

**TITLE V RENEWAL PERMIT APPLICATION
PERMIT R30-02900001-2011 (Part 1 of 3)
PERMIT R30-02900001-2012 (Part 2 of 3)**

**ARCELORMITTAL WEIRTON LLC
WEIRTON, WEST VIRGINIA**

April 11, 2016

Prepared for:

ArcelorMittal Weirton LLC
100 Pennsylvania Avenue
Weirton, West Virginia 26062
304-797-3908

Prepared by:

Montrose Air Quality Services
1050 William Pitt Way
Pittsburgh, Pennsylvania 15238
412-826-3636

Project Number 16-066



**ARCELORMITTAL WEIRTON LLC
TITLE V RENEWAL PERMIT APPLICATION**

PERMIT R30-02900001-2011 (Part 1 of 3)

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TABLE OF CONTENTS

Renewal Title V Permit Application – General Forms

ATTACHMENTS

Attachment A.	Area Maps
Attachment B.	Site Maps
Attachment C.	Process Flow Diagrams
Attachment D.	Title V Equipment Table
Attachment E.	Emission Unit Forms
Attachment F.	Schedule of Compliance Form (Not Applicable, attachment not submitted)
Attachment G.	Air Pollution Control Device Forms
Attachment H.	Compliance Assurance Monitoring (CAM) Plan (Not Applicable, attachment not submitted)
Attachment I.	Regulatory Applicable Requirements
Attachment J.	2016 Potential Emissions Inventory
Attachment K.	Miscellaneous Supporting Information



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

601 57th Street SE
Charleston, WV 25304
Phone: (304) 926-0475

www.dep.wv.gov/daq

INITIAL/RENEWAL TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

1. Name of Applicant (As registered with the WV Secretary of State's Office): ArcelorMittal Weirton LLC
2. Facility Name or Location: ArcelorMittal Weirton LLC, Weirton, WV 26062
3. DAQ Plant ID No.: 029-00001
4. Federal Employer ID No. (FEIN): 56-2435202
5. Permit Application Type: [X] Permit Renewal
6. Type of Business Entity: [X] LLC
7. Is the Applicant the: [X] Both
8. Number of onsite employees: 1000
9. Governmental Code: [X] Privately owned and operated; 0
10. Business Confidentiality Claims: [X] No

11. Mailing Address		
Street or P.O. Box: 100 Pennsylvania Avenue		
City: Weirton	State: WV	Zip: 26062
Telephone Number: (304) 797-3908		Fax Number: (304) 797-2391
12. Facility Location		
Street: 100 Pennsylvania Avenue	City: Weirton	County: Hancock
UTM Easting: 533.70 km	UTM Northing: 4474.50 km	Zone: <input checked="" type="checkbox"/> 17 or <input type="checkbox"/> 18
<input type="checkbox"/> Directions: Traveling East or West on US 22 into West Virginia, take Exit 2		
<input type="checkbox"/> Continue on either exit ramp at sign reading "Exit 2 WV-2 North to Downtown Weirton " and go 0.6 miles to first traffic light		
<input type="checkbox"/> Continue on WV-2 North, Main Street and go approximately 3 miles through 9 traffic lights [after the 9 th light, you will travel up a slight incline and pass over an elevated roadway]		
<input type="checkbox"/> As you approach the 10 th light [intersection with Pennsylvania Avenue (County Route 105)], turn right into the driveway/parking lot located adjacent to a 3-story brick building [MAB (Mill Administration Building)]		
<input type="checkbox"/> Environmental Control Offices are located on the 1st floor of the MAB in Rooms 116 and 117 [Phone extension x3908 for Mike Mieczkowski or x2658 for Aaron Pozar from either lobby telephone for building access]		
Portable Source? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Is facility located within a nonattainment area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, for what air pollutants? PM2.5	
Is facility located within 50 miles of another state? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, name the affected state(s). Ohio, Pennsylvania	
Is facility located within 100 km of a Class I Area¹? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, name the area(s).	
If no, do emissions impact a Class I Area¹? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
¹ Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.		

13. Contact Information		
Responsible Official: Brian James		Title: General Manager
Street or P.O. Box: 100 Pennsylvania Avenue		
City: Weirton	State: WV	Zip: 26062
Telephone Number: (304) 797-2296	Fax Number: (304) 797-3419	
E-mail address: brian.james@arcelormittal.com		
Environmental Contact: Mike Mieczkowski / Aaron Pozar		Title: Manager-Environmental
Street or P.O. Box: 100 Pennsylvania Avenue		
City: Weirton	State: WV	Zip: 26062
Telephone Number: (304) 797-3908	Fax Number: (304) 797-2391	
E-mail address: mike.mieczkowski@arcelormittal.com Aaron.pozar@arcelormittal.com		
Application Preparer: Nancy Hirko		Title: Senior Project Manager
Company: Montrose Air Quality Services		
Street or P.O. Box: 1050 William Pitt Way		
City: Pittsburgh	State: PA	Zip: 15238
Telephone Number: (412) 826-3636	Fax Number: (412) 826-3640	
E-mail address: nhirko@montrose-env.com		

14. Facility Description

List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.

Process	Products	NAICS	SIC
Tin Mill	Plated steel (tin, chrome)	331111	3312
Heat Treating - Annealing	Steel	331111	3312
Steel Pickling	Steel	331111	3312
Cold Rolling	Steel	331111	3312
Hydrogen Plant	Hydrogen	325120	2813

Provide a general description of operations.

This application covers all operations at the ArcelorMittal Weirton LLC facility as described in the current Title V Permit R30-02900001-2011 (Part 1 of 3), modified March 25, 2014 and Permit R30-02900001-2012 (Part 2 of 3), modified April 28, 2015.

Note that Permit R30-02900001-2006 (Part 3 of 3) no longer applies to the site as all steelmaking activities have ceased at the facility. The Part 3 permit was issued on December 15, 2006 and expired on December 15, 2011. The Part 3 Operating Permit included blast furnaces, BOP vessels, continuous caster, material handling, and ancillary support equipment/operations. These operations were idled by January 1, 2006 and are permanently shut down.

This Title V Renewal Application covers the Part 1 and Part 2 source operations, with some additional modifications/equipment shutdown. ArcelorMittal Weirton LLC is requesting that one Title V Permit be issued for the entire facility operations.

ArcelorMittal Weirton LLC operates a steel finishing facility that includes a Strip Mill (steel pickling and cold rolling operations) and Tin Mill (tempering and electrolytic plating [tin, and chrome]). The steel finishing processes are supported by annealing furnaces (continuous and batch), an on-site Hydrogen Reformer Plant, storage tanks, cooling towers, shot blasters, maintenance shops and wastewater treatment plant. Facility operations are also supported by five leased package boilers, each rated at 99 MMBtu/hr heat input that fire natural gas only.

15. Provide an **Area Map** showing plant location as **ATTACHMENT A**.

16. Provide a **Plot Plan(s)**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as **ATTACHMENT B**. For instructions, refer to "Plot Plan - Guidelines."

17. Provide a detailed **Process Flow Diagram(s)** showing each process or emissions unit as **ATTACHMENT C**. Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

Section 2: Applicable Requirements

18. Applicable Requirements Summary	
Instructions: Mark all applicable requirements.	
<input checked="" type="checkbox"/> SIP	<input type="checkbox"/> FIP
<input type="checkbox"/> Minor source NSR (45CSR13)	<input type="checkbox"/> PSD (45CSR14)
<input checked="" type="checkbox"/> NESHAP (45CSR34)	<input type="checkbox"/> Nonattainment NSR (45CSR19)
<input type="checkbox"/> Section 111 NSPS	<input checked="" type="checkbox"/> Section 112(d) MACT standards
<input type="checkbox"/> Section 112(g) Case-by-case MACT	<input type="checkbox"/> 112(r) RMP
<input type="checkbox"/> Section 112(i) Early reduction of HAP	<input type="checkbox"/> Consumer/commercial prod. reqts., section 183(e)
<input type="checkbox"/> Section 129 Standards/Reqts.	<input checked="" type="checkbox"/> Stratospheric ozone (Title VI)
<input type="checkbox"/> Tank vessel reqt., section 183(f)	<input type="checkbox"/> Emissions cap 45CSR§30-2.6.1
<input type="checkbox"/> NAAQS, increments or visibility (temp. sources)	<input type="checkbox"/> 45CSR27 State enforceable only rule
<input checked="" type="checkbox"/> 45CSR4 State enforceable only rule (Odor)	<input type="checkbox"/> Acid Rain (Title IV, 45CSR33)
<input type="checkbox"/> Emissions Trading and Banking (45CSR28)	<input type="checkbox"/> Compliance Assurance Monitoring (40CFR64)
<input type="checkbox"/> CAIR NO _x Annual Trading Program (45CSR39)	<input type="checkbox"/> CAIR NO _x Ozone Season Trading Program (45CSR40)
<input type="checkbox"/> CAIR SO ₂ Trading Program (45CSR41)	

19. Non Applicability Determinations

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

45CSR13 - Permit R13-1137, Specific Requirement A.4 - required the permittee to discontinue operations of the two (2) existing vintage slab reheating furnaces, No. 3 and No. 4, upon commencement of operation of the No. 2 walking beam slab reheating furnace. Permit R13-1310, Specific Requirement A.4. required the permittee to discontinue operations of the two (2) existing vintage slab reheating furnaces, No. 1 and No. 2, upon commencement of operation of the new No. 1 walking beam slab reheating furnace. These requirements have been completed and were not included in the Title V permit.

Permits R13-1137 and R13-1310, Specific Requirement A.7. - requires SO₂ emission limitations upon commencement of operation of the Struthers Corporation's Browns Island coke oven battery. The coke oven battery was never constructed, therefore this requirement was not included in the Title V permit.

Civil Consent Decree 5-96-CV-171 - has been terminated in accordance with Section XXXVIII.B. The permittee has certified completion and compliance with all requirements.

40 CFR 60, Subparts K, Ka, and Kb - The storage tanks associated with the steel finishing side of the facility are not subject to these subparts. The 6 million gallon fuel oil tank, OB6/1, is the only tank that was constructed within the time frames, however, its true vapor pressure is 0.0002 psia and it is thus exempt from 40 CFR Subpart K in accordance with 40 CFR §60.113(d)(1). This tank is no longer in service.

40 CFR 63 Subpart N - NESHAP for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks. Continuous chromium electroplating of steel is different from the chromium electroplating operations regulated in the existing NESHAP standard. USEPA has indicated that they intend for continuous chromium electroplating to be included in this NESHAP, however the rule has not yet been updated.

40 CFR 63 Subpart Q - NESHAP for Industrial Process Cooling Towers.

No chromium-based water treatment chemicals are used at the facility.

40 CFR 63 Subpart T - National Emissions Standards for Halogenated Solvent Cleaning.

No halogenated solvent cleaning machines exist at the facility.

40 CFR Part 63, Subpart DDDDD (Boiler MACT) for Certain Sources – ArcelorMittal Weirton LLC provided WVDEP with an administrative update of Installation Permit R13-0032B on January 29, 2016 for removal of HCL Acid Regeneration Units 1, 2, 3 and 4 which have been permanently shut down. WVDEP granted the request via communication dated February 9, 2016. Thus, the facility is designated as an Area Source for hazardous air pollutants (HAPs). This designation has allowed the Jumbo Anneals, Continuous Annealing lines, Anode Pots, and natural gas fired comfort heating equipment to become subject to the area source boiler MACT, 40 CFR 63, Subpart JJJJJ. The new natural gas fired boilers will remain subject to the boiler MACT because of the “once-in, always-in” requirement.

Polymer Coating Line - A Permit Determination form, dated December 10, 2002, and received by this Office on December 12, 2002 was submitted for the installation of a Polymer coating line. No permit was required based on information received in the Permit Determination form.

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies. (cont.)

Hydrogen Reforming Facility - The Methane Hydrogen Reformer was constructed in 1995 by BOC Gases Division after a Rule 13 permit determination deemed that no permit was necessary. In April 2009, ownership was transferred to ArcelorMittal Weirton LLC. Since there are no applicable requirements on this equipment, it was not included in the Title V permit.

40 CFR 68 Risk Management Plans - The facility stores liquefied hydrogen, but engineering controls are in place to limit the amount of hydrogen stored to less than RMP threshold amounts, <10,000 lbs for a flammable substance. The rule does not apply at this time. An RMP Plan would be developed if thresholds are triggered for an applicable chemical.

40 CFR Part 64 - Compliance Assurance Monitoring

The Tandem Mills and the Chrome and Tin Plating Lines have PM emission limitations but no PM control devices. The control devices are for VOC emissions but there are no VOC emissions limitations for these sources, therefore these sources do not meet the applicability requirements of 40 CFR §§ 64.2(a)(1) and (2).

The Lime Storage Silos and Roll Shot Blasters are not major sources and do not meet the applicability requirement of 40 CFR § 64.2(a)(3).

The No. 5 Pickling Line is subject to 40 CFR part 63Subpart CCC and is exempt from CAM in accordance with 40 CFR § 64.2(b)(1)(i).

There are no control devices associated with the boilers or emergency generators. These and all other emission sources have no control devices and do not meet the applicability requirements of 40 CFR § 64.2(a)(2).

Greenhouse Gas Permitting - This is a renewal Title V permit and there have been no modifications that would have triggered a PSD permit. Therefore, there are no applicable GHG requirements other than reporting.

Permit Shield

20. Facility-Wide Applicable Requirements

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements).

SEE ATTACHMENT I.

Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all facility-wide applicable requirements? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

21. Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance MM/DD/YYYY	List any Permit Determinations that Affect the Permit (<i>if any</i>) / Other Comments
R13-0032A	November 8, 2006	R13-0032B December 5, 2014 R13-0032C
R30-02900001-2006 (Part 1 of 3)	05/31/2006	Current Title V Permit - Boilers
R30-02900001-2006 (Part 2 of 3)	08/21/2006	Current Title V Permit – Cold Operations
R13-3075	August 13, 2013	Installation of Package Boilers
CO-SIP-C-2003-28	June 30, 2003	Fuel restriction for annealing furnaces applies. Reheat furnaces permanently shutdown.

22. Inactive Permits/Obsolete Permit Conditions		
Permit Number	Date of Issuance	Permit Condition Number
CO-R34-E-2003-30	08/01/2003	Terminated following installation of scrubber system and submission of stack test results.
R30-02900001-2006 (Part 3 of 3)	December 15, 2006	Title V Permit – Hot Operations Equipment/operations permanently shutdown.
R13-1109A		Veolia Permit – Support Operations Equipment/operations permanently shutdown.
CO-6-1978	June 29, 1978	Equipment/operations permanently shutdown.
CO-7-1987	July 17, 1987	Equipment/operations permanently shutdown.
CO-7-1990	July 10, 1990	R13-1137 and R13-1310 Reheat furnaces permanently shutdown.
CO-SIP-95-2	January 9, 1995	CO-SIP-C-2003-28 Reheat furnaces permanently shutdown.
R13-1137	October 26, 1990	CO-SIP-C-2003-28 Reheat furnaces permanently shutdown.
R13-1310	February 8, 1991	CO-SIP-C-2003-28 Reheat furnaces permanently shutdown.
R30-02900001-2011 (Part 1 of 3)	October 11, 2011 Modified March 25, 2014	These sections no longer apply: 4.1.1 Only natural gas fired. 4.1.2 – 4.1.10 4.1.12 Boilers 3,4, and 5 decommissioned in 2015 4.1.13 Boilers 3, 4 and 5 decommissioned in 2015 4.2.1 4.2.2 4.2.3 4.2.4 4.2.5 4.2.6 4.2.7 4.3.1 Only natural gas fired. 4.3.2 Only natural gas fired. 4.3.3 4.4.1 4.5.2 Only natural gas fired. 4.5.3 4.5.4 Notifications previously submitted. Appendices A, B, and C

<p>R30-02900001-2012 (Part 2 of 3)</p>	<p>January 31, 2012 Modified April 28, 2015</p>	<p><u>Section 4.0</u> (entire section) <u>Section 5.0</u> - update for operating sources only. Sources permanently shutdown include: 060/1 Continuous Annealing Line 1 <u>Section 6.0</u> – update for operating sources only. Sources permanently shutdown include: 037/1 Hot Strip Mill 040/1 No. 7 Tandem Mill 044/1 No. 8 Skin Mill 063/1 No. 1 Weirlite Temper Mill 065/1 No. 4 Temper Mill 075/1,2,3 No. 5 Tin/Chrome Plating Line <u>Section 7.0</u> - update for operating sources only. Sources permanently shutdown include: 095 Veolia Lime Storage Silo <u>Section 8.0</u> - update for operating sources only. Sources permanently shutdown include: 047/1,2 HCL Regeneration Unit 2 048/1,2 HCL Regeneration Unit 3 049/1,2 HCL Regeneration Unit 4 (Unit 1 previously permanently shutdown.) 8.1.2.b 8.1.3.a 8.1.4.c 8.1.6 8.1.7 8.1.8 8.1.9 8.2.1.a., b. and d. References to the HCL Regeneration Plant and Cl₂ should be removed. 8.2.1.c 8.3.1.b. 1., 2., and 4. 8.3.3 8.4.1.a. and b. and 8.4.2.a. Initial performance test previously conducted and NOCS previously submitted. 8.4. 2.b.2 – The required submittal dates are different than what is contained in the referenced rule [40 CFR §63.10(d)(5)(i)] which states reports are due by the “30th day following the end of each calendar half.” Please clarify submittal dates. 8.5.1.b.2 8.5.3. References to the HCL Regeneration Plant should be removed. 8.5.4. 8.5.5 8.5.6</p>
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Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	211.78
Nitrogen Oxides (NO _x)	235.99
Lead (Pb)	1.85E-03
Particulate Matter (PM _{2.5}) ¹	14.48
Particulate Matter (PM ₁₀) ¹	29.56
Particulate Matter (Condensable)	21.10
Total Particulate Matter (TSP)	91.79
Sulfur Dioxide (SO ₂)	2.33
Volatile Organic Compounds (VOC)	39.49
Hazardous Air Pollutants ²	Potential Emissions
Hydrogen Chloride	6.53
Benzene	7.91E-03
Dichlorobenzene	4.44E-03
Naphthalene	2.26E-03
Toluene	1.26E-02
Xylene	3.91E-05
Formaldehyde	2.78E-01
Hexane	6.66
Chromium	4.56E-01
Zinc	1.07E-01
TOTAL HAPS (See Attachment J; Table 1)	13.97
Regulated Pollutants other than Criteria and HAPs	Potential Emissions
Carbon Dioxide (CO ₂)	454,090
N ₂ O	4.80
Methane (CH ₄)	8.51
¹ PM _{2.5} and PM ₁₀ are components of TSP. ² For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.	

