof canopies. PTI 535-96I	1/1/1973	FG-SHOP
EU-AF01	60.2 MMBTU/hr annealing furnace #1 PTI 183-01	9/8/2001	FG-FACILITY
EU-AF02	38.4 MMBTU/hr annealing furnace #2 PTI 183-01	9/25/2001	FG-FACILITY
EU-EAF-01	Electric arc furnace (EAF #1) melts scrap iron in a batch process. It is a refractory-lined cylindrical vessel with bowl shaped hearth and dome-shaped movable roof. The EAF emissions are ducted to a common baghouse (Baghouse No. 3)	1/1/1973	FG-EAF FG-EAF/LMF/VAD FG-SHOP FG-FACILITY
EU-EAF-02	Electric arc furnace (EAF #2) melts scrap iron in a batch process. It is a refractory-lined cylindrical vessel with bowl shaped hearth and dome-shaped movable roof. The EAF emissions are ducted to a common baghouse (Baghouse	1/1/1973	FG-EAF FG-EAF/LMF/VAD FG-SHOP FG-FACILITY

	No. 3).		
EU-LMF	A ladle metallurgy furnace (LMF). Exhaust gases from the LMF are captured by the removable hood and associated canopy hoods and then routed to the melt shop baghouse. (DV-BH03) for PM emission control.	7/7/1989	FG-EAF/LMF/VAD FG-SHOP FG-FACILITY
EU-VAD	A vacuum arc degasser (VAD). Exhaust gases from the VAD are captured by the close fitting hood at the vacuum chamber door and associated canopy hoods and then routed to the melt shop baghouse (DV-BH03) for PM emission control.	7/7/1989	FG-EAF/LMF/VAD FG-SHOP FG-FACILITY
EU-binfilter	This device is a small baghouse atop a silo. Its use is to prevent fugitive emissions from escaping the silo, which stores EAF dust.	3/1/1998	FG-FACILITY
EU-limeBH	This is a small baghouse attached to the lime system. Its purpose is to collect fugitive emissions during lime system operation. It operates about 2 hours per day.	6/1/1999	FG-FACILITY
EU-COLDCLEANERS	Seventeen (17) cold cleaners	11/26/13	FG-FACILITY
EU-ENGINE1	Existing Emergency Compression Ignition Generator < 500 HP (Clean 1 West)	June 1984	FG-RICE
EU-ENGINE2	Existing Emergency Compression Ignition Generator <500 HP (Clean 1 East)	5/23/1997	FG-RICE
EU-ENGINE3	Existing Emergency Compression Ignition Generator < 500 HP (Turn Office)	Before 7/11/2005	FG-RICE

EU-ENGINE4	Existing Emergency Compression Ignition Generator >500 HP. (New Heat Treat)	2001	FG-RICE
EU-ENGINE5	Existing Emergency Spark Ignition Engine < 500 HP (Outside #1 STR)	7/14/1998	FG-RICE
EU-ENGINE6	Existing Emergency Spark Ignition Engine <500 HP (Admin Bldg.)	6/8/2006	FG-RICE

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG-EAF	Two (2) Electric Arc Furnaces	EU-EAF-01 and EU-EAF-02
FG-EAF/LMF/VAD	Two (2) Electric Arc Furnaces, a ladle metallurgy furnace (LMF), and a vacuum arc degasser (VAD).	EU-EAF-01, EU-EAF-02, EU-LMF and EU-VAD
FG-SHOP (Roof Monitor)	The shop roof monitor is above the EU-EAF-01, EU-EAF-02, EU-LMF, and EU-VAD. Fugitive emissions from all of these processes are emitted through the shop roof monitor.	EU-ROOFMONITOR, EU-EAF-01, EU-EAF-02, EU-LMF and EU-VAD
FG-FACILITY	All equipment at the facility including the FG-EAF, FG-EAF/LMF/VAD and the equipment covered by other permits, grand-fathered equipment and exempt equipment.	EU-EAF-01, EU-EAF-02, EU-LMF, EU-VAD, EU-HTOV001,EU-ROOFMONITOR, EU-AF01, EU-AF02, EU-binfilter,