Section 4: Insignificant Activities

24. Insignificant Activities (Check all that apply)	
<input checked="" type="checkbox"/>	1. Air compressors and pneumatically operated equipment, including hand tools.
<input checked="" type="checkbox"/>	2. Air contaminant detectors or recorders, combustion controllers or shutoffs.
<input checked="" type="checkbox"/>	3. Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
<input checked="" type="checkbox"/>	4. Bathroom/toilet vent emissions.
<input checked="" type="checkbox"/>	5. Batteries and battery charging stations, except at battery manufacturing plants.
<input checked="" type="checkbox"/>	6. Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
<input type="checkbox"/>	7. Blacksmith forges.
<input checked="" type="checkbox"/>	8. Boiler water treatment operations, not including cooling towers.
<input checked="" type="checkbox"/>	9. Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
<input type="checkbox"/>	10. CO ₂ lasers, used only on metals and other materials which do not emit HAP in the process.
<input checked="" type="checkbox"/>	11. Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
<input checked="" type="checkbox"/>	12. Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
<input checked="" type="checkbox"/>	13. Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
<input type="checkbox"/>	14. Demineralized water tanks and demineralizer vents.
<input checked="" type="checkbox"/>	15. Drop hammers or hydraulic presses for forging or metalworking.
<input type="checkbox"/>	16. Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
<input type="checkbox"/>	17. Emergency (backup) electrical generators at residential locations.
<input type="checkbox"/>	18. Emergency road flares.
<input checked="" type="checkbox"/>	19. Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO _x , SO ₂ , VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units. Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis: <u>Cooling Towers – See Attachment J, Table 3</u> <u>Space Heating Equipment – See Attachment J, Table 6</u> <u>Maintenance Activities – See Attachment J, Table 6</u> <u>Small Degreasing Stations – See Attachment J, Table 11</u> <u>Hydrogen Plant - See Attachment J, Table 15</u>

24. Insignificant Activities (Check all that apply)	
<input type="checkbox"/>	<p>20. Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27.</p> <p>Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis:</p> <p>_____</p> <p>_____</p>
<input type="checkbox"/>	21. Environmental chambers not using hazardous air pollutant (HAP) gases.
<input type="checkbox"/>	22. Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
<input type="checkbox"/>	23. Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
<input checked="" type="checkbox"/>	24. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
<input type="checkbox"/>	25. Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
<input checked="" type="checkbox"/>	26. Fire suppression systems.
<input type="checkbox"/>	27. Firefighting equipment and the equipment used to train firefighters.
<input type="checkbox"/>	28. Flares used solely to indicate danger to the public.
<input type="checkbox"/>	29. Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
<input type="checkbox"/>	30. Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
<input checked="" type="checkbox"/>	31. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
<input type="checkbox"/>	32. Humidity chambers.
<input type="checkbox"/>	33. Hydraulic and hydrostatic testing equipment.
<input checked="" type="checkbox"/>	34. Indoor or outdoor kerosene heaters.
<input checked="" type="checkbox"/>	35. Internal combustion engines used for landscaping purposes.
<input type="checkbox"/>	36. Laser trimmers using dust collection to prevent fugitive emissions.
<input type="checkbox"/>	37. Laundry activities, except for dry-cleaning and steam boilers.
<input checked="" type="checkbox"/>	38. Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
<input checked="" type="checkbox"/>	39. Oxygen scavenging (de-aeration) of water.
<input type="checkbox"/>	40. Ozone generators.
<input checked="" type="checkbox"/>	41. Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must still get a permit if otherwise requested.)
<input checked="" type="checkbox"/>	42. Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.

24. Insignificant Activities (Check all that apply)	
<input checked="" type="checkbox"/>	43. Process water filtration systems and demineralizers.
<input checked="" type="checkbox"/>	44. Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
<input checked="" type="checkbox"/>	45. Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
<input checked="" type="checkbox"/>	46. Routing calibration and maintenance of laboratory equipment or other analytical instruments.
<input type="checkbox"/>	47. Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants.
<input type="checkbox"/>	48. Shock chambers.
<input type="checkbox"/>	49. Solar simulators.
<input checked="" type="checkbox"/>	50. Space heaters operating by direct heat transfer.
<input checked="" type="checkbox"/>	51. Steam cleaning operations.
<input checked="" type="checkbox"/>	52. Steam leaks.
<input type="checkbox"/>	53. Steam sterilizers.
<input checked="" type="checkbox"/>	54. Steam vents and safety relief valves.
<input checked="" type="checkbox"/>	55. Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
<input checked="" type="checkbox"/>	56. Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
<input type="checkbox"/>	57. Such other sources or activities as the Director may determine.
<input checked="" type="checkbox"/>	58. Tobacco smoking rooms and areas.
<input type="checkbox"/>	59. Vents from continuous emissions monitors and other analyzers.

Section 5: Emission Units, Control Devices, and Emission Points

25. Equipment Table
Fill out the Title V Equipment Table and provide it as ATTACHMENT D .
26. Emission Units
For each emission unit listed in the Title V Equipment Table , fill out and provide an Emission Unit Form as ATTACHMENT E .
For each emission unit not in compliance with an applicable requirement, fill out a Schedule of Compliance Form as ATTACHMENT F . NOT APPLICABLE
27. Control Devices
For each control device listed in the Title V Equipment Table , fill out and provide an Air Pollution Control Device Form as ATTACHMENT G .
For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the Compliance Assurance Monitoring (CAM) Form(s) for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as ATTACHMENT H . NOT APPLICABLE

Section 6: Certification of Information

28. Certification of Truth, Accuracy and Completeness and Certification of Compliance

Note: This Certification must be signed by a responsible official. The original, signed in blue ink, must be submitted with the application. Applications without an original signed certification will be considered as incomplete.

a. Certification of Truth, Accuracy and Completeness

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

b. Compliance Certification

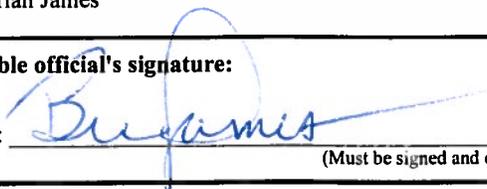
Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

Responsible official (type or print)

Name: Brian James

Title: General Manager

Responsible official's signature:

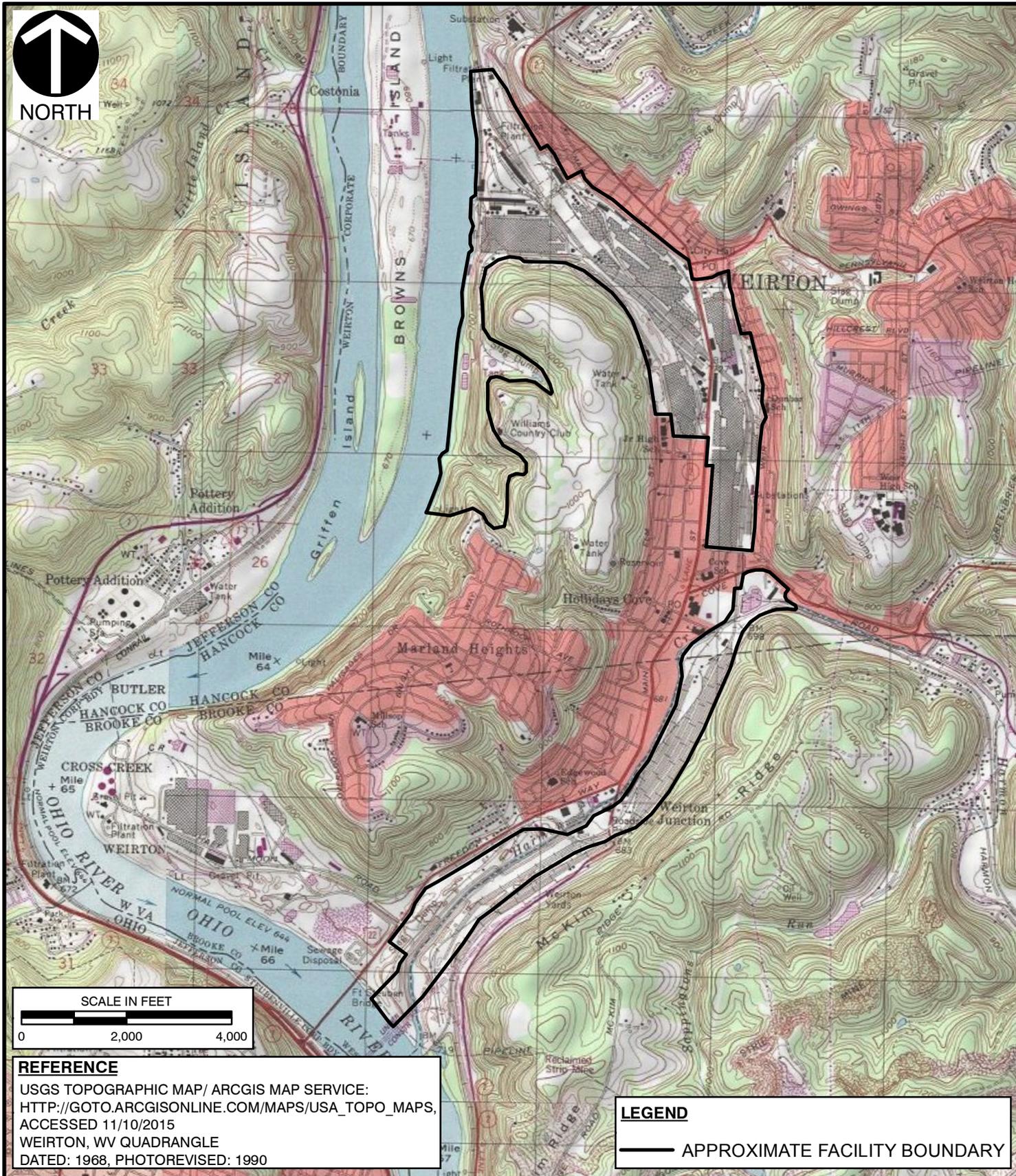
Signature:  Signature Date: 7/11/16
 (Must be signed and dated in blue ink)

Note: Please check all applicable attachments included with this permit application:

<input checked="" type="checkbox"/>	ATTACHMENT A: Area Map
<input checked="" type="checkbox"/>	ATTACHMENT B: Plot Plan(s)
<input checked="" type="checkbox"/>	ATTACHMENT C: Process Flow Diagram(s)
<input checked="" type="checkbox"/>	ATTACHMENT D: Equipment Table
<input checked="" type="checkbox"/>	ATTACHMENT E: Emission Unit Form(s)
<input type="checkbox"/>	ATTACHMENT F: Schedule of Compliance Form(s)
<input checked="" type="checkbox"/>	ATTACHMENT G: Air Pollution Control Device Form(s)
<input type="checkbox"/>	ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s)
<input checked="" type="checkbox"/>	ATTACHMENT I: Regulatory Applicable Requirements
<input checked="" type="checkbox"/>	ATTACHMENT J: Potential to Emit - Data for Emission Units
<input checked="" type="checkbox"/>	ATTACHMENT K: Miscellaneous Supporting Information

ATTACHMENT A

Area Map



REFERENCE
 USGS TOPOGRAPHIC MAP/ ARCGIS MAP SERVICE:
[HTTP://GOTO.ARCGISONLINE.COM/MAPS/USA_TOPO_MAPS](http://gto.arcgis.com/maps/usa_topo_maps),
 ACCESSED 11/10/2015
 WEIRTON, WV QUADRANGLE
 DATED: 1968, PHOTOREVISED: 1990

LEGEND
 — APPROXIMATE FACILITY BOUNDARY



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 www.cecinc.com

**ARCELORMITTAL INC.
 ENVIRONMENTAL RESPONSE PLAN
 WEIRTON FACILITY
 WEIRTON, WEST VIRGINIA**

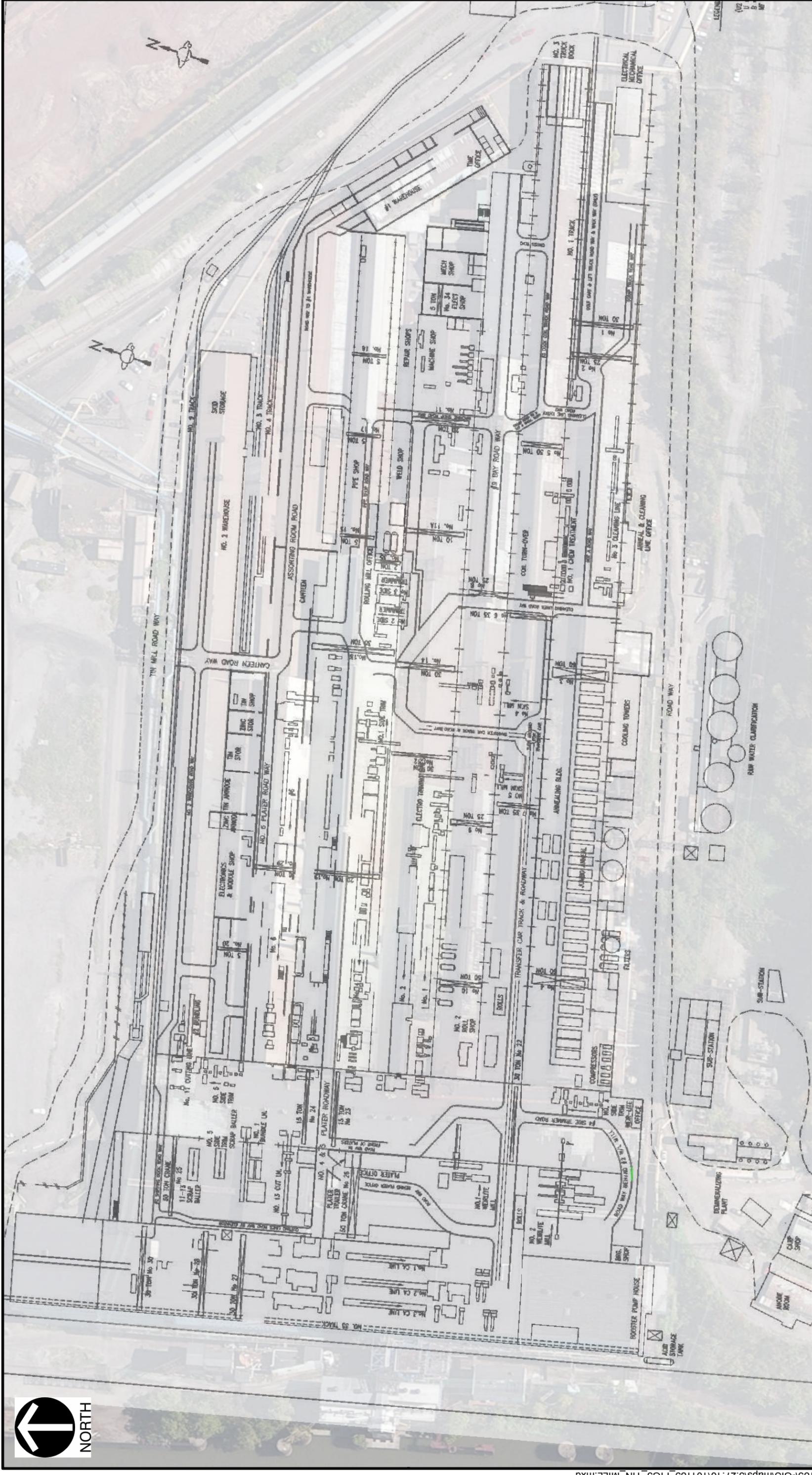
SITE LOCATION MAP

DRAWN BY: CBL	CHECKED BY: PWT	APPROVED BY: * Hand signature PWT* on file	FIGURE NO: 1
DATE: 11/10/2015	SCALE: 1" = 2,500'	PROJECT NO: 153-099	

Document Path: P:\2015\153-099-GIS\Maps\REPORT\20151018\20151105\153099_FIG1_SITE_LOC.mxd

ATTACHMENT B

Site Maps





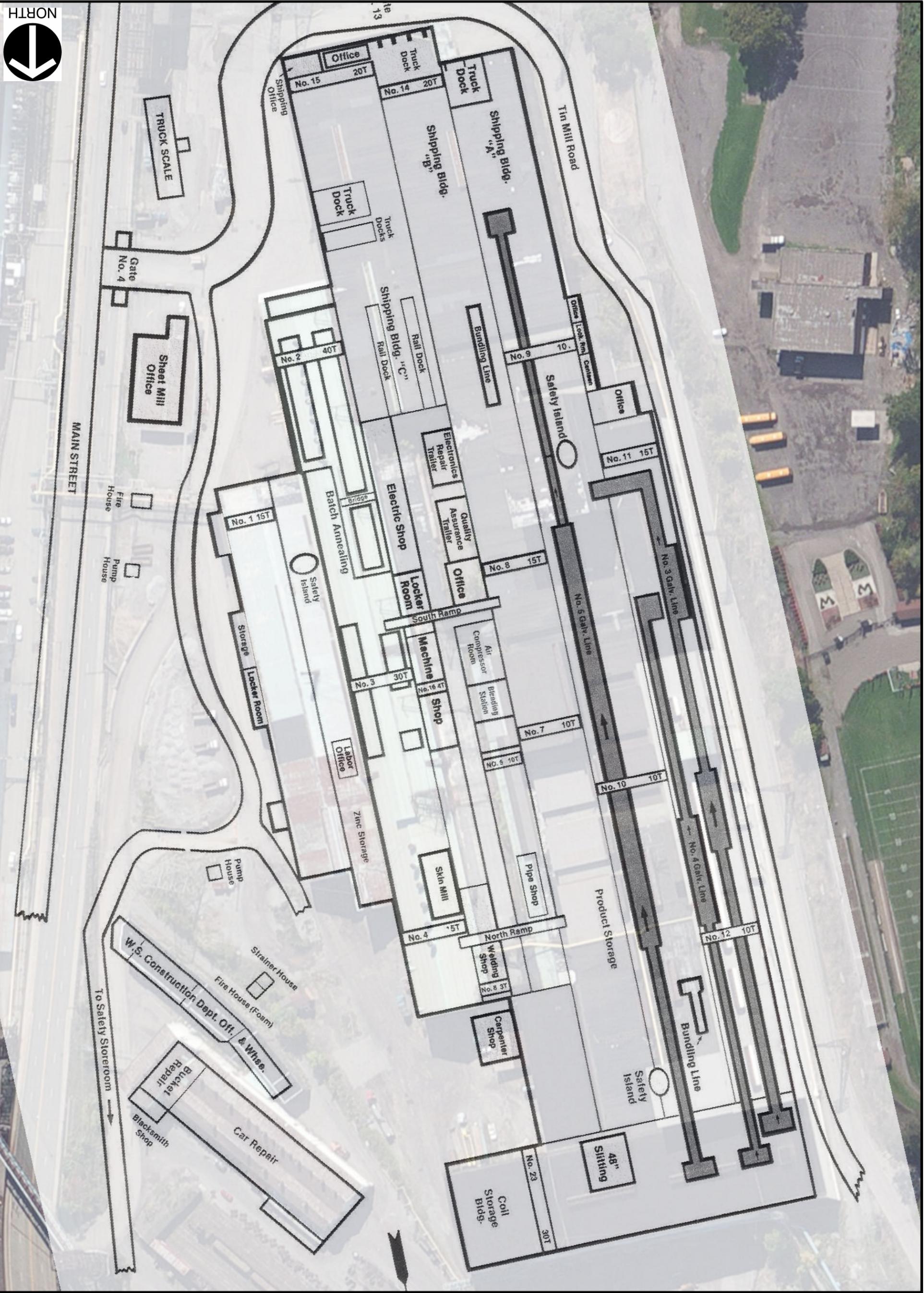
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ARCELORMITTAL WEIRTON LLC
 2016 TITLE V PERMIT RENEWAL
 WEIRTON PLANT
 HANCOCK AND BROOKE COUNTIES, WEST VIRGINIA

TIN MILL AREA OVERVIEW

DRAWN BY:	CBL	CHECKED BY:	PWT
DATE:	3/27/2016	SCALE:	N.T.S.
APPROVED BY:	* Hand signature PWT*		FIGURE NO:
			3
	PROJECT NO:	101-185	

REFERENCE
 ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
[HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY](http://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY)
 ACCESSED 3/31/2016, IMAGERY DATE: 2011.



REFERENCE
 ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
 HTTP://GOTO.ARCGISONLINE.COM/MAPS/
 WORLD IMAGERY,
 ACCESSED 3/31/2016, IMAGERY DATE: 2011.

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 WEIRTON PLANT
 HANCOCK AND BROOKE COUNTIES, WEST VIRGINIA

CBL	CHECKED BY: PWT	APPROVED BY: * Hand signature on file PWT*	FIGURE NO:
3/27/2016	SCALE: N.T.S.	PROJECT NO: 101-185	4



REFERENCE
 ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
 HTTP://GOTO.ARCGISONLINE.COM/MAPS/
 WORLD_IMAGERY,
 ACCESSED 3/31/2016, IMAGERY DATE: 2011.


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ARCELORMITTAL WEIRTON LLC
 2016 TITLE V PERMIT RENEWAL
 WEIRTON PLANT
 HANCOCK AND BROOKE COUNTIES, WEST VIRGINIA

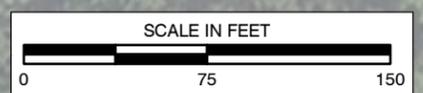
A OUTFALL AREA OVERVIEW

DRAWN BY: CBL	CHECKED BY: PWT	APPROVED BY: * Hand signature on file PWT*	FIGURE NO: 5
DATE: 3/27/2016	SCALE: 1" = 50'	PROJECT NO: 101-185	



OHIO RIVER

TO TIN MILL



REFERENCE
 ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
 HTTP://GOTO.ARCGISONLINE.COM/MAPS/
 WORLD_IMAGERY,
 ACCESSED 3/31/2016, IMAGERY DATE: 2011.

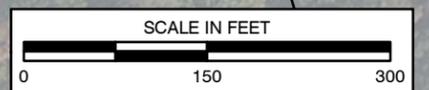
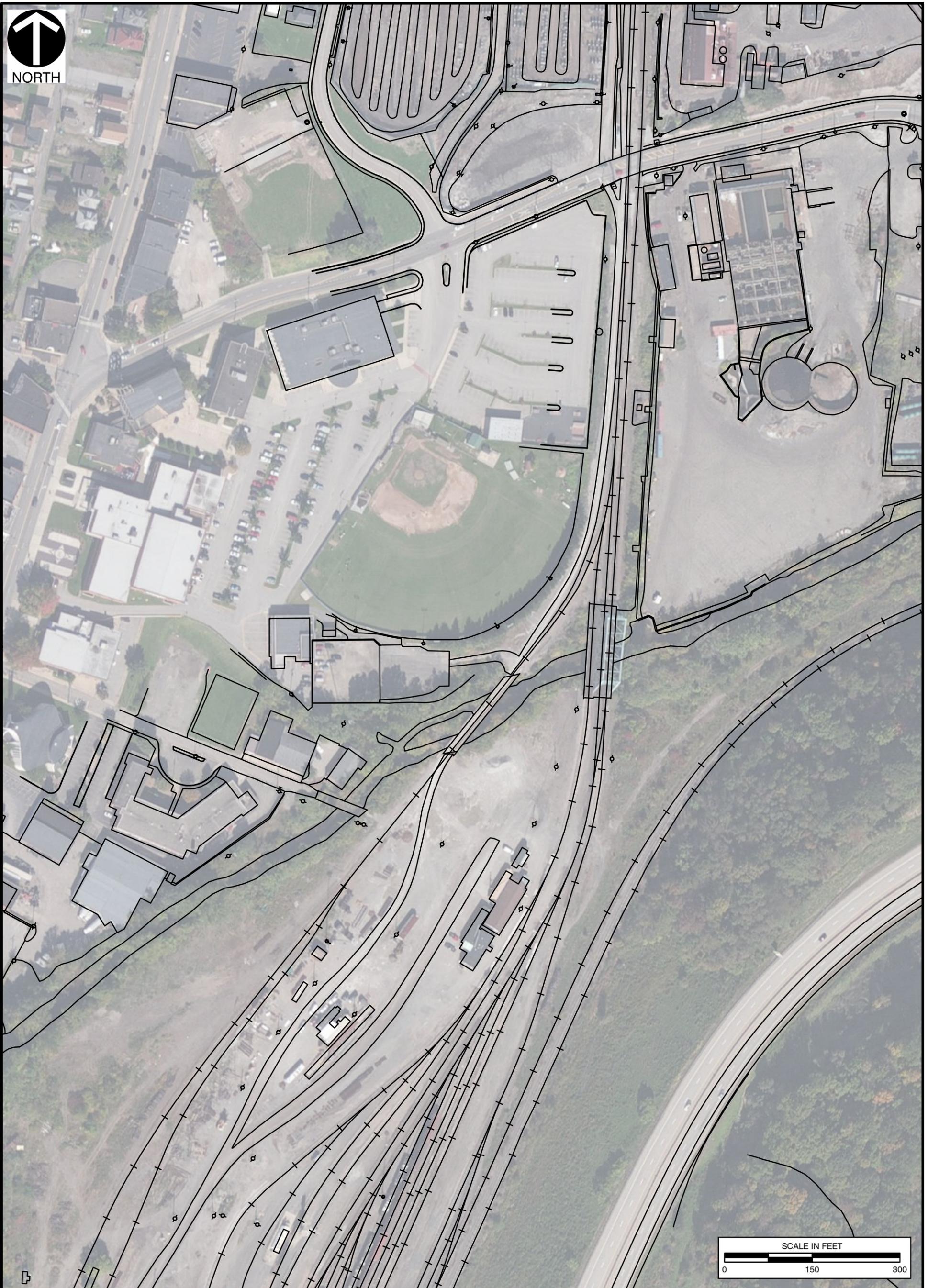


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ARCELORMITTAL WEIRTON LLC
 2016 TITLE V PERMIT RENEWAL
 WEIRTON PLANT
 HANCOCK AND BROOKE COUNTIES, WEST VIRGINIA

B OUTFALL AREA OVERVIEW

DRAWN BY:	CBL	CHECKED BY:	PWT	APPROVED BY: * Hand signature on file	PWT*	FIGURE NO:	6
DATE:	3/27/2016	SCALE:	1" = 75'	PROJECT NO:	101-185		



REFERENCE
ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
HTTP://GOTO.ARCGISONLINE.COM/MAPS/
WORLD_IMAGERY,
ACCESSED 3/31/2016, IMAGERY DATE: 2011.



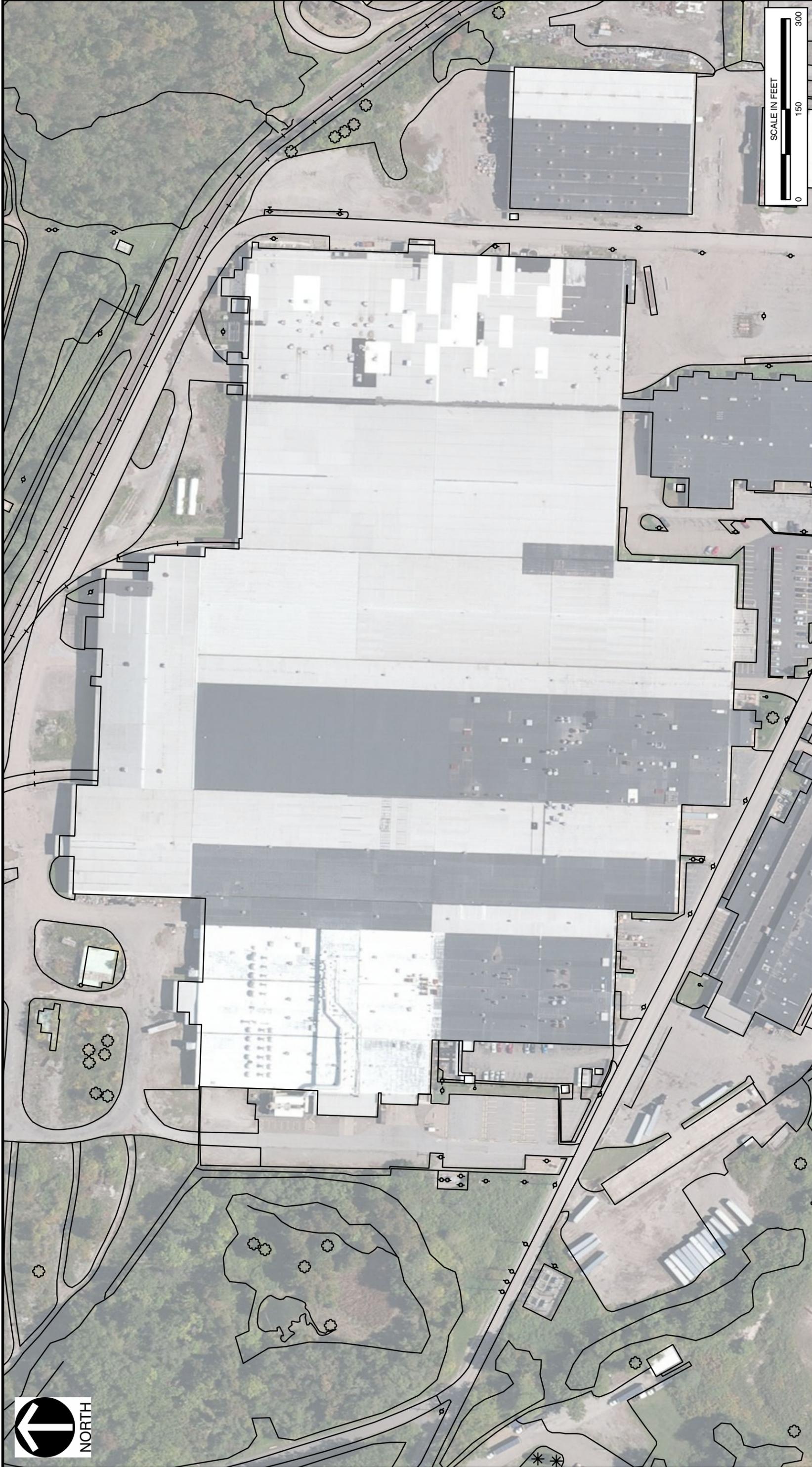
Civil & Environmental Consultants, Inc.

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412-429-2324 • 800-365-2324
www.cecinc.com

ARCELORMITTAL WEIRTON LLC
2016 TITLE V PERMIT RENEWAL
WEIRTON PLANT
HANCOCK AND BROOKE COUNTIES, WEST VIRGINIA

WALNUT STREET AREA OVERVIEW

DRAWN BY:	CBL	CHECKED BY:	PWT	APPROVED BY: * Hand signature on file	PWT*	FIGURE NO:	7
DATE:	3/27/2016	SCALE:	1" = 150'	PROJECT NO:	101-185		



REFERENCE
 ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
 HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY;
 ACCESSED 3/31/2016, IMAGERY DATE: 2011.



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ARCELORMITTAL WEIRTON LLC
 2016 TITLE V PERMIT RENEWAL
 WEIRTON PLANT
 HANCOCK AND BROOKE COUNTIES, WEST VIRGINIA

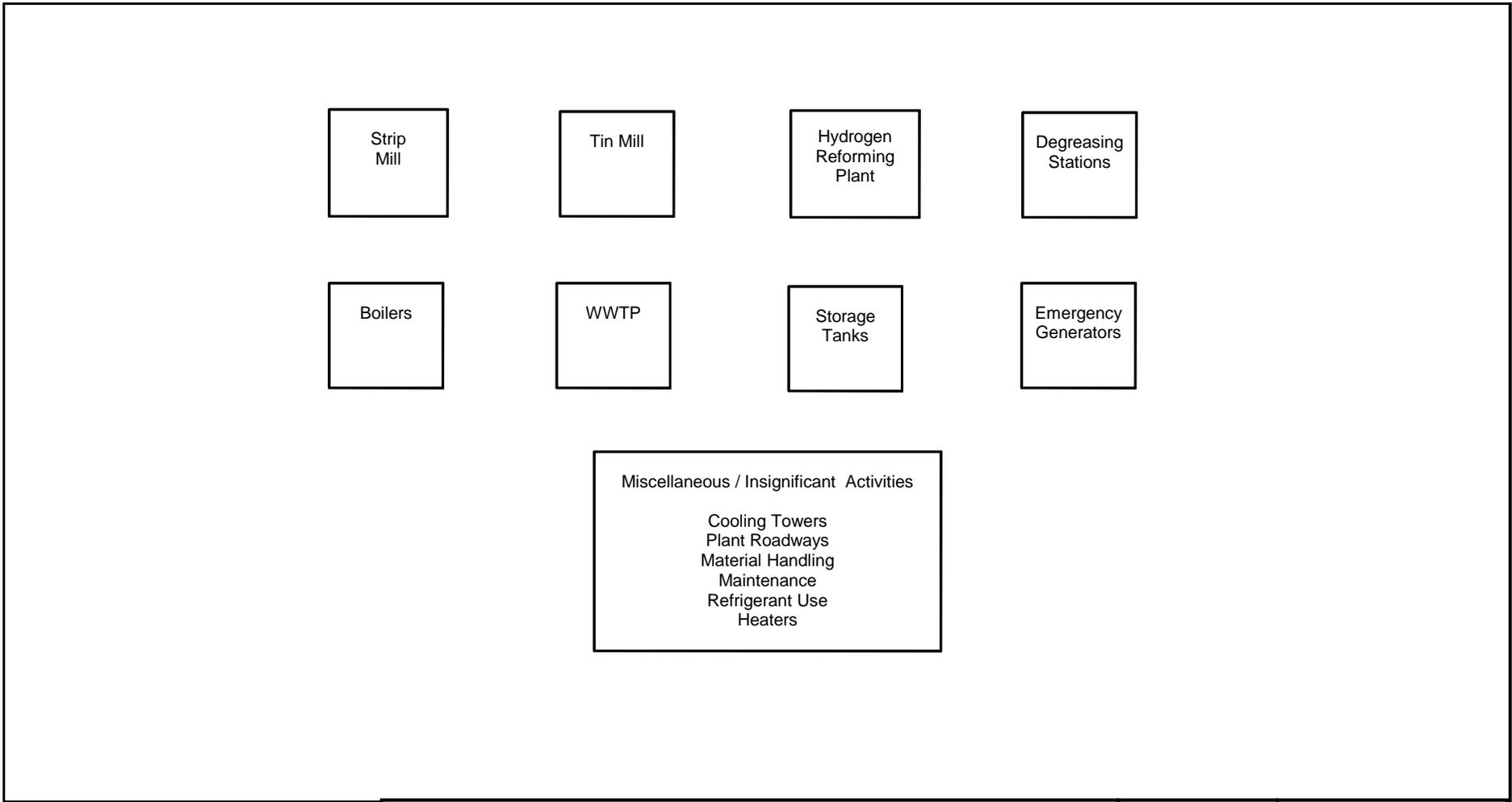
HALF MOON AREA OVERVIEW

DRAWN BY:	CBL	CHECKED BY:	PWT
DATE:	3/27/2016	SCALE:	1" = 150'
APPROVED BY:	* Hand signature on file		PWT* FIGURE NO:
			101-185

8

ATTACHMENT C

Process Flow Diagrams

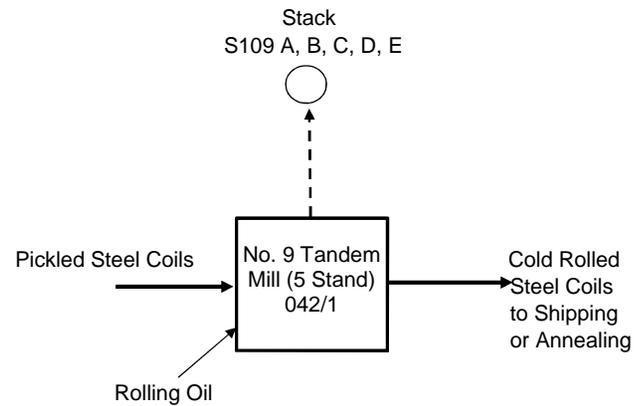
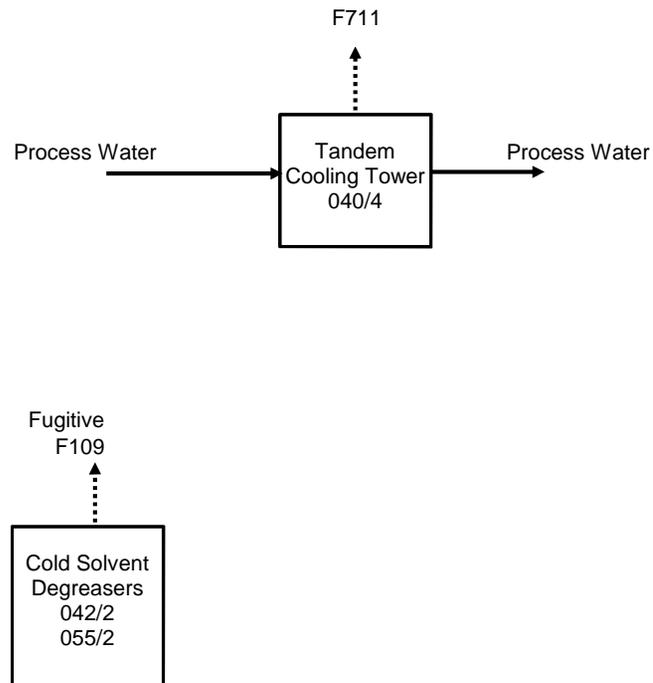