		EU-limeBH, and EU-COLDCLEANERS
FG-RICE	Four (4) Compression Ignition Emergency Generators and Two (2) Spark Ignition Emergency Generators subject to the RICE MACT Requirements	EU-ENGINE1, EU-ENGINE2, EU-ENGINE3, EU-ENGINE4, EU-ENGINE5, EU-ENGINE6

Facility Background and Pre-Inspection Meeting

AW reviewed there current operations and described their desire to work closely with the AQD to maintain compliance. He indicated that their production mostly supplies the automotive market, followed by the oil and gas market, and then the gun manufacturing industry. GJ's focus remains on safety and product reliability. Facility improvements include installation of a new EAF pulpit, which is expected to become fully operationally by Christmas 2016.

We then discussed US EPA's recent issuance of a Finding of Violation (FOV). The FOV was issued due to US EPA's observance of the EAF's (located on the south side of the building) emission migration to the caster area (located on the northern side of the building). These EAF emissions are regulated with an opacity limit of less than 6%, taken at the baghouse (DV-BH03), while the caster roof monitor is regulated at a 20% opacity limit. The FG-SHOP (Roof Monitor) was sealed up and now opacity readings are taken at the baghouse. GJ's focus is on maximizing EAF emission capture and minimizing drift to the caster area, but becomes difficult under certain wind patterns. GJ is undergoing a feasibility study to determine whether the use of strategically placed fans would prevent EAF emission migration into the caster area. AW departed and we continued with the meeting.

I provided RB with a copy of the Michigan Department of Environmental Quality (MDEQ) brochures entitled: *Rights and Responsibilities Environmental Regulatory Inspections* and *Boiler NESHAP Navigation Tool.* I did invite RB to complete the customer service survey upon receipt of my inspection report. I informed RB of my intent to conduct a facility inspection after together reviewing the Special Conditions (SCs) of their ROP. RB extended his full cooperation during the inspection, accompanied us during the full duration of the inspection, and fully addressed our onsite questions.

RB continued with a brief facility background and indicated that GJ is a Secondary Steel Producer (Mini-Mill) that employees about 400 persons. The melt shop operates 5 to 6 days a week, while the finishing shop operates 7 days a week. Typically production occurs over three, 8-hour shifts. A heat typically lasts about an hour, and under normal operations, GJ can achieve 24-26 heats per day. A "heat" refers to a batch of molten steel. In

addition, "tap-to-tap" is used to define the start and end of a heat, which includes furnace charging, melting, refining, de-slagging, tapping (pouring of the molten steel to a ladle, etc.), and furnace turn-around. The facility primarily produces small bar steel having a diameter between 0.9 to 4.25 inches. RB confirmed that GJ does not expect to make any immediate process or equipment changes.

RB then provided a summary of the GJ's process, from beginning to end. Scrap is selected from the various piles found in the facility's scrap yard, and is loaded in a charge bucket. The charge bucket's bottom opens to load 1 of the 2 EAFs with cold steel and the melting phase begins once the operator strikes an arc on the scrap as the EAF electrodes are lowered into the furnace. The furnace is charged again with additional cold steel. The EAFs alternate operations, as only 1 EAF is charged at one time.

Once the molten steel is to spec, tapping occurs when the EAF is tilted and the steel pours into a ladle to transfer the molten steel to the ladle metallurgy furnace (LMF) for additional fine refining / secondary addition of alloys, and then to the vacuum arc degasser (VAD) for the injection of argon to stir the molten steel for additional refinement and removal of entrained gases using a steam vacuum system. Emissions from the EAFs, the LMF, and VAD are controlled by a positive pressure baghouse (DV-BH03).