**Plant Wide
Process Flow Diagram
ArcelorMittal Weirton LLC, Weirton, WV**

**Figure:
1**

DATE: 3/23/2016

DRAWN BY: NMH

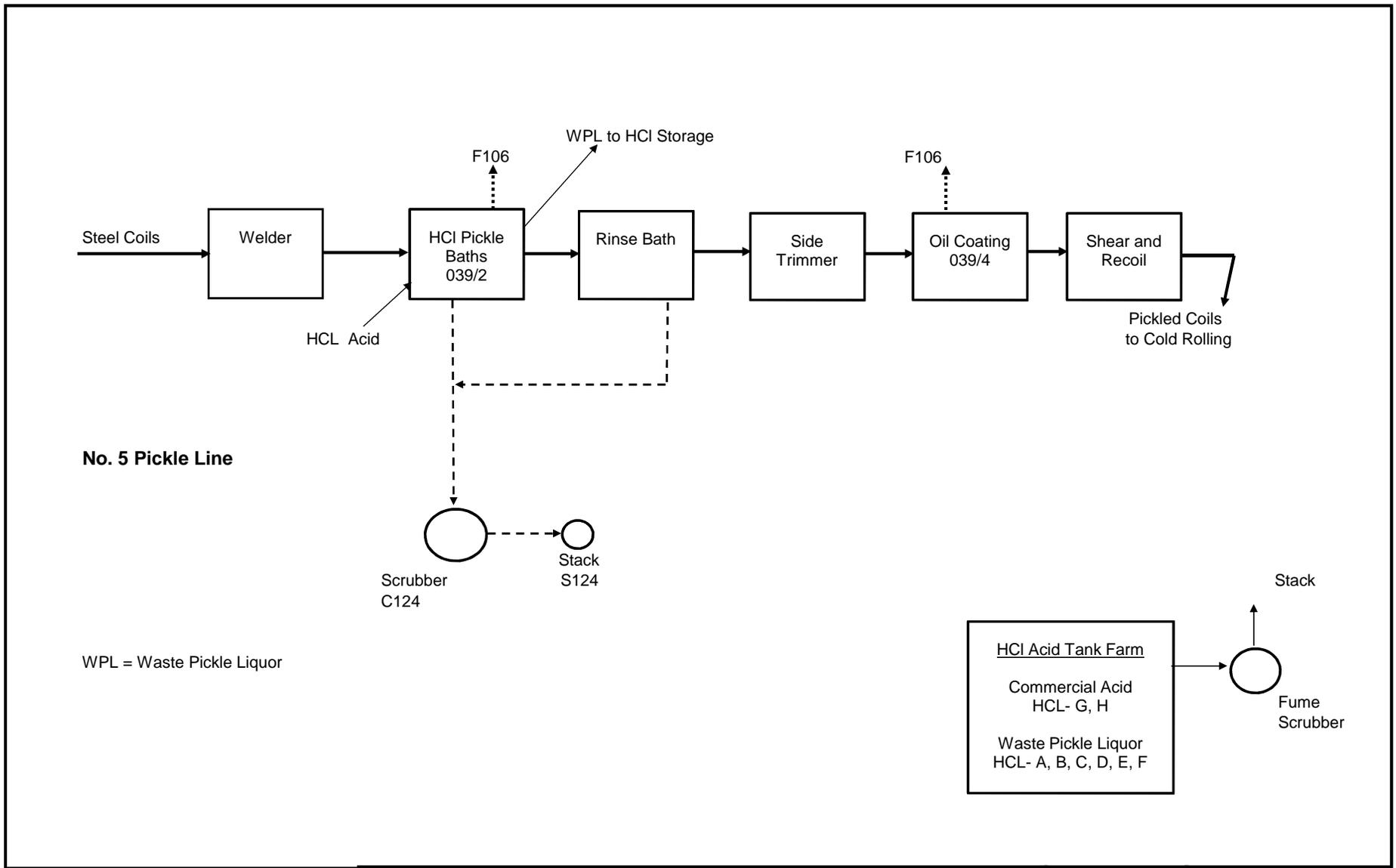


**Strip Steel Cold Rolling
Process Flow Diagram
ArcelorMittal Weirton LLC, Weirton, WV**

**Figure:
2**

DATE: 3/23/2016

DRAWN BY: NMH

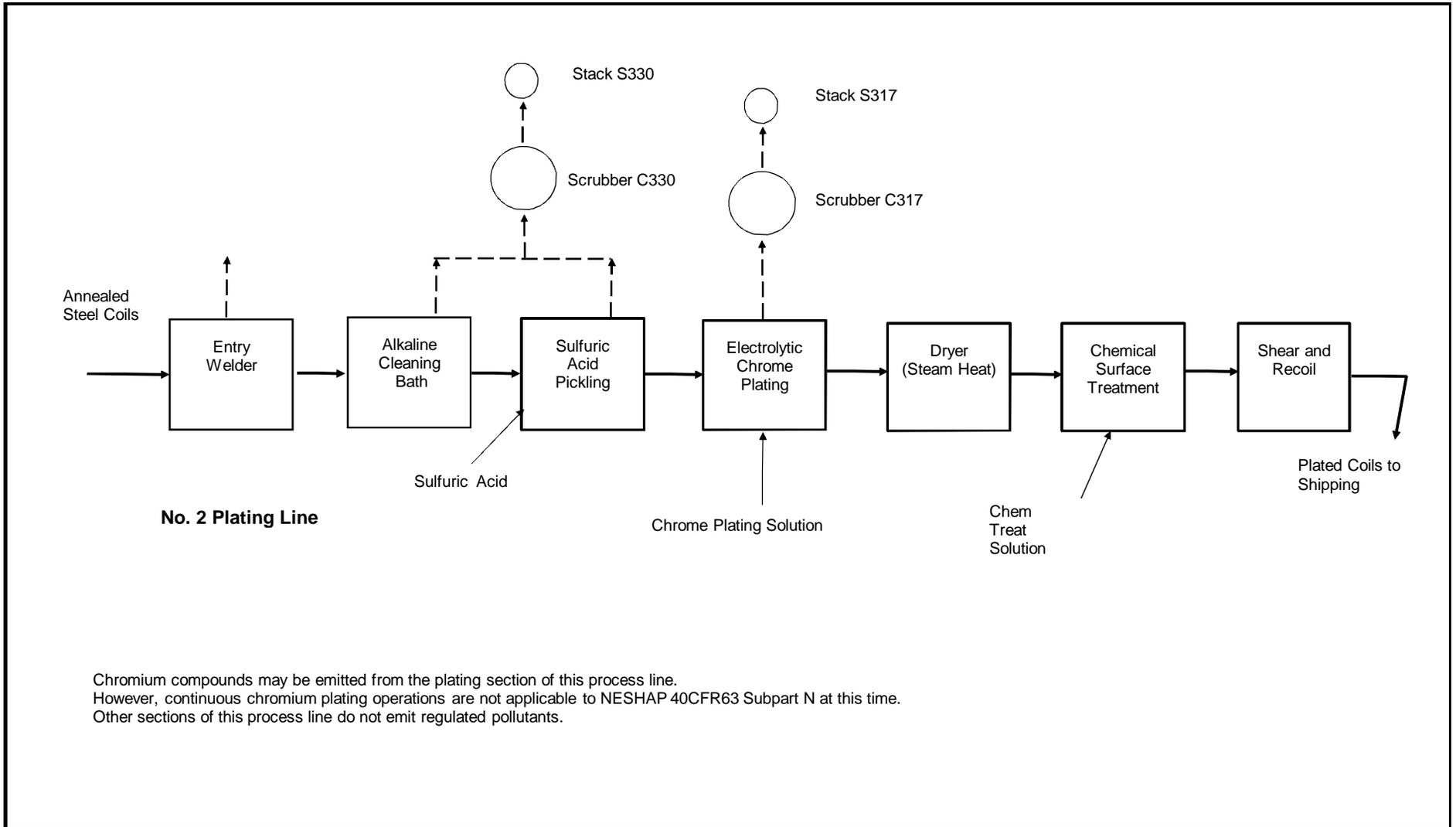


**Strip Steel Pickling Line and HCl Acid Tank Farm
Process Flow Diagram
ArcelorMittal Weirton LLC, Weirton, WV**

**Figure:
3**

DATE: 3/23/2016

DRAWN BY: NMH

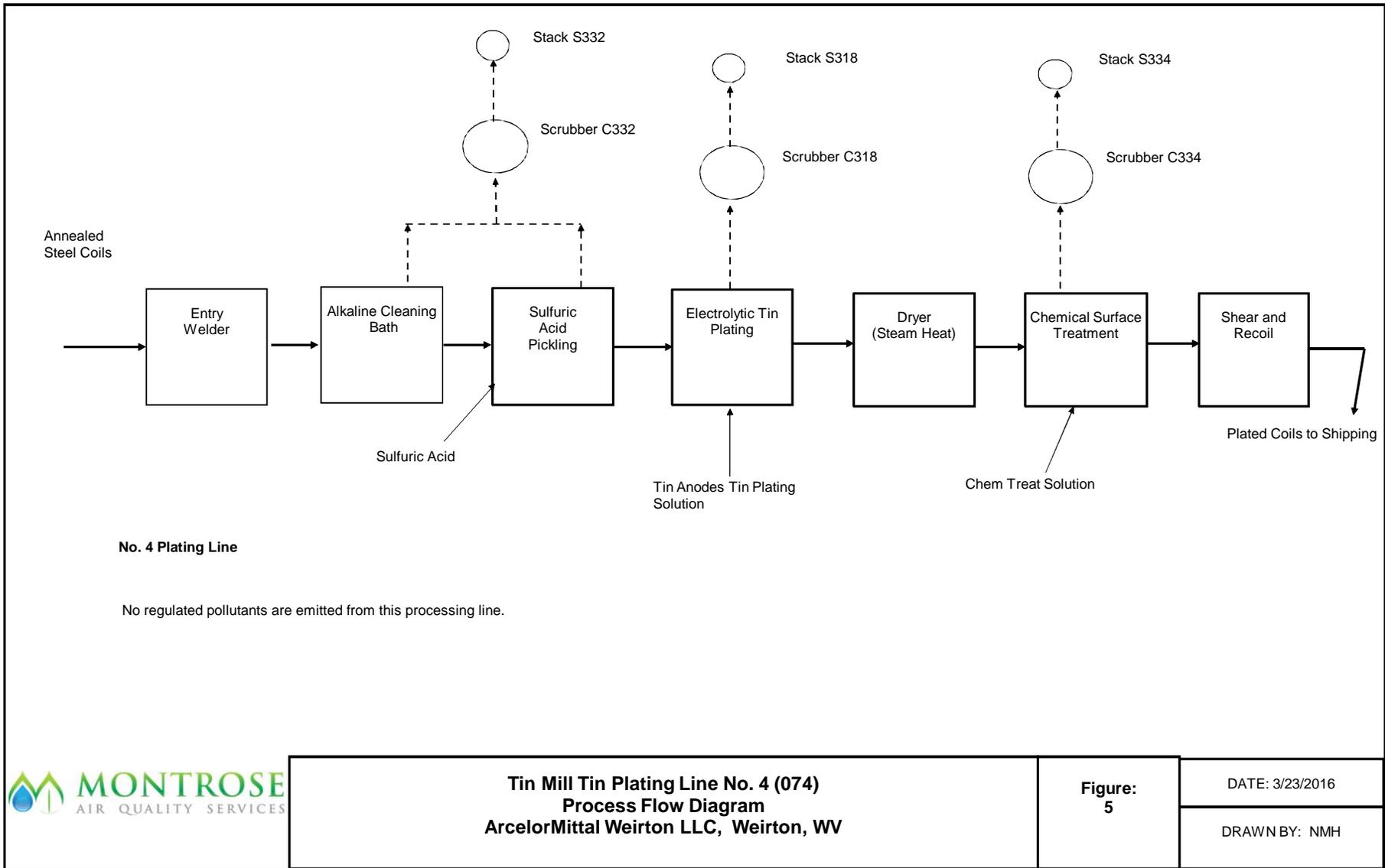


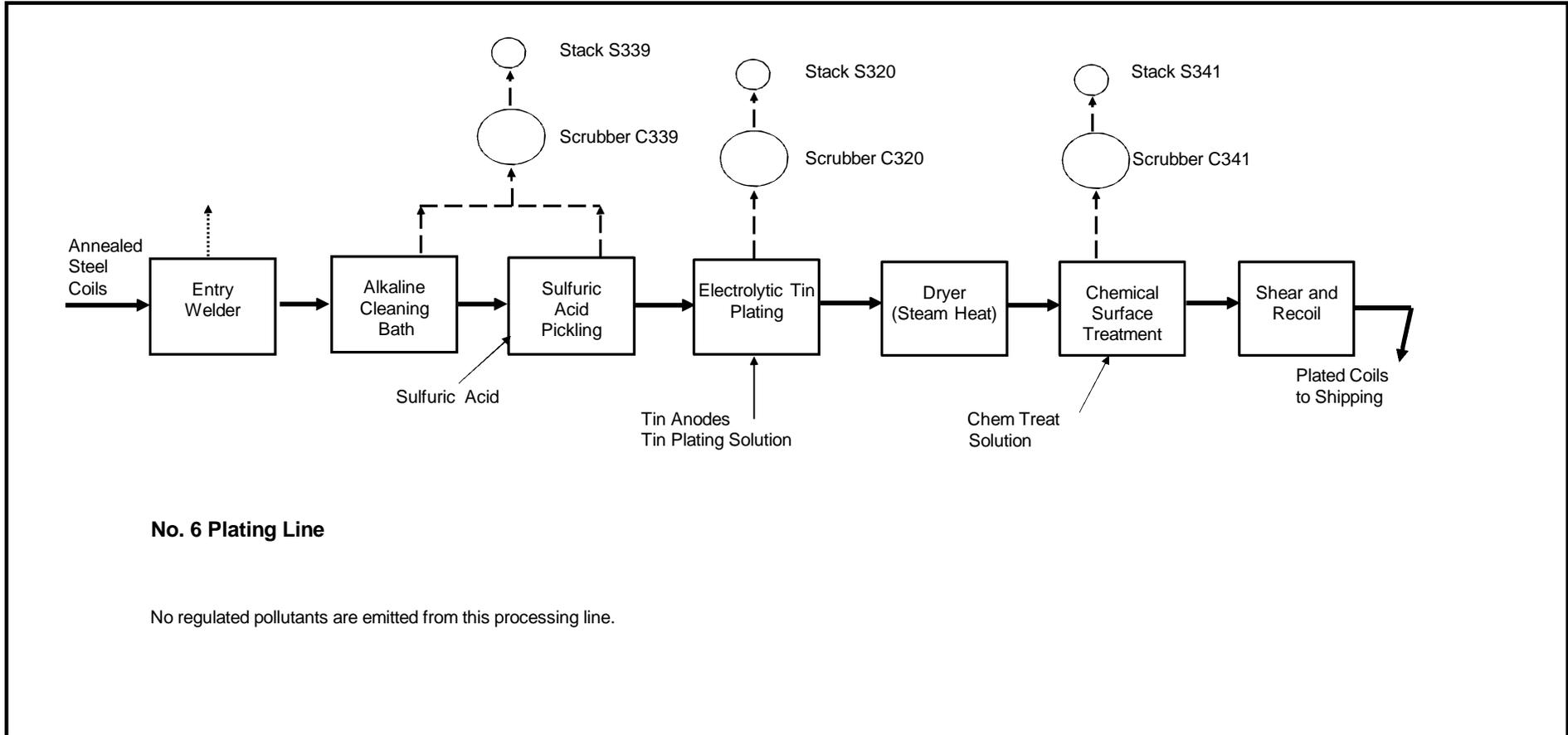
**Tin Mill Chrome Plating Line No. 2 (073)
Process Flow Diagram
ArcelorMittal Weirton LLC, Weirton, WV**