Next, the 50-ton ladle is transported to the caster area. A 2 strand tundish feeds molten steel to a continuous caster. A conveyer transports the molten steel strands to a walking beam furnace for reheat. Then the strands go through 6 roughing mills, which slowly round out the strands. The finishing mills conduct additional rolling and fine adjusting, prior to being cut. The finishing department then polishes, inspects, and conducts heat treatment in the facility's annealing furnaces. The final product is banded and shipped offsite.

I next summarized the facility's regulatory applicablity, as summarized above and we discussed the VE / opacity limits. FG-EAF/LMF/VAD has a less than 6% opacity limit, except for one 6-minute average of not more than 10%, per SC III.1 and a 6% opacity limit at the FG-Shop (Roof Monitor), per SC III.1. This roof monitor is sealed and readings are taken at the baghouse. The casting roof monitor is limited to a 20% opacity limit, per GC 11.

Next we discussed GJ's 2015 Michigan Air Emissions Reporting System (MAERS) report, which required a few corrections. Comments, etc. are included under the FCE compliance comments. I did request that future reports include emissions associated with the RICE emergency generators and RB agreed to do so for the 2016 MAERS report. Overall, GJ reported the following, facility-wide total emissions for 2015: 517 tons CO, 71.76 tons NOx, 15.19 tons PM10, 28 tons S02, and 18 tons VOC. The facility reported emissions using CEMS, stack testing, and MAERS EFs. GJ's ROP does not specify facility-wide emission limits, but for comparisons, FG-EAF/LMF/VAD have the following limits, 280 tons per year (tpy) for SO2, 148.4 tpy for NOx, 1,400 tpy for CO, and 84 tpy for VOC.

Next, I summarized the reporting / submittal requirements and include the follow items listed below.

- Annual MAERS report.

- Annual and Semi-Annual ROP Certifications, per ROP requirements. Recent deviations, with additional comments available on the FCE report, include: Records for daily non-Method 9 reading were not taken for 1 day, per FG-SHOP SC VI.2 and no records were produced for daily preventative maintenance work on the baghouse for one day, per FG-Facility SC III.1.
- Quarterly EAF baghouse dust analysis, per FG-EAF/LMF/VAD SC VI.2.
- Quarterly Continuous Emission Monitoring System (CEMs) Excessive Emissions Reports (EER), per ROP Appendix 3. The facility measures SO2 and CO emissions using CERMS, per ROP requirements.
- Semiannual mercury compliance reporting, per subpart YYYYY requirements.
- Stack testing test plan: every 5 years.

Together with RB, we reviewed the Special Conditions (SCs) of ROP MI-ROP-B4306-2015. I also requested the records indicated below, under the *Recordkeeping Review* section, for July 2015 through June 2016. Specific points of discussion are documented under the individual EU and or FG paragraphs of the *Onsite Inspection Narrative* section.

The facility also has onsite six emergency RICEs, which are scattered throughout the facility's property, and are a part of FG-RICE. I requested a photograph to be of the non-resettable hour meter, as required by SC IV.1, for the engines that we could not observe during the inspection. RB provided photographs for two of the engines on August 2, 2016 (attached). RB confirmed that they are following and complying with the requirements of NESHAP subpart ZZZZ. In addition, GJ is not contractually obligated to have its RICE generators available, so SCs II.1 and VII.5 do not apply.

Onsite Inspection Narrative

We proceeded to conduct the onsite portion of the inspection. We first observed the baghouse duct work and no VE were observed. Behind the baghouse, the facility operates equipment to crush slag into smaller pieces that is sold. We observed VE from the equipment and piles of crushed slag. We advised RB to take additional measures to control the dust and that the activity would need to be incorporated into the ROP.