**Figure:
4**

DATE: 3/23/2016

DRAWN BY: NMH



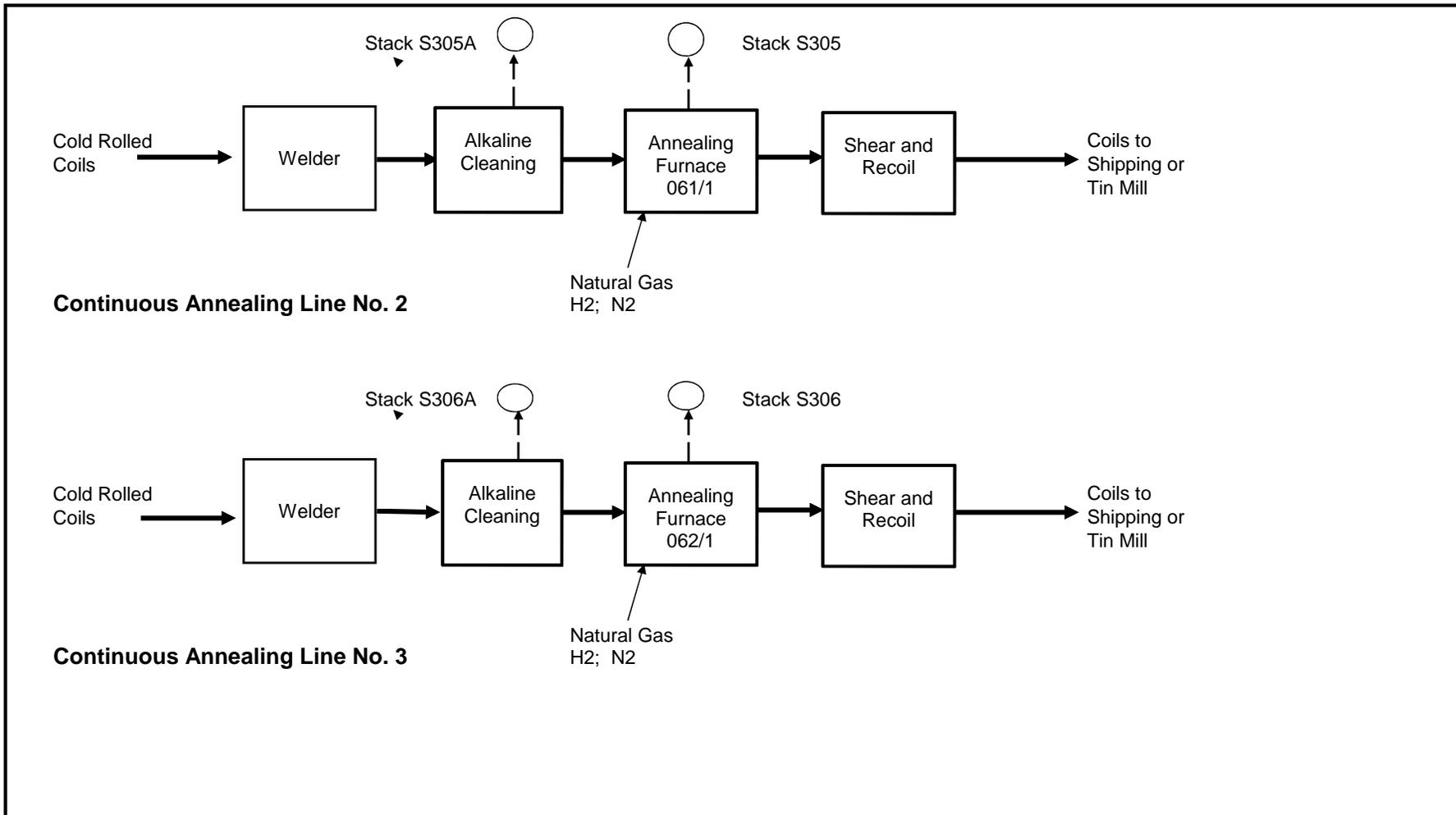


**Tin Mill Plating Line No. 6 (076)
Process Flow Diagram
ArcelorMittal Weirton LLC, Weirton, WV**

**Figure:
6**

DATE: 3/23/2016

DRAWN BY: NMH

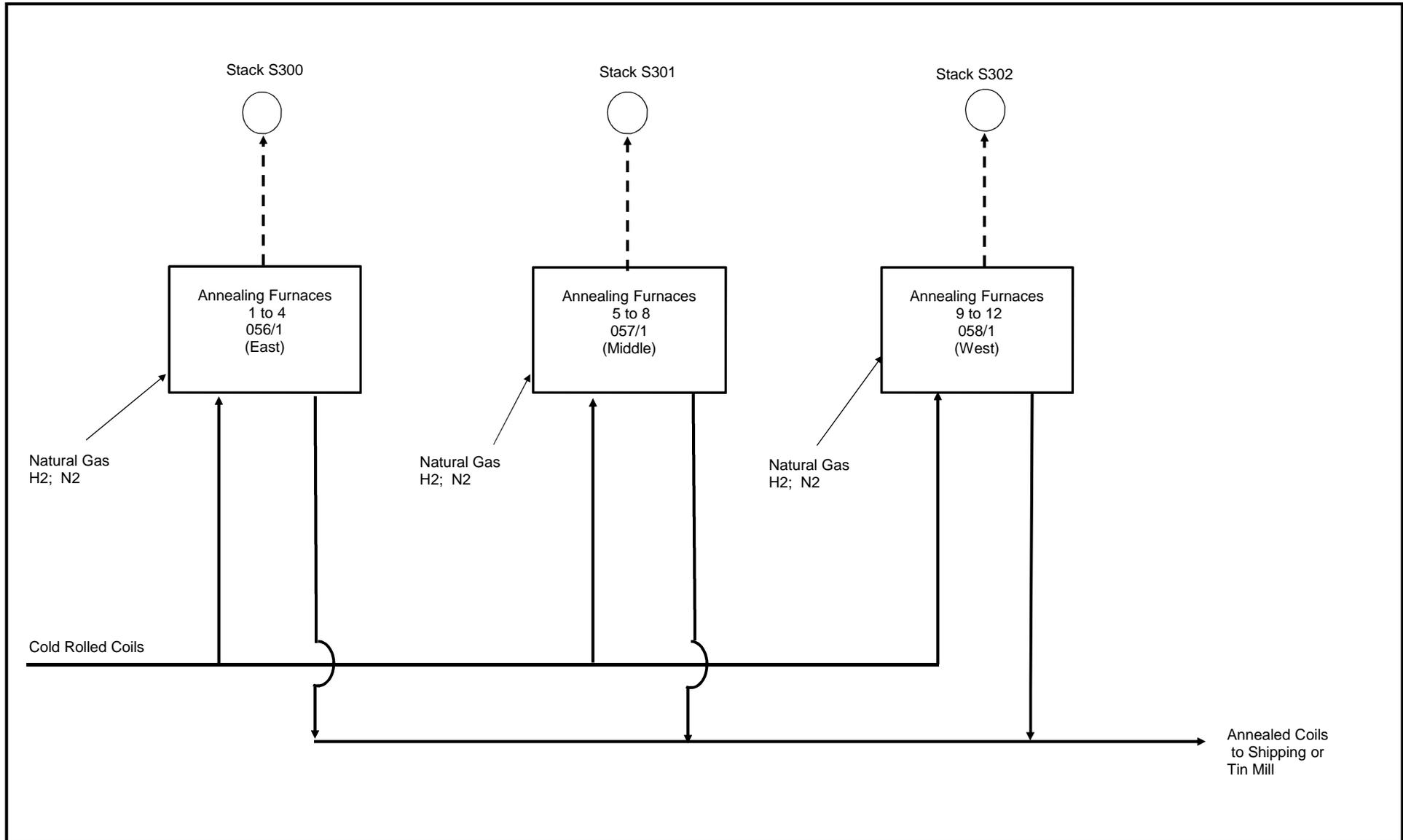


**Tin Mill Continuous Annealing Lines
Process Flow Diagram
ArcelorMittal Weirton LLC, Weirton, WV**

**Figure:
7**

DATE: 3/23/2016

DRAWN BY: NMH

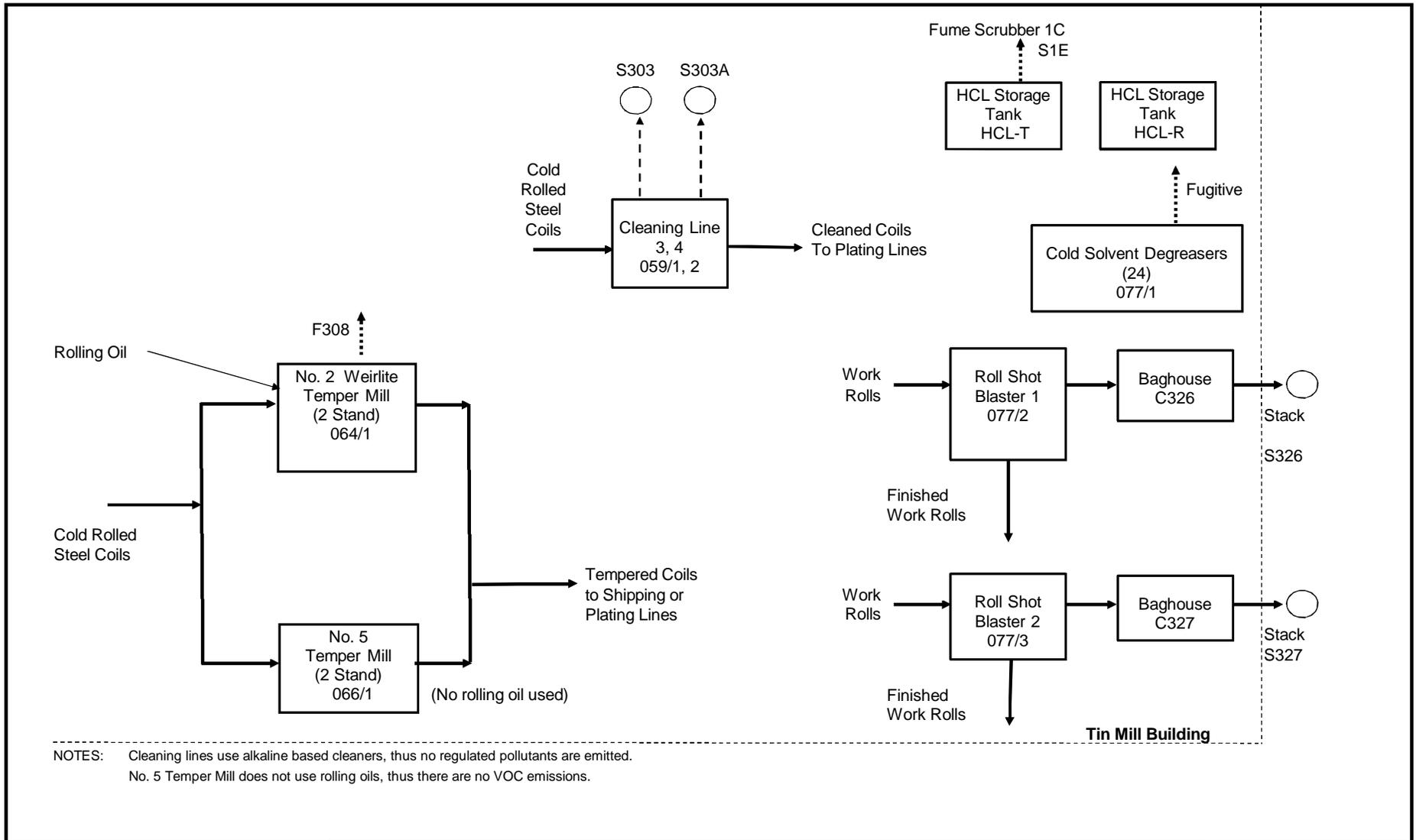


**Tin Mill Batch Annealing (Jumbo Annealing)
Process Flow Diagram
ArcelorMittal Weirton LLC, Weirton, WV**

**Figure:
8**

DATE: 3/23/2016

DRAWN BY: NMH

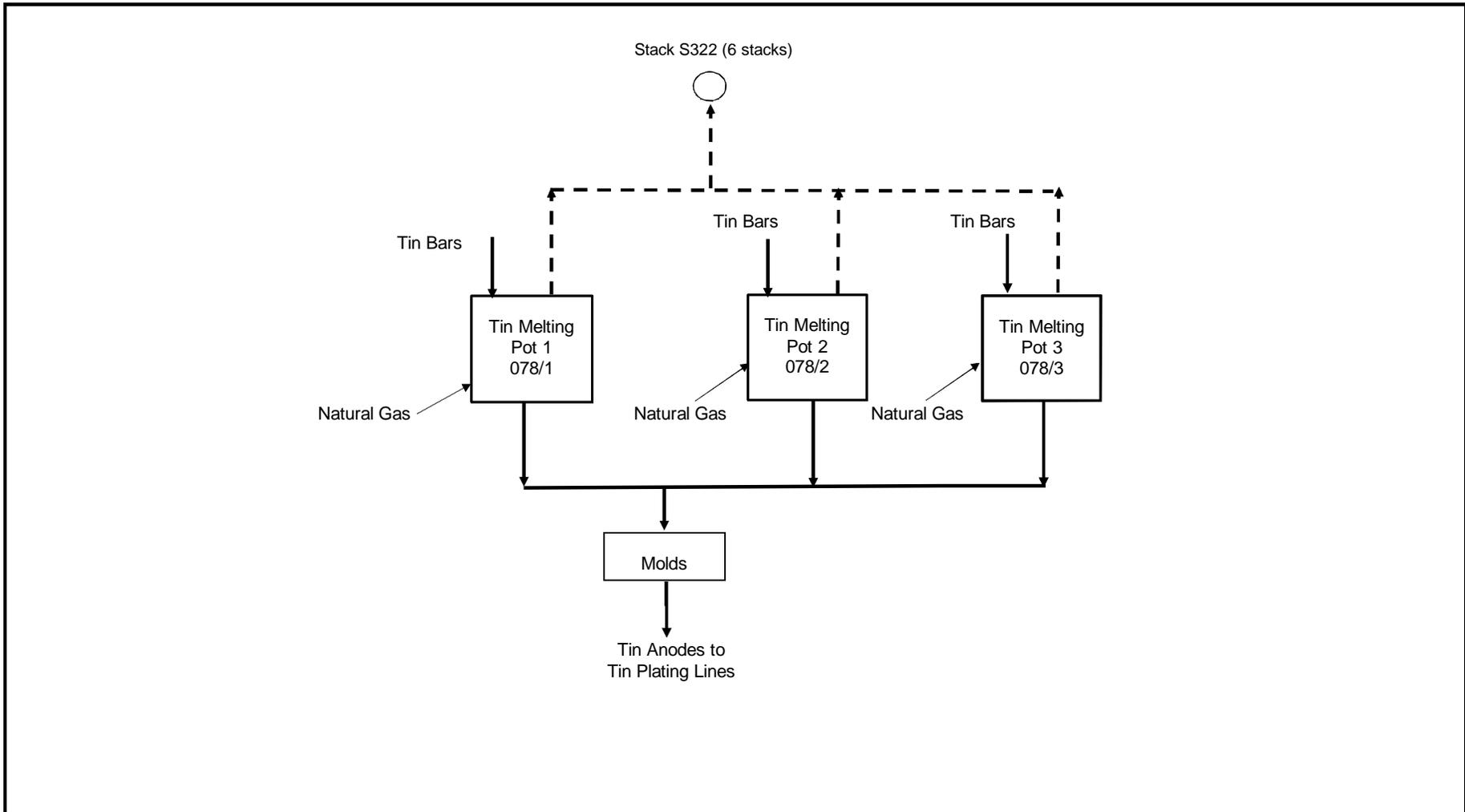


**Tin Mill Cleaning, Tempering, HCL Storage and Roll Shot Blasters
Process Flow Diagram
ArcelorMittal Weirton LLC, Weirton, WV**

**Figure:
9**

DATE: 3/23/2016

DRAWN BY: NMH

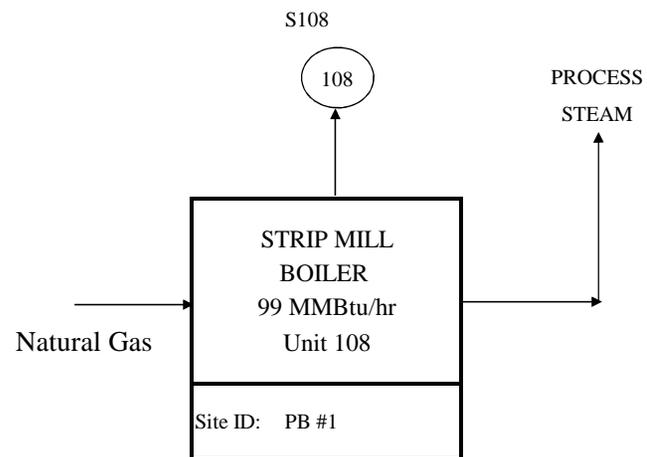


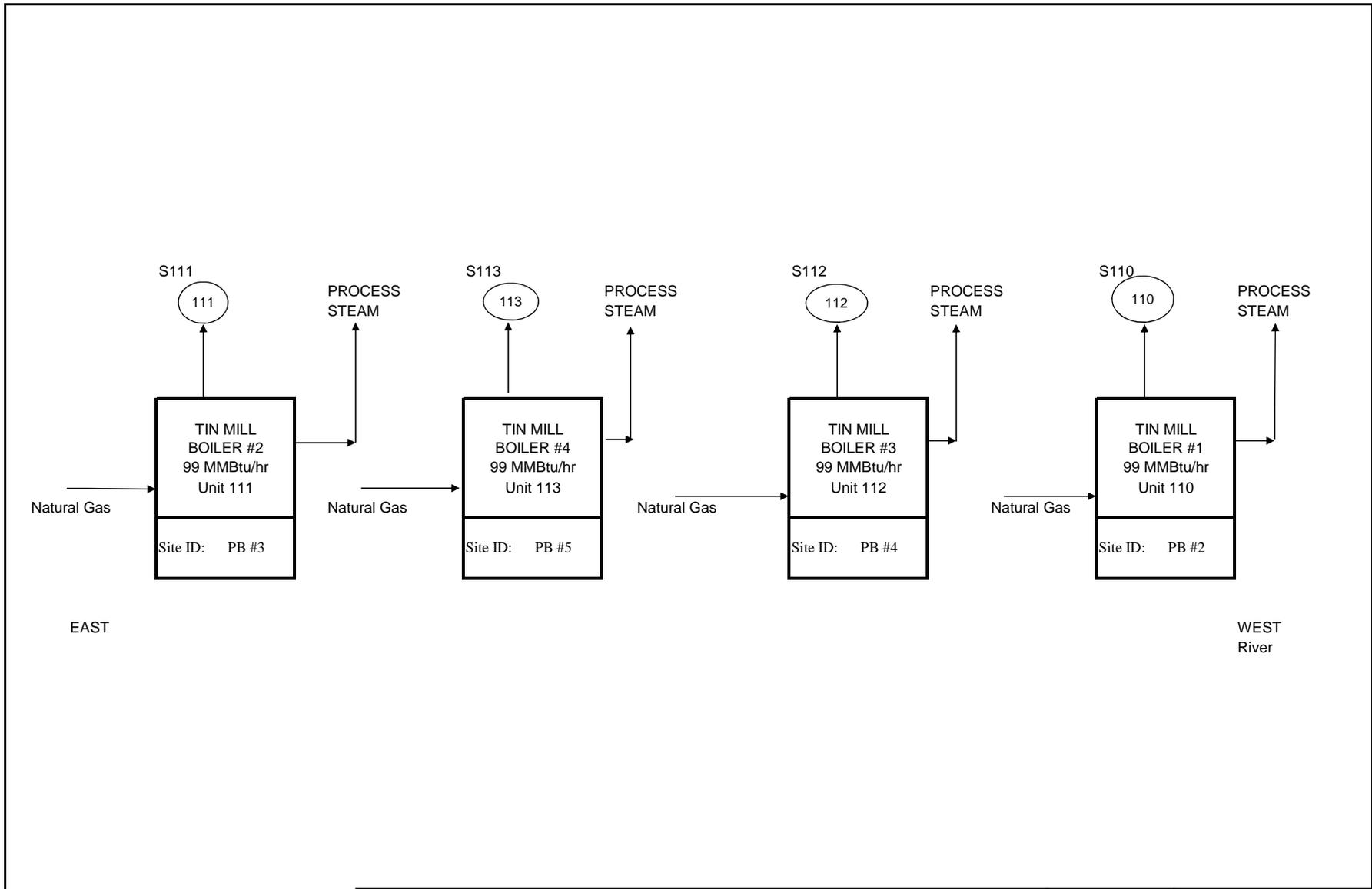
**Tin Mill Anode Shop
Process Flow Diagram
ArcelorMittal Weirton LLC, Weirton, WV**