FG-EAF/LMF/VAD / BAGHOUSE DV-BH03 / FG-EAF / FG-SHOP (Roof Monitor) / FG-FACILITY

Next, we observed the facility's positive pressure baghouse (DV-BH03) and its associated control room. RB confirmed that a positive pressure baghouse places a fan in-duct prior to the baghouse compartments, where the actual bags are located. Prior to the fan's location, the ductwork is under negative pressure, while the baghouse compartment is under positive pressure. Operation of the baghouse is required for FG-EAF/LMF/VAD's operation, per SC IV.1 and to comply with NESHAP Subpart YYYYY PM emission limits (SCs I.1 and I.3).

RB also explained that the baghouse has 3 fans, and if 1 of the 3 go down, the EAF's electrodes rise up and they

can continue to operate in a malfunction abatement plan (MAP) mode by staggering EAF operation. RB provided the latest copy of the facility's MAP, per FG-FACILTY SC III.1 (Attached).

Next, we observed the CERMS equipment used to monitor SO2 and CO emissions, per SC VI.3. I also observed 3 duct exhaust flow / velocity meters and temperature probes. I also observed the instrument used to monitor the pressure drop across the baghouse, which indicated 4.88 inches of water, per SC VI.5 and IX.1 (CAM requirements). GJ records the pressure drop using a paper disc and an electronic database. This reading was also within the CAM indicator range of a pressure drop between 2.5 and 15 inches of water, per SC IX.3 and CAM requirements. Per the requirements of Appendix 3 of the ROP, the CERMS are required to have Relative Accuracy Test Audits (RATA) annually, and the data from the CERMS are to be audited using Excess Emission reports (EER) conducted quarterly.

RB summarized how GJ complies with SC VI.4, which requires daily non-certified VE readings to be done at least once during operation, especially during charging. Readings are taken at the baghouse by the baghouse mechanic and a secondary, backup, reading is taken be the lubrication technicians. RB also showed us the daily preventative maintenance forms indicating the opacity readings. Use of the daily preventative maintenance logs are also used to meet their CAM requirements, per SCs IX.1 through IX.5. I suggested that their daily PM sheets include the CAM baghouse indicator range limit of 2.5 to 15 inches of water to assist with compliance determinations.

We also observed the scrap steel yard and noted some fugitive dust emissions from the yard and requested that they add additional water and conduct additional sweeping, etc. to help mitigate the dust. The summer of 2016 has been exceptionally hot and dry, making it more troublesome to control the dust. RB confirmed that he would continue and increase their efforts. He also provided me with the facility's latest Fugitive Dust Plan and associated recordkeeping items (attached), per SC FG-FACILITY SC III.2.

We also observed the rail scrap steel charge car while in the scrap yard. Each one is equipped with an electronic scale in order to comply with FG-EAF SC VI.1, which requires GJ to monitor and record the tons of scrap steel charged to FG-EAF. RB indicated that each heat requires 2 charge car's worth of scrap or about 110,000 pounds which typically yields about 50 tons of molten steel.

While still outside of the plant, we did not observe any VE from the baghouse or from the caster roof monitor.

We then proceeded into the plant to observe the EAFs. The FG-SHOP (Roof Monitor) is sealed / closed and all VE readings are taken at the baghouse. VE readings are done at least once daily, especially while charging at the baghouse, per FG-SHOP SC VI. 2. We also observed the onsite records keeping methods of any required method 9 readings, as required by FG-SHOP SC VI.3.

While observing the EAFs, we did observe some EAF emission drift to the caster area on occasion. However, the

overwhelming majority of emissions were captured by the overhead canopy, see Figure 1. GJ operates 2 individual EAFs with a 50 ton capacity. Each is equipped with 3 electrodes and additional oxy-fuel burners. Scrap is charged 2 times per heat. GJ does alternate the front (1^{st}) and the back (2^{nd}) charge. We then observed the LMF, followed by the VAD. A ladle is transported by an overhead crane from the EAF to the LMF, then to the VAD, and finally to the caster and the caster roof monitor.