**Figure:
10**

DATE: 3/23/2016

DRAWN BY: NMH



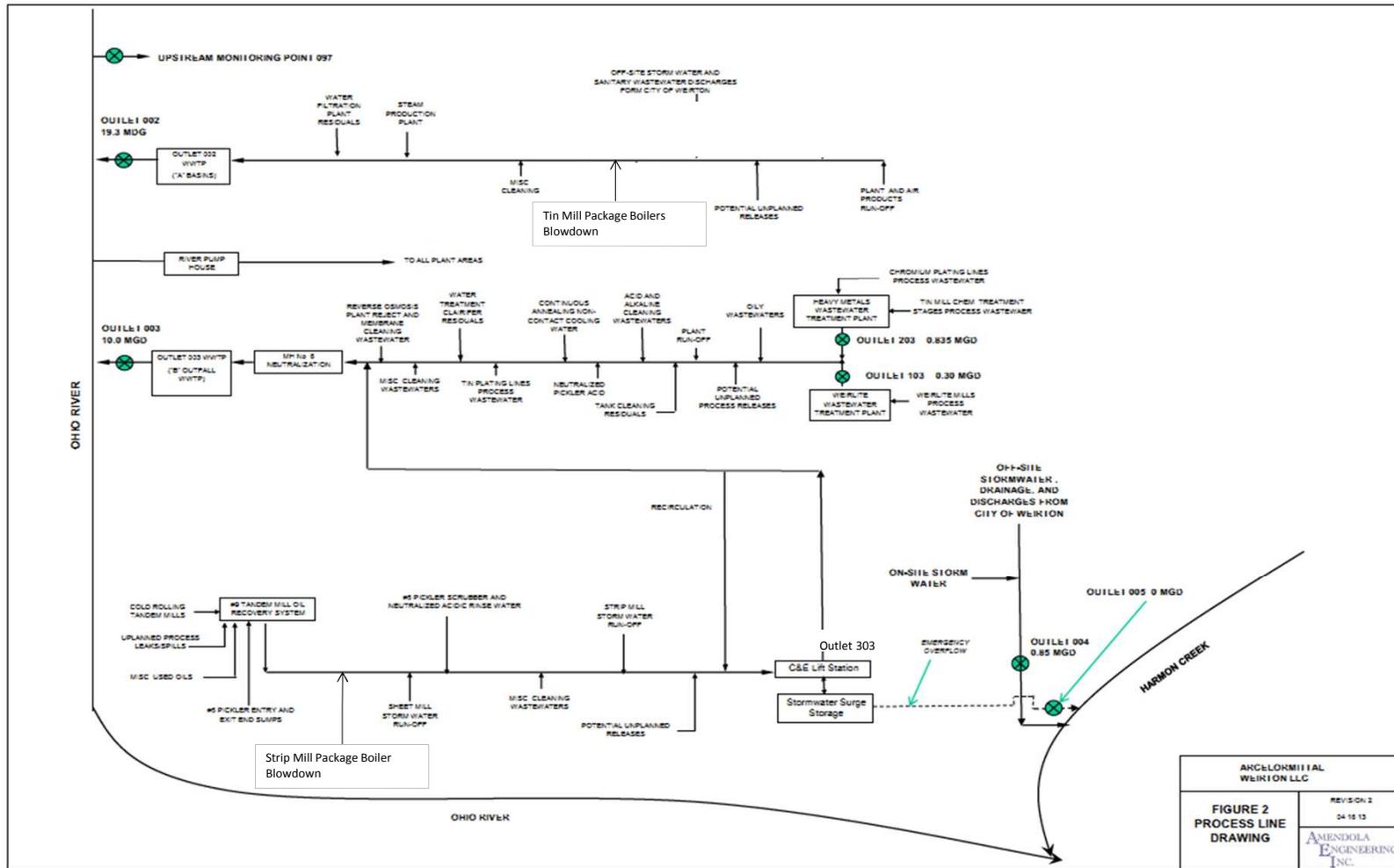


**Tin Mill Boilers
Process Flow Diagram
ArcelorMittal Weirton LLC, Weirton, WV**

**Figure:
12**

DATE: 3/23/2016

DRAWN BY: NMH



ARCELORMITTAL WEIRTON LLC	
FIGURE 2 PROCESS LINE DRAWING	REVISION 2 24 10 13
AMENDOLA ENGINEERING INC.	