We then proceeded to observe the caster and tundish, followed by the walking beam furnace, see Figure 2. We also observed the current and the new pulpit that is being constructed. The new pulpit is placed further back from the EAFs for safety. We then observed the various roughing and finishing mills following the walking beam furnace, which roll out the steel beam to spec round bar. After casting of the beams, they are then immediately processed by the mills. The finishing mill is located in a separate building, across from the building containing the melt shop and roughing mill.

EU-HTOV001

We observed EU-HTOV001, a 30 MMBTU/hr natural gas heat treat furnace located in the rolling mill. It only burns natural gas, per SC III.1, and its usage is monitored by a dedicated natural gas meter. The emissions are emitted directly into the plant, per SC IX.1.

EU-AF-01

We observed EU-AF-01, a 60.2 MMBTU/hr natural gas heat treat furnace located in the finishing mill. It only burns natural gas (but may burn propane as well), per SC III.1, and its usage is monitored by a dedicated natural gas meter. The emissions are emitted via stack SV-001, per SC VIII.1.

EU-AF-02

We observed EU-AF-02, a 38.4 MMBTU/hr natural gas heat treat furnace located in the finishing mill. It only burns natural gas (but may burn propane as well), per SC III.1, and its usage is monitored by a dedicated natural gas meter. The emissions are emitted directly into the plant, per SC IX.1.

FG-RICE

Four of the six emergency generators were observed during the inspection. I observed a non-resettable hour meter, per SC IV.1, on 4 of the six, while RB provided photographs of the remaining 2's hour meter.

EU-Binfilter, EU-limeBH, EU-COLDCLEANERS

We did not observe EU-Binfilter, EU-limeBH, EU-COLDCLEANERS during the inspection.

While in the finishing mill, we observed that the round, final steel bars were spray painted on the ends. The spray paint was used to color code their product for inventory purposes. We asked RB to provide us with the coating monthly usage to determine whether it qualifies for the PTI exemption found under Rule 287(c), which allows usage of up to 200 gallons of coating per month, minus water.

Post-Inspection Meeting

We returned to RB's office and held a brief post-inspection meeting. We then proceed to AW's office to inform him of the inspection's findings. I informed both RB and AW:

- **to ensure that their torching operation maintains compliance with the 20% opacity limit and that it most likely will need to be added to their ROP when it is due for renewal,**
- **to further mitigate the dust from their slag crushing operation and that it most likely will also need to be added to their ROP during the next renewal,**
- **to continue to mitigate the yard's fugitive dust,**
- **to confirm spray painting usage and that it may need to be added to their ROP,**
- **we confirmed our observation of some of the EAF's emissions migrating to the caster area, and**
- **to report emissions associated with their RICE emergency generators in their next MAERS report.**

We thanked RB and AW for their cooperation and assistance, and departed the facility at approximately 2:10 pm.

Recordkeeping Review

Below is a summary of the records I requested, as specified by the following permit SCs or records requested to demonstrate compliance with a specific SC for the period of July 2015 through June 2016.

EU or FG Designation	Record Request per Permit SC(s) for July 2015 through June 2016	Comments (if applicable)	Substantial Compliance (Yes or No) / Comments
	VI.1		Yes /

EU-HTOV001			Records attached.
	VI.1	Requested to also demonstrate compliance with SC I.1, 18.4 tons, per 12-month rolling time period, NOx emission limit.	Yes / Records attached. 3.73 tons, highest 12-month rolling NOx emissions reported for June 2016.
EU-AF01	VI.1	Also requested to demonstrate compliance with natural gas material usage limits of less than 527 million cubic feet per 12 month rolling time period, per SC II.1 and less than 0.06 million cubic feet per hour, based on 24-hour averaging period, per SC II.2.	Yes / Records attached. 155.32 MMCF, highest 12-month rolling natural gas usage reported for June 2016. Daily natural gas usage below 0.06 million cubic feet per hour limit.
	VI.2	Requested to also demonstrate compliance with SC I.1, 4.92 pounds per hour, based upon a 24-hour averaging period, NOx emission limit, SC I.2, 22 tons, per 12-month rolling time period NOx emissions limit, and SC I.3, 20 tons, per 12-month rolling time period CO emissions limit.	Yes / Records attached. Daily NOx emissions are below the 4.92 pounds per hour. 6.37 tons, highest 12-month rolling NOx emissions reported for June 2016. 0.56 tons, highest 12-month rolling CO emissions reported for June 2016.