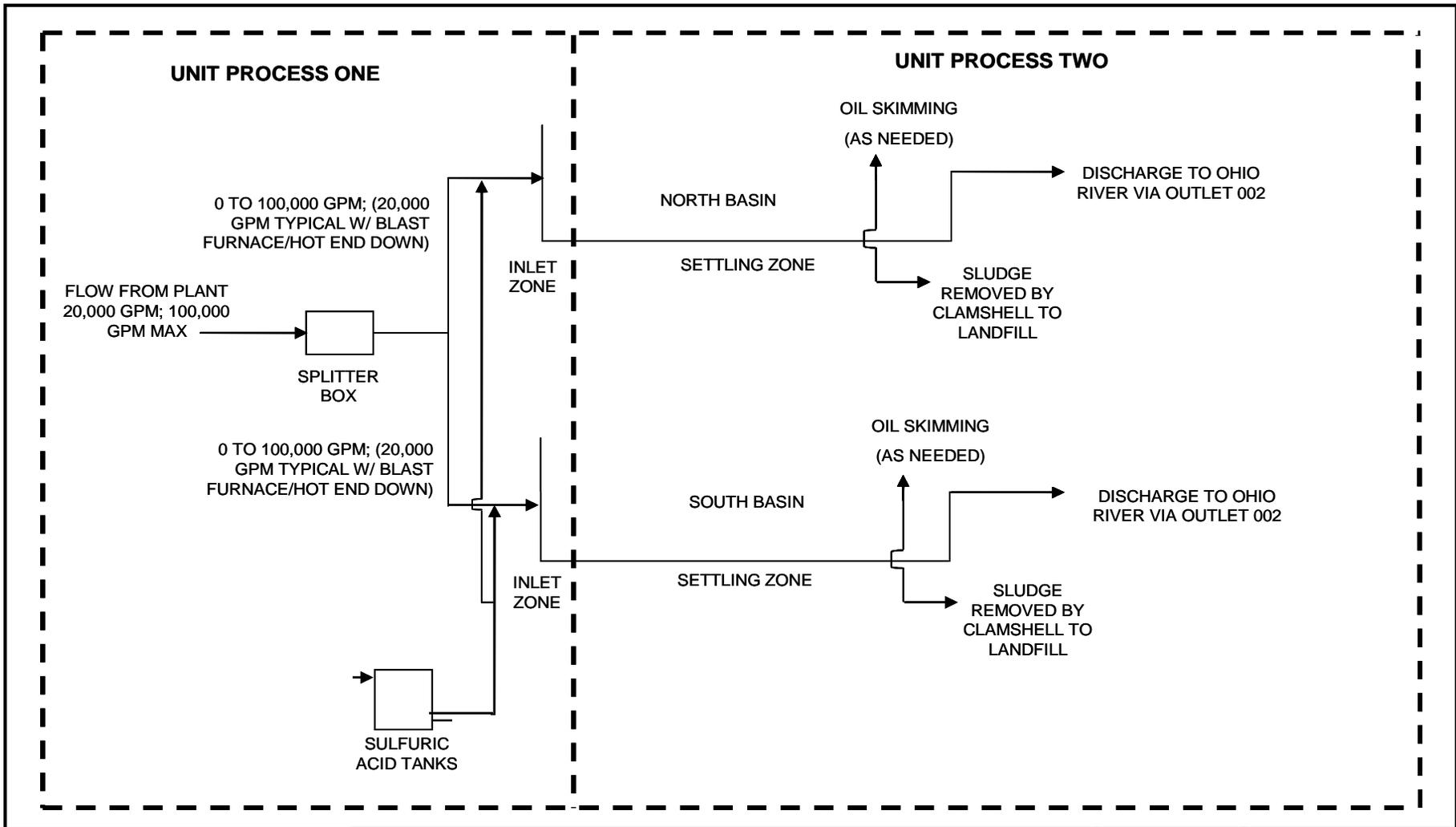


**Overview of Wastewater Flows
Process Flow Diagram
ArcelorMittal Weirton LLC, Weirton, WV**

**Figure:
13**

DATE: 3/23/2016

DRAWN BY: AEI

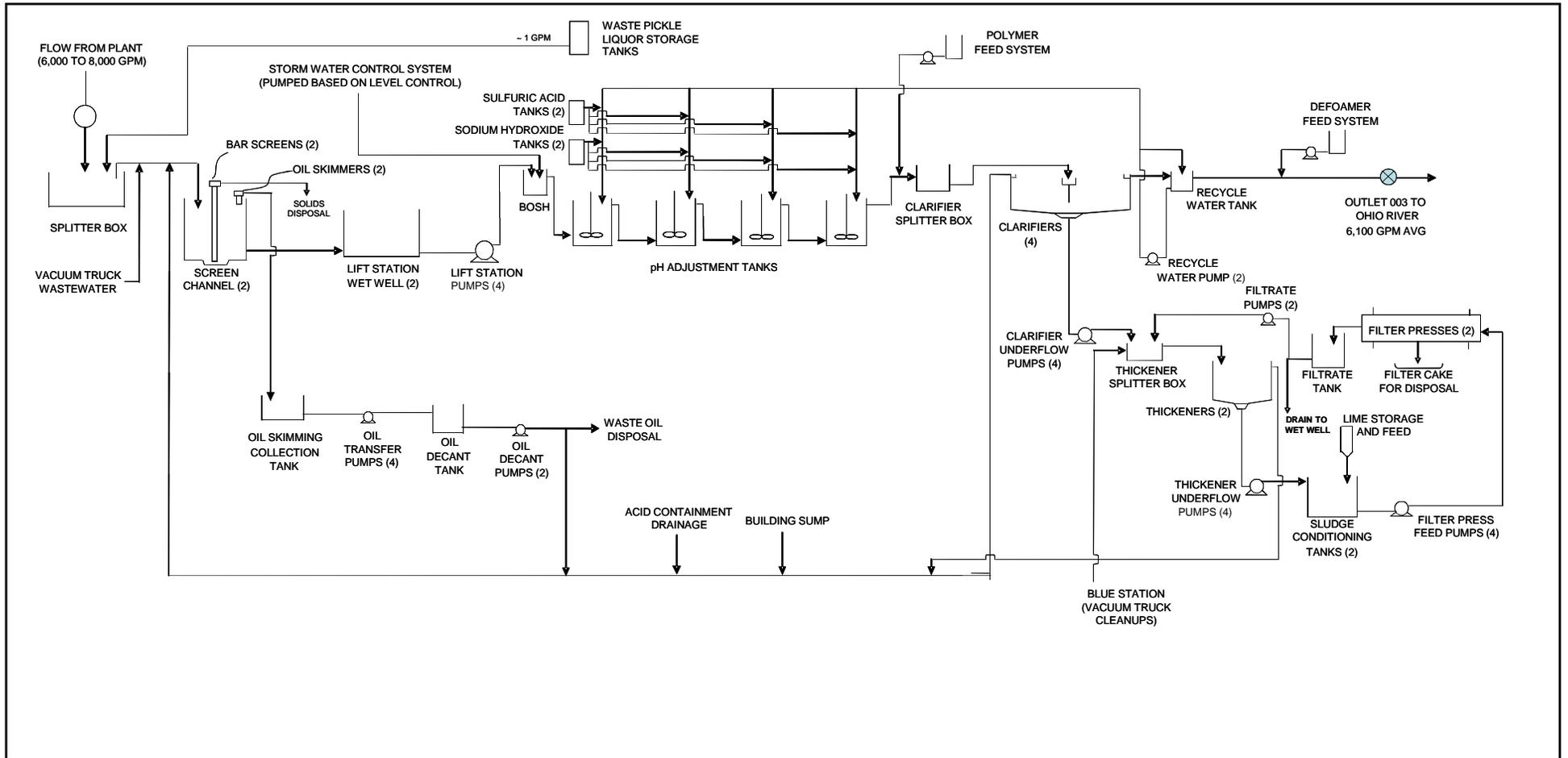


**"A" Outfall (Outlet 002) WWTP
Process Flow Diagram
ArcelorMittal Weirton LLC, Weirton, WV**

**Figure:
14**

DATE: 3/24/2016

DRAWN BY:
ArcelorMittal Weirton

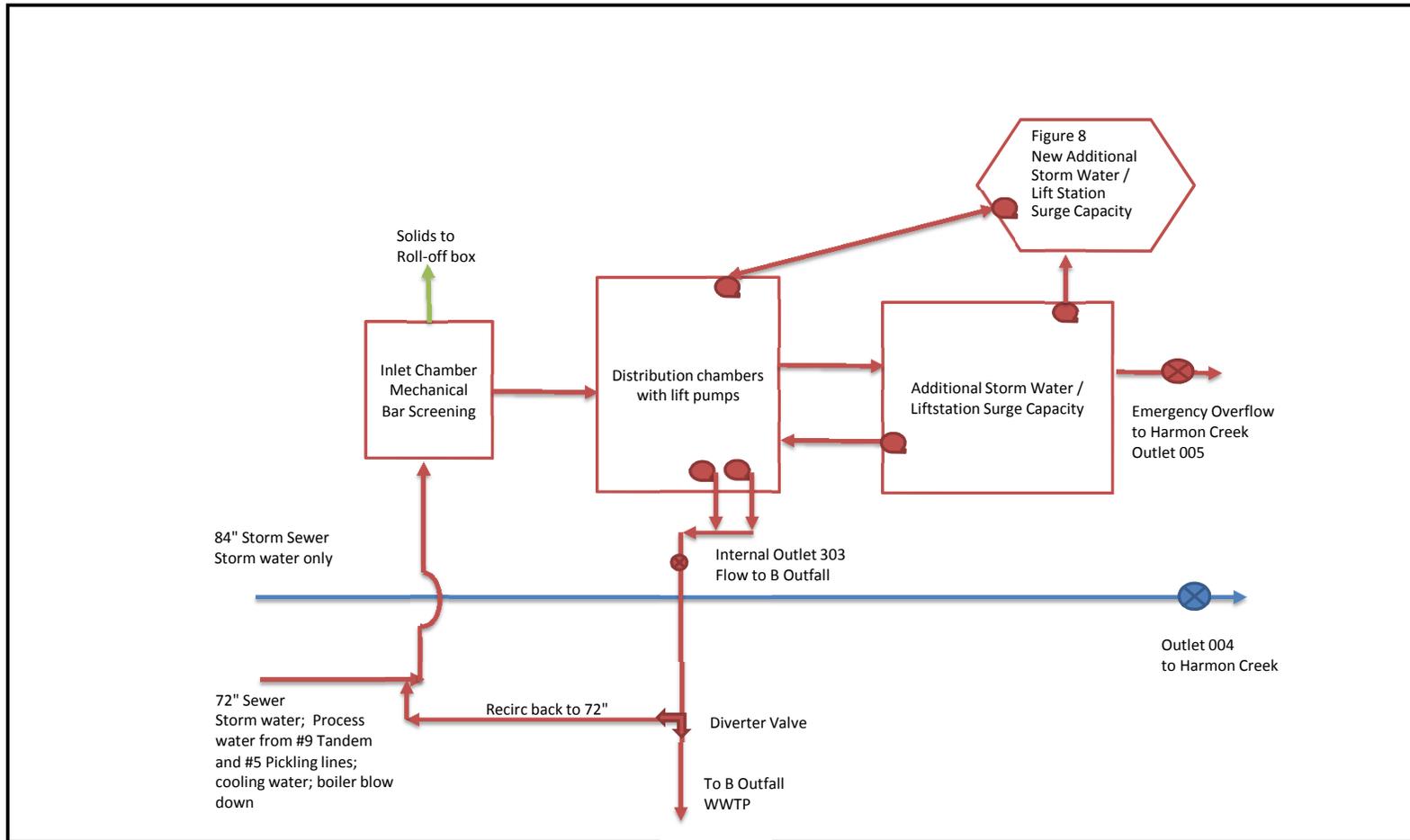


**“B” Outfall (Outlet 003) WWTP
Process Flow Diagram
ArcelorMittal Weirton LLC, Weirton, WV**

**Figure:
15**

DATE: 3/24/2016

DRAWN BY:
ArcelorMittal Weirton

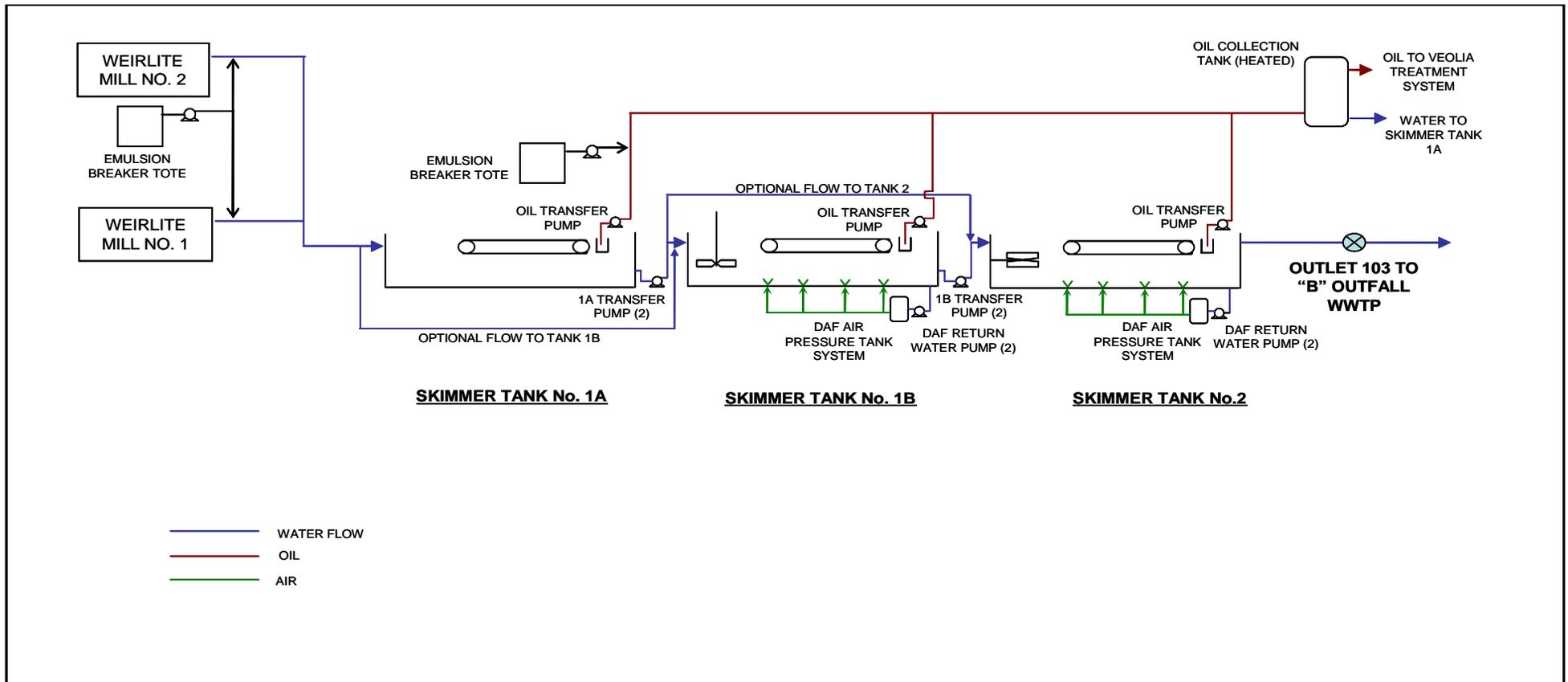


**“C&E” Outfall (Outlet 004) WWTP
Process Flow Diagram
ArcelorMittal Weirton LLC, Weirton, WV**

**Figure:
16**

DATE: 3/23/2016

DRAWN BY:
ArcelorMittal Weirton

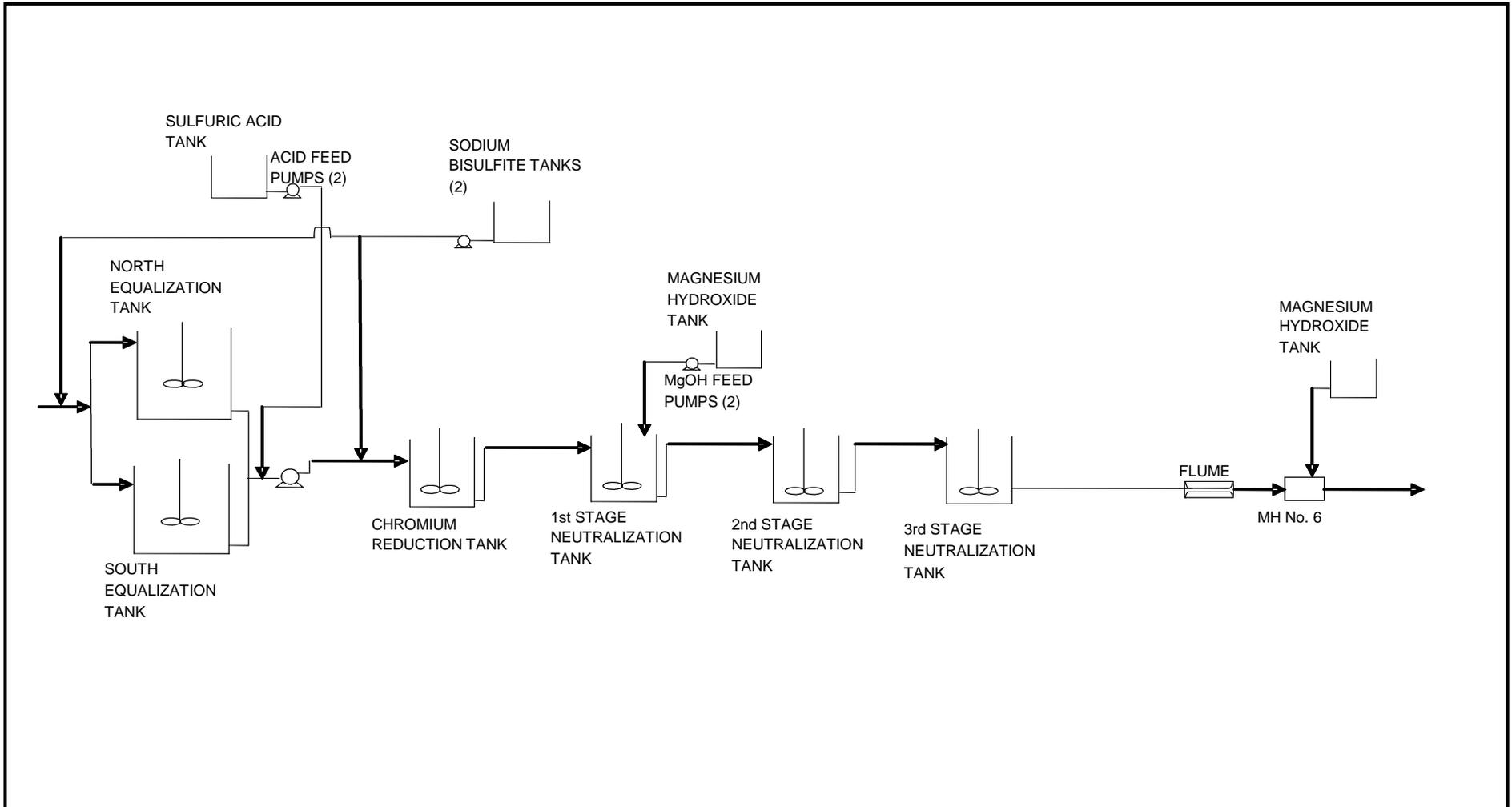


**Weirlite WWTP
 Process Flow Diagram
 ArcelorMittal Weirton LLC, Weirton, WV**

**Figure:
 17**

DATE: 3/24/2016

DRAWN BY:
 ArcelorMittal Weirton

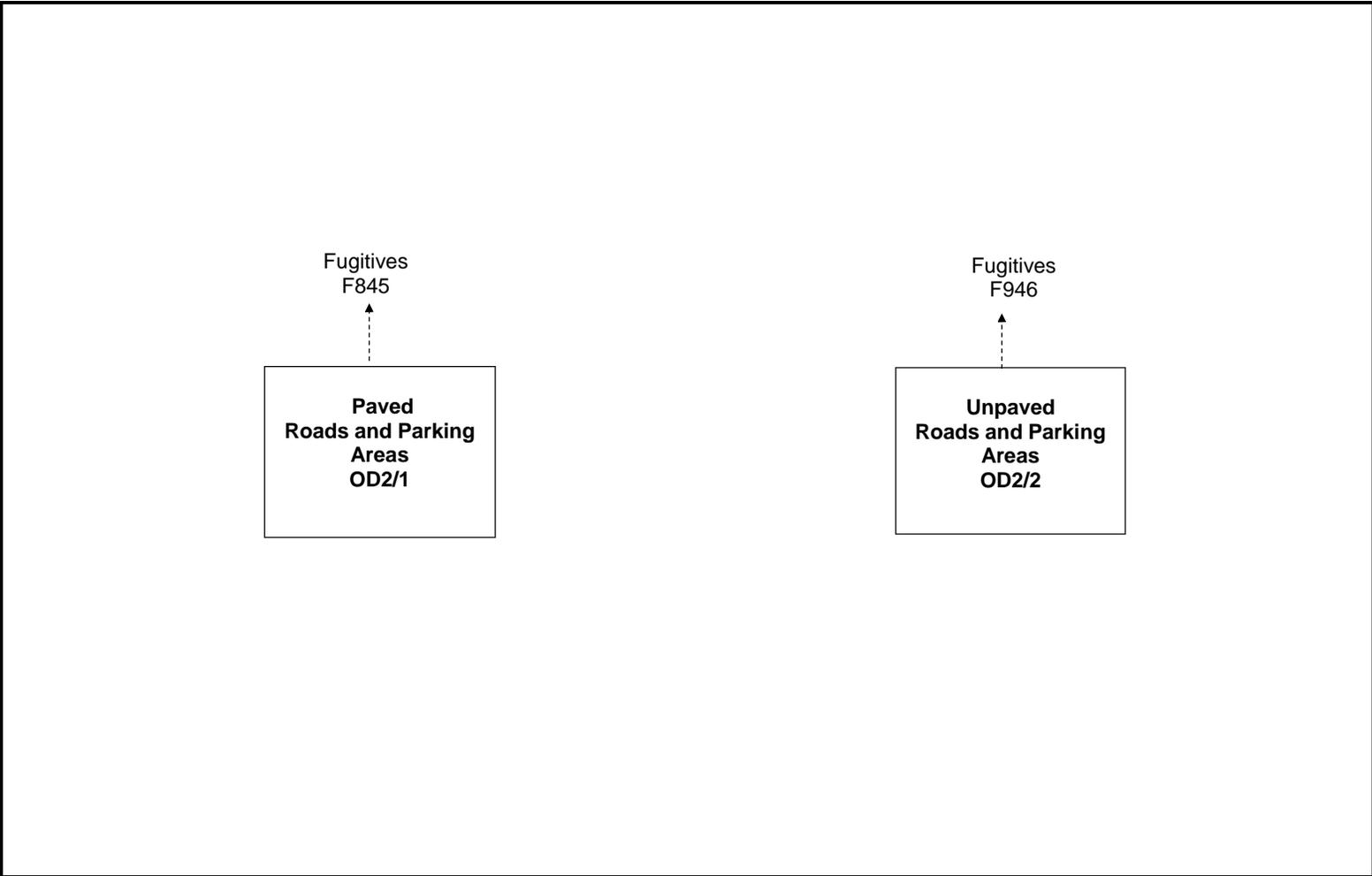


**Heavy Metals WWTP
Process Flow Diagram
ArcelorMittal Weirton LLC, Weirton, WV**

**Figure:
18**

DATE: 3/24/2016

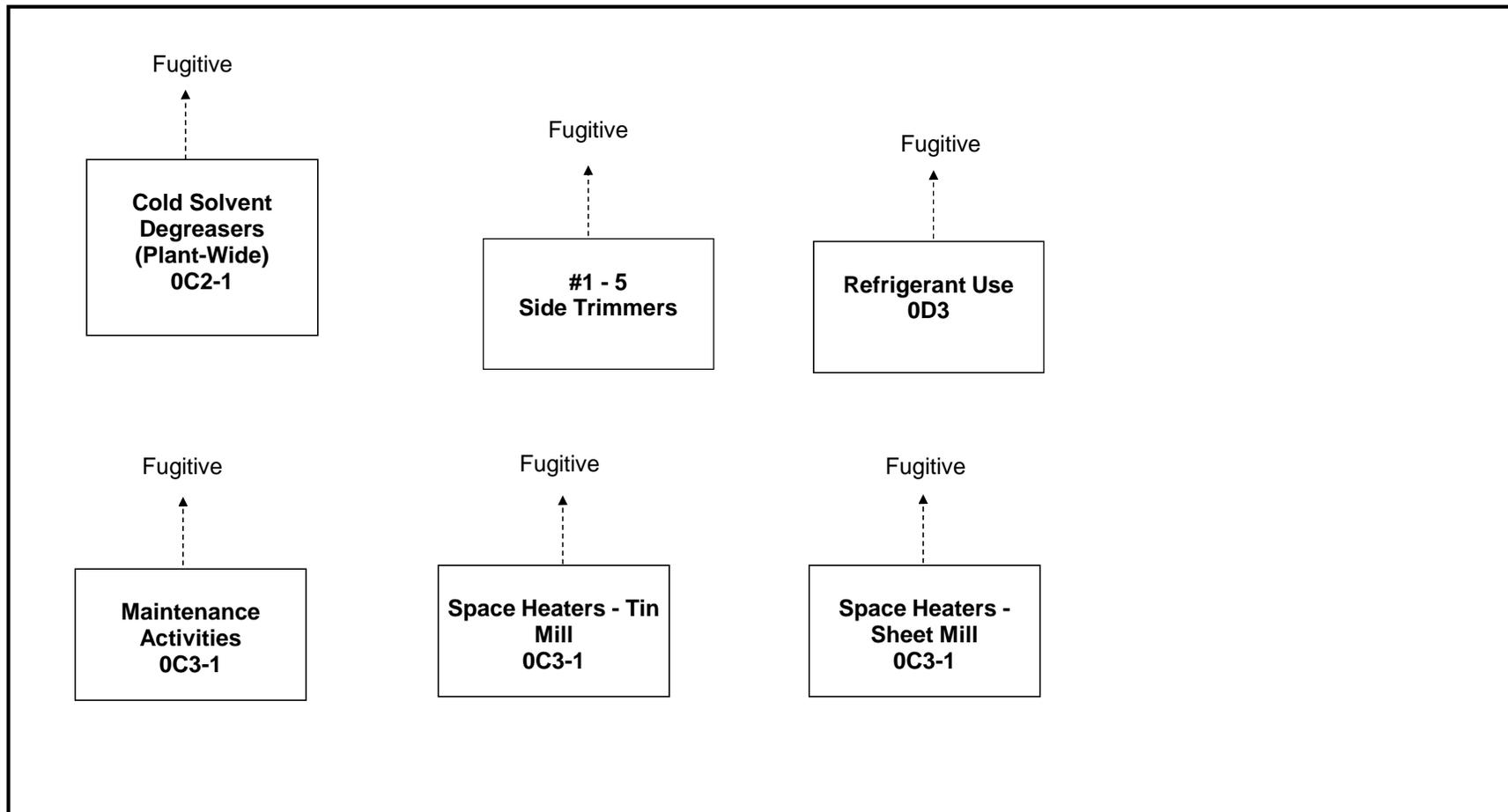
DRAWN BY:
ArcelorMittal Weirton



**Road and Parking Areas
Process Flow Diagram
ArcelorMittal Weirton LLC, Weirton, WV**

**Figure:
19**

DATE: 3/24/2016
DRAWN BY: NMH

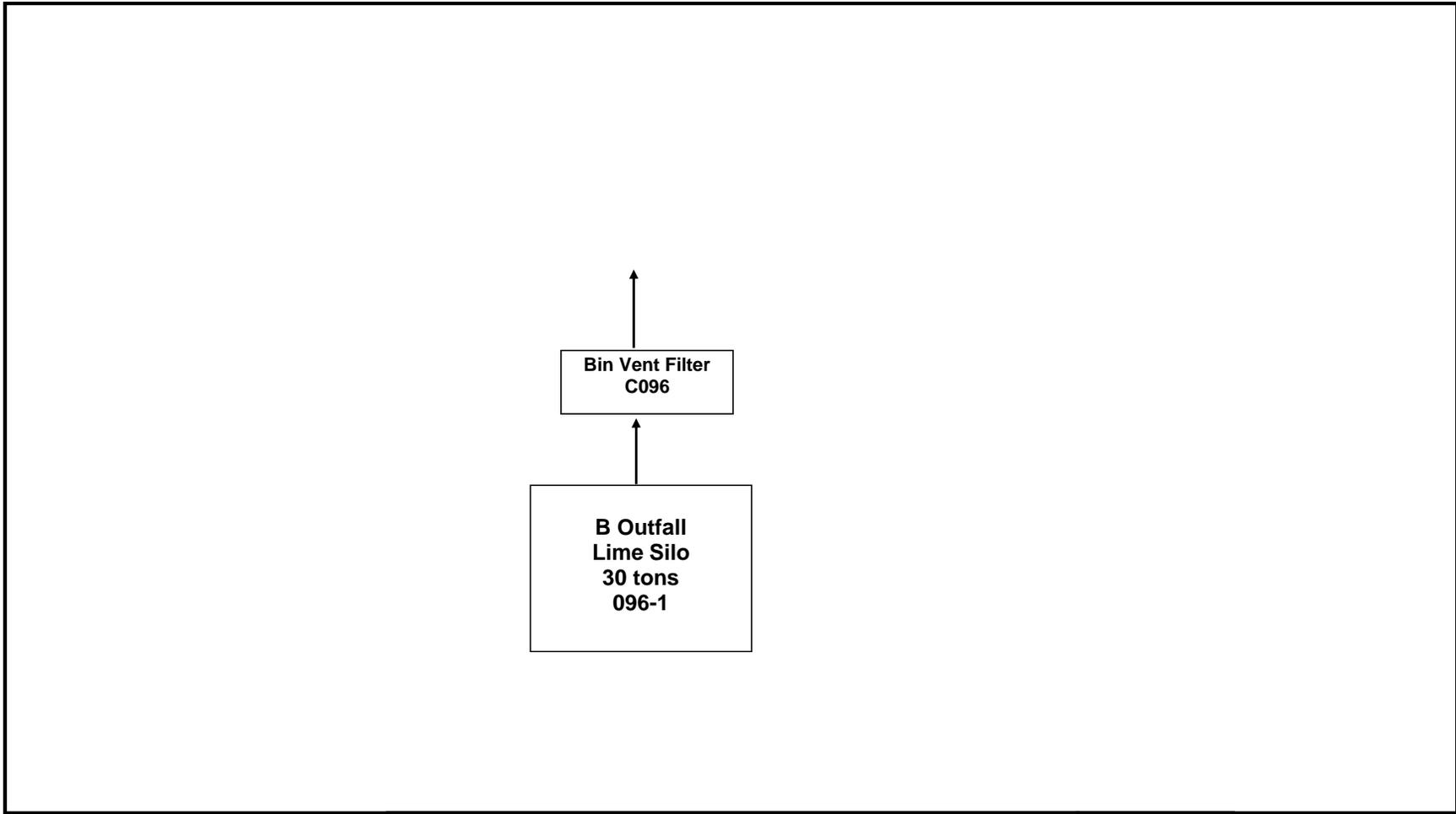


**Miscellaneous Activities
Process Flow Diagram
ArcelorMittal Weirton LLC, Weirton, WV**

**Figure:
20**

DATE: 3/24/2016

DRAWN BY: NMH

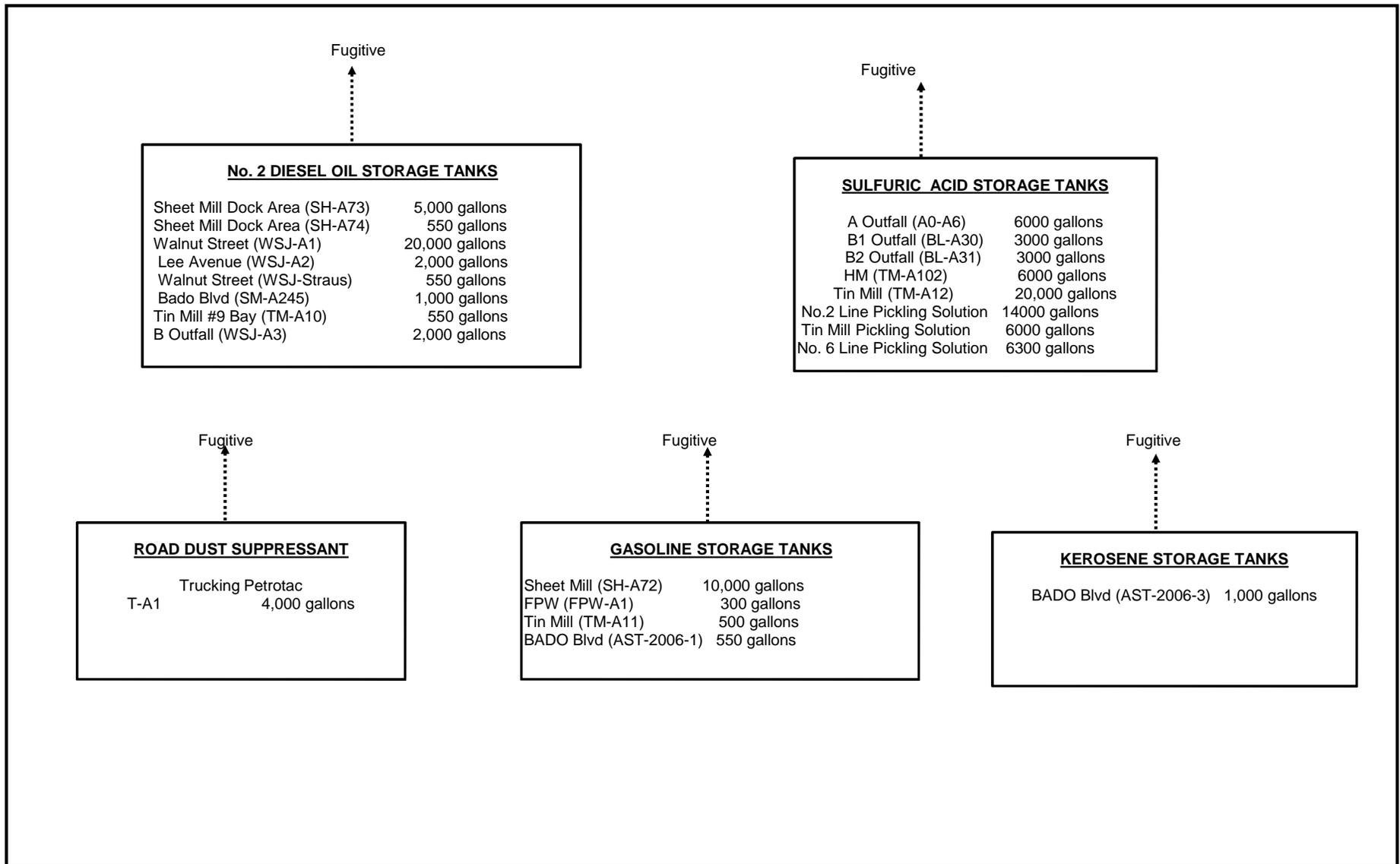


**Lime Storage Silo
Process Flow Diagram
ArcelorMittal Weirton LLC, Weirton, WV**

**Figure:
21**

DATE: 3/23/2016

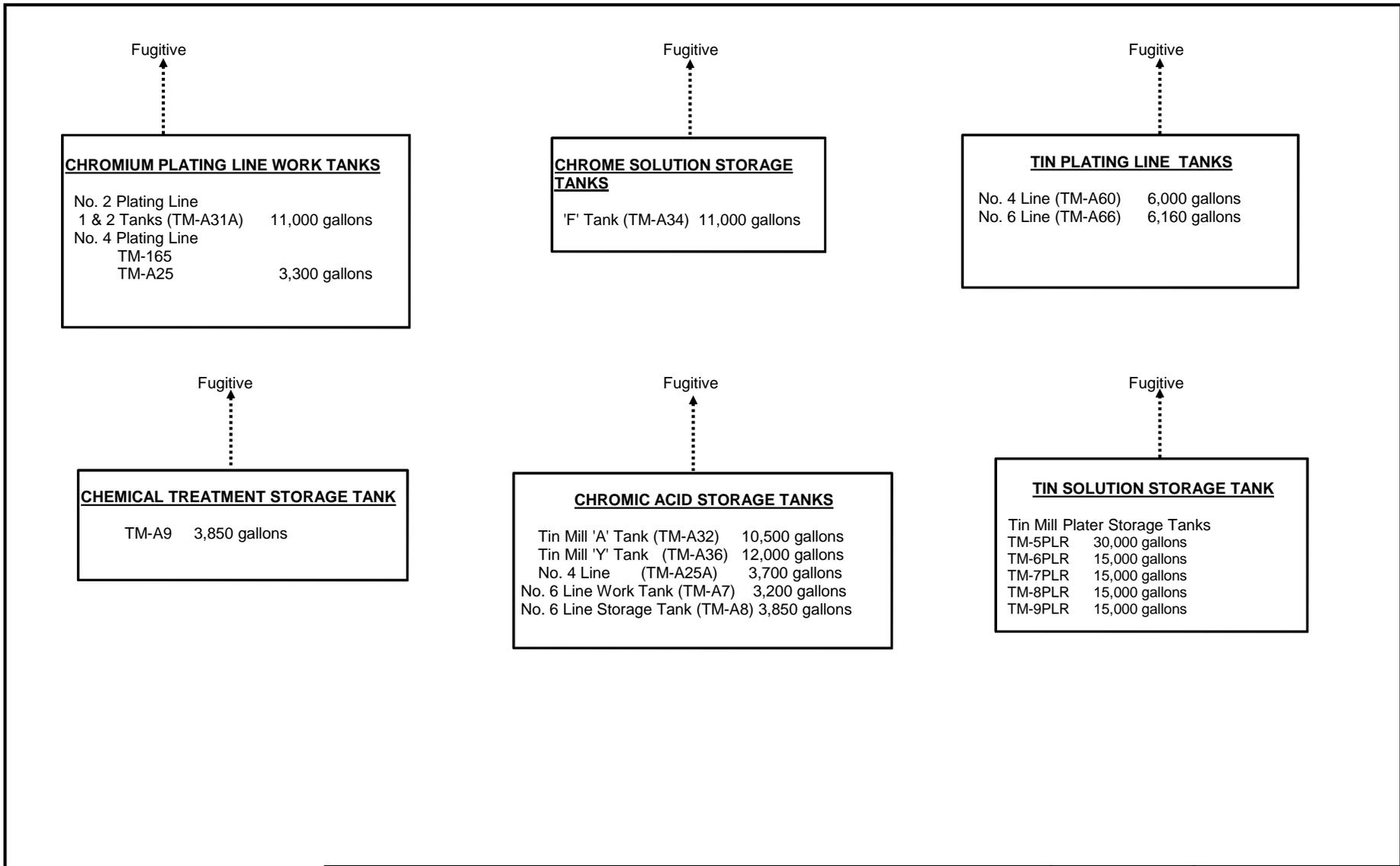
DRAWN BY: NMH



**Fuels / Miscellaneous Storage Tanks
Process Flow Diagram
ArcelorMittal Weirton LLC, Weirton, WV**

**Figure:
22**

DATE: 3/24/2016
DRAWN BY: NMH

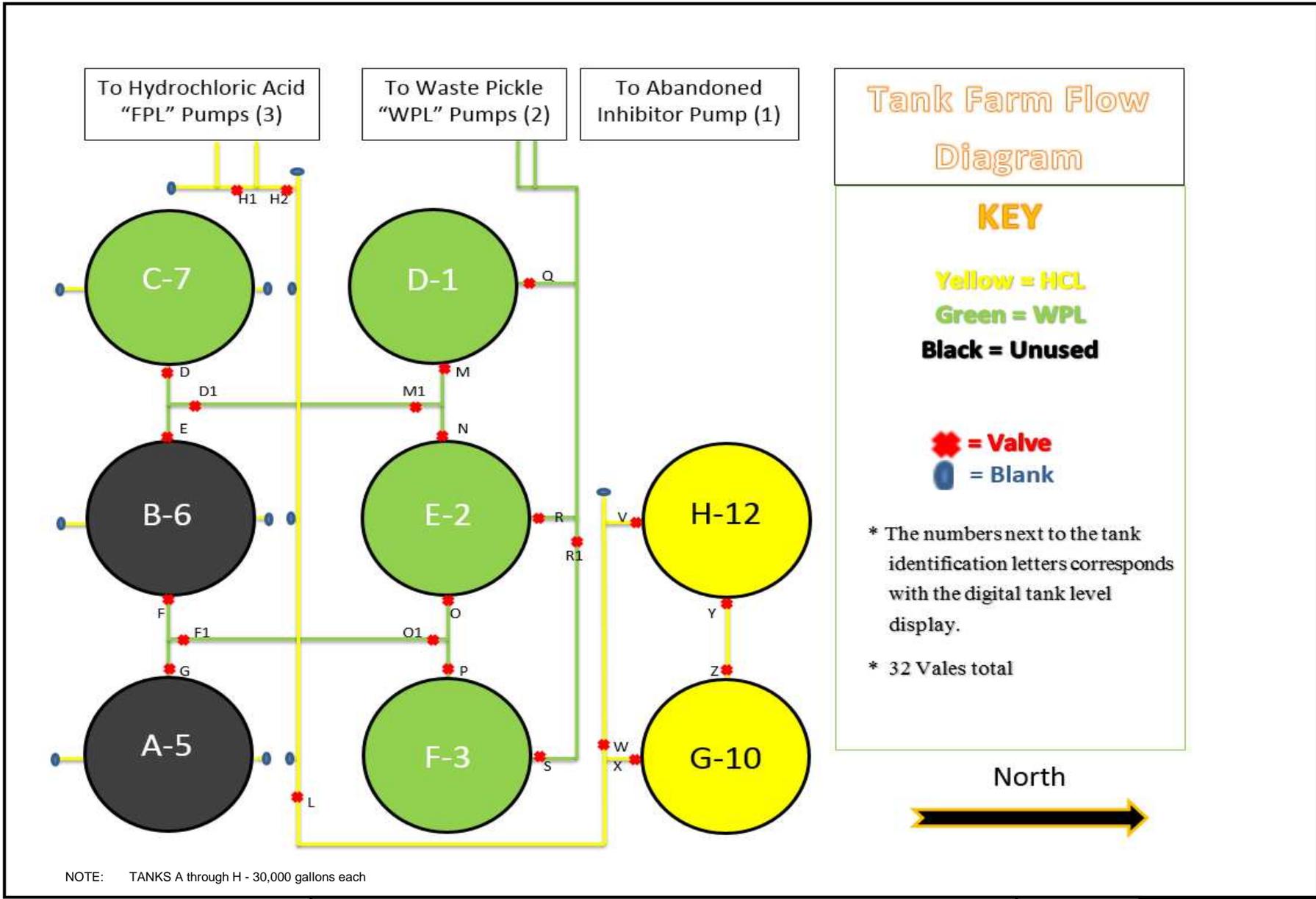


**Storage Tanks - Plating Lines
Process Flow Diagram
ArcelorMittal Weirton LLC, Weirton, WV**

**Figure:
23**

DATE: 3/24/2016

DRAWN BY: NMH

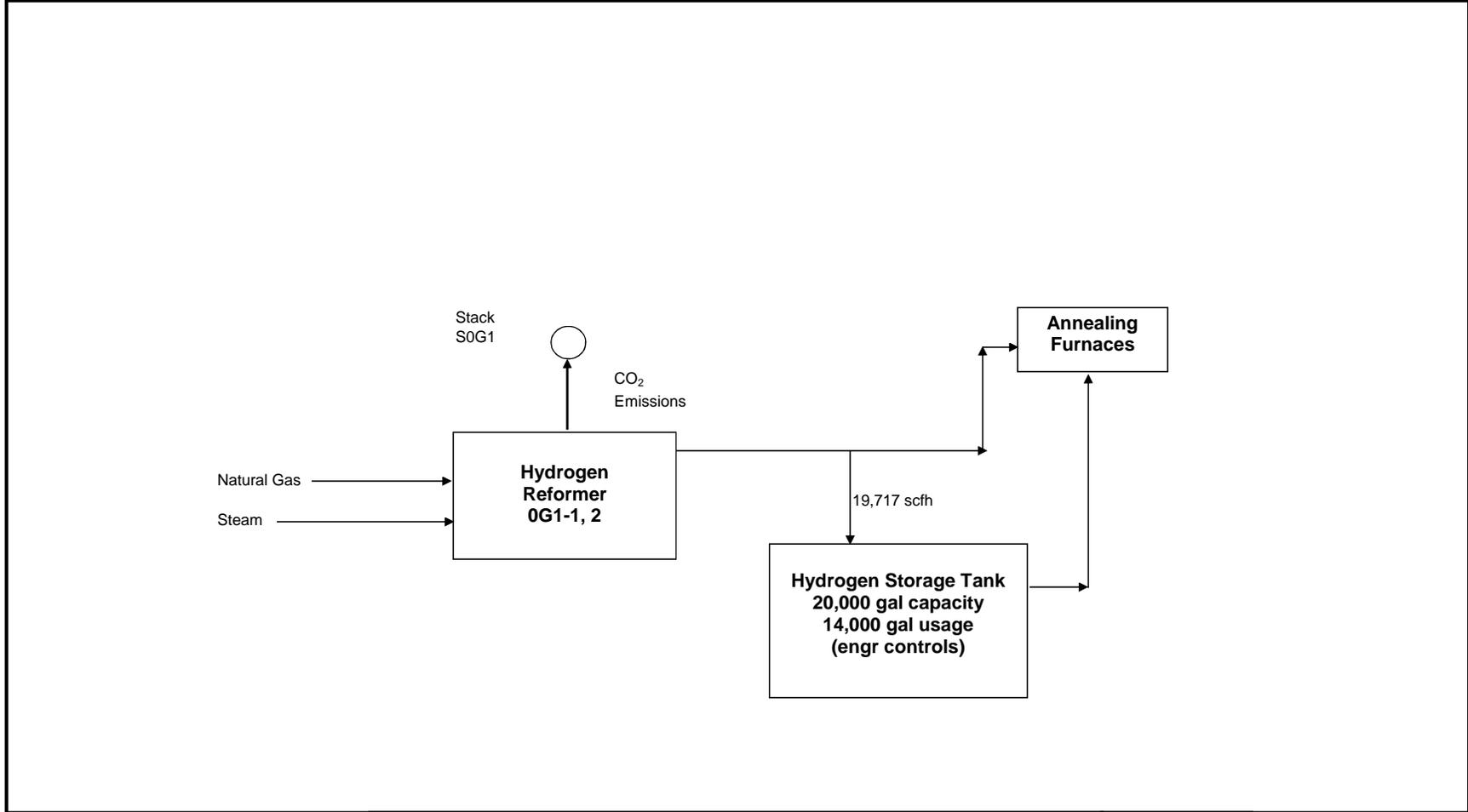


**HCl Tank Farm
Process Flow Diagram
ArcelorMittal Weirton LLC, Weirton, WV**

Figure:
24

DATE: 3/24/2016

DRAWN BY:
ArcelorMittal Weirton



**Hydrogen Reforming Plant
Process Flow Diagram
ArcelorMittal Weirton LLC, Weirton, WV**

**Figure:
25**

DATE: 3/24/2016

DRAWN BY: NMH

ATTACHMENT D

Title V Equipment Table

ATTACHMENT D - Title V Equipment Table

ArcelorMittal Weirton LLC

(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Unit ID ¹	Control Device ¹	Emission Point ID ¹	Emission Unit Description	Design Capacity	Year Installed/Modified
STRIP MILL					
039/2	C124	S124	No 5 Pickle Line	310 tons/hr	1975
039/3	None		No. 5 Pickler Cooling Tower	1500 gpm	1975
039/4	None	F106	No. 5 Pickle Line Oil Coating	310 tons/hr	1975
040/4	None	F711	Strip Steel Tandem Mill Cooling Tower	850 gpm	1950s
042/1	Fume exhaust & cleaning system	S109A S109B S109C S109D S109E	No. 9 Tandem Mill	150 tons/hr	1975