EU-AF02	VI.1	Also requested to demonstrate compliance with natural gas material usage limits of less than 336 million cubic feet per 12 month rolling time period, per SC II.1 and less than 0.038 million cubic feet per hour, based on 24-hour averaging period, per SC II.2.	Yes / Records attached. 82.7 MMCF, highest 12-month rolling natural gas usage reported for May 2016. Daily natural gas usage below 0.038 million cubic feet per hour limit.
	VI.2	Requested to also demonstrate compliance with SC I.1, 3.12 pounds per hour, based upon a 24-hour averaging period, NOx emission limit, SC I.2, 13.9 tons, per 12-month rolling time period NOx emissions limit, and SC I.3, 15 tons, per 12-month rolling time period CO emissions limit.	Yes / Records attached. Daily NOx emissions are below the 3.12 pounds per hour. 3.39 tons, highest 12-month rolling NOx emissions reported for May 2016. 3.15 tons, highest 12-month rolling CO emissions reported for May 2016.
FG-EAF	VI.2	Requested to also demonstrate compliance with SC II.1, 1,920 tons of scrap steel charged to FG-EAF material usage limit, calculated per calendar day as determined at the end of each calendar month and with SC II.2, 560,000 tons of scrap steel charged to FG-EAF material usage limit, calculated per 12-month	Yes / Records attached. Daily scrap steel charged to FG-EAF below 1,920 tons, with a 888 tons / day reported highest for February 2016. 278,086.5 tons, highest 12-month rolling scrap

		rolling time period as determined at the end of each calendar month.	steel usage reported for May 2016.
	VI.1		Yes / Records attached.
	VI.2 and VI.6		Yes / Records reviewed upon quarterly receipt and included in the facility's file.
	VI.7		Yes / Daily preventative maintenance records were observed during the onsite inspection. The last method 9 was taken on 3/17/16, with a 6-minute VE reading of 3.1%.
			No / Partial Compliance / Records attached. CERMS software / database were observed during the inspection, with data used to calculate the SO2 and CO emissions.

	VI.8	Also requested to demonstrate compliance with SC I.5, 1.0 pound SO2 / ton steel emissions limit, based on a daily average, SC 1.6, 280 tpy SO2 emission limit, based on a 12-month rolling time period, and SC I.10, 1,400 tpy CO emission limit, based on a 12-month rolling time period.	One exceedance was reported for 7/29/2016 for the daily 1.0 pound SO2 / ton steel emission limit, with 1.13 pounds SO2 / ton steel reported. See attached email from RB, dated 8/1/2016. Excess was due to mechanical failure and response was accepted. 42.03 tons, highest 12-month rolling SO2 emissions reported for July 2016. 458.2 tons, highest 12-month rolling CO emissions reported for June 2016.
	VI.9	Requested to also demonstrate compliance with SC 1.8, 148.4 tpy NOx emission limit, based on a 12-month rolling time period, SC I.12, 84 tpy VOC emission limit, based on a 12-month rolling time period, SC I.16, 2.8 tpy Mn emission limit, based on a 12-month rolling time period, and SC I.18, 0.069 tpy Hg emission limit, based on a 12-month rolling time period.	Yes / 37.54 tons, highest 12-month rolling NOx emissions reported for May 2016. 4.62 tons, highest 12-month rolling VOC emissions reported for July 2016. 135.3 pounds, highest 12-month rolling Mn emissions reported for December 2015. 0.0123 tons, highest 12-month rolling Hg emissions reported for