HCL-R	Fume Scrubber	F125	Strip Steel HCl Acid Storage Tank	24,000 gallons	
ACID PLANT LOCATION					
HCL-A through H	Fume Scrubber	Stack	HCL Storage Tanks (8) Commercial Acid [G, H] Waste Pickle Liquor (WPL) [A, B, C, D, E, F]	30,000 gallons each	1996
HYDROGEN PLANT					
0G1/1	None	Fugitive	Hydrogen Plant Cooling Tower	1000 gpm	1995
0G1/2	None	S0G1	Hydrogen Reformer	19,717 scf/hr	1995
0G1/3	None	Fugitive	Liquified Hydrogen Storage Tank	20,000 gallons design 14,000 gallons usage	1995

¹For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

ATTACHMENT D - Title V Equipment Table

ArcelorMittal Weirton LLC

(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Point ID ¹	Control Device ¹	Emission Unit ID ¹	Emission Unit Description	Design Capacity	Year Installed/Modified
TIN MILL					
056/1	None	S300	Jumbo Anneal 1-4 (East); 10 MMBtu/hr each	40 MMBtu/hr	1942
057/1	None	S301	Jumbo Anneal 5-8 (Middle); 10 MMBtu/hr each	40 MMBtu/hr	1948
058/1	None	S302	Jumbo Anneal 9-12 (West); 10 MMBtu/hr each	40 MMBtu/hr	1956
059/1, 2	None	S303 S303A	Tin Mill Cleaning Lines (2) 0.4 MMBtu/hr each	0.8 MMBtu/hr	1938
060/3	None		Tin Mill Cont. Anneal Cooling Tower	4,000 gpm	1961
061/1	None	S305 S305A	Continuous Annealing Line 2 Alkaline Cleaning Exhaust	96 MMBtu/hr	1961
062/1	None	S306 S306A	Continuous Annealing Line 3 Alkaline Cleaning Exhaust	96 MMBtu/hr	1970
064/1	None	F308	No. 2 Weirlite Temper Mill	100 tons/hr	1965
066/1	None	N/A	No. 5 Temper Mill (no rolling oils)	120 tons/hr	1969
073/1, 2	C317 C330	S317 S330	No. 2 Chrome Plating Line–Electrolytic Plating Cleaning and Pickling	60 tons/hr	1943 1966
074/1, 2, 3	C332 C318 C334	S332 S318 S334	No. 4 Tin Plating Line–Electrolytic Plating Cleaning and Pickling Chemical Surface Treatment	40 tons/hr	1950
076/1, 2, 3	C320 C339 C341	S320 S339 S341	No. 6 Tin Plating Line – Plating Cleaning and Pickling Chemical Surface Treatment	50 tons/hr	1965
077/2	C326	S326	Roll Shot Blaster 1	24,000 lbs/hr	1950
077/3	C327	S327	Roll Shot Blaster 2	each	1965
078/1 078/2 078/3	None	S322 (6 stacks)	Anode Shop Melting Pots (3)	15 MMBtu/hr (5 MMBtu/hr each)	1943
HCL-T	1C	1E	HCL Storage Tank	8,700 gallons	2014

ATTACHMENT D - Title V Equipment Table

ArcelorMittal Weirton LLC

(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Point ID ¹	Control Device ¹	Emission Unit ID ¹	Emission Unit Description	Design Capacity	Year Installed/Modified
BOILERS					
108	Low-NOx Burners	S108	Strip Mill Boiler 1	99 MMBtu/hr	2013
110	Low-NOx Burners	S110	Tin Mill Boiler 1	99 MMBtu/hr	2013
111	Low-NOx Burners	S111	Tin Mill Boiler 2	99 MMBtu/hr	2013
112	Low-NOx Burners	S112	Tin Mill Boiler 3	99 MMBtu/hr	2013
113	Low-NOx Burners	S113	Tin Mill Boiler 4	99 MMBtu/hr	2013
LIME STORAGE SILO					
096/1	C096	Bin Vent Filter	B-Outfall	30 tons	---
EMERGENCY GENERATORS – DIESEL FUEL					
EG-01	None		B Outfall – Caterpillar 3412	676 HP	1990
EG-01	None		MAB - Cummins	227 HP	1/25/2011
EG-01	None		TM Comm Room - Cummins	132 HP