FG-EAF/LMF/VAD			
	VI.11		Yes / Observed records during onsite inspection.
	V.12		Yes / Observed records during onsite inspections. Specifically viewed the records for the week of February 15, 2016, and the baghouse pressure data were within the CAM limits of 2.5 through 15 inches of water.
	IX.1 through IX.7	CAM Requirements	Yes / Reviewed other permit and recordkeeping requirements regarding VE readings and, baghouse pressure drop and inspection and maintenance activities. CAM assurance plan is attached.

FG-SHOP (ROOF Monitor)	VI.2		Yes / Observed during onsite inspection. Daily VE readings are conducted as apart of daily preventative maintenance activities.
	VI.3		Yes / Observed VE reading and Method 9 records onsite during inspection.
FG-RICE	VI.1.b		Yes / No RICE engine malfunctions in the last year.
	VI.1.d		Yes / Observed records onsite during inspection.
	VI.1.e		Yes / Observed records onsite during inspection.
			Yes

	VI.1.f		/ Observed non-resettable hour meters on site and pictures were provided for inaccessible engines.
Fugitive Dust Control			Yes / GJ provided records to indicate fugitive dust control methods, attached.

Compliance Summary

Based upon the visual observations and the review of the records, GJ appears to be in substantial compliance with the requirements of their ROP. Throughout the entire onsite inspection and subsequent recordkeeping review, the staff of GJ extended their full cooperation.

The following items were discussed with GJ during the post-inspection meeting and some items will need to be included in GJ's ROP during the next renewal.

- **To ensure that their torching operation maintains compliance with the 20% opacity limit and that it most likely will need to be added to their ROP when it is due for renewal,**
- **To further mitigate the dust from their slag crushing operation and that it most like will also need to be added to their ROP during the next renewal,**
- **To continue to mitigate the yard's fugitive dust,**
- **GJ confirmed a 627 gallon usage for 2015, and that it may need to be added to their ROP as an Rule 287(c)-exempt process,**
- **SM and I observed some of the EAF's emissions migrating to the caster area, and**
- **To report emissions associated with their RICE emergency generators in their next MAERS report.**

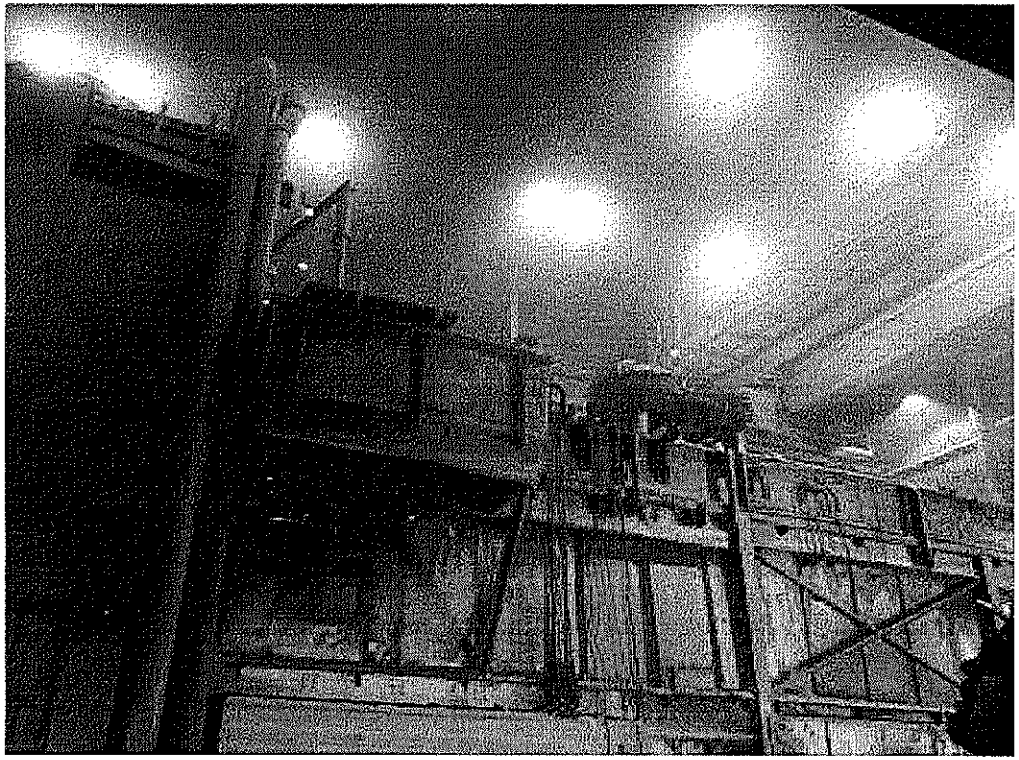

Image 1(Figure 1) : While observing the EAFs, we did observe some EAF emission drift to the caster area on occasions. However, the overwhelming majority of emissions were captured by the overhead canopy.

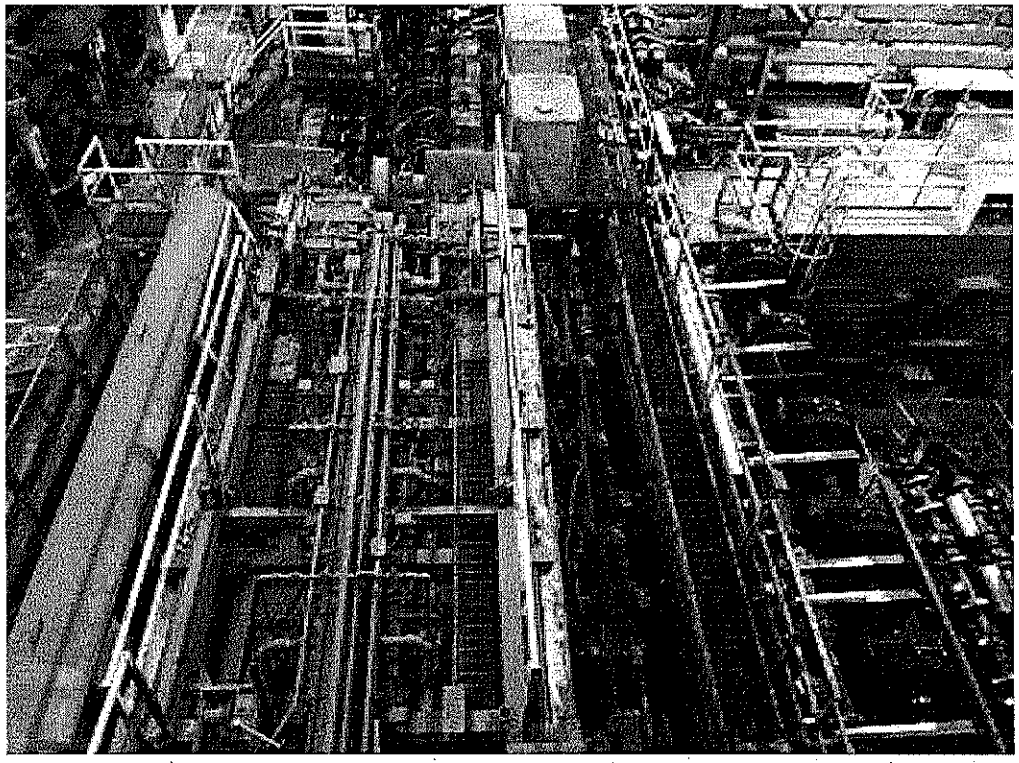

Image 2(Figure 2) : Overhead picture of the walking beam furnace.

NAME Michael M. Shaw DATE 8/12/16 SUPERVISOR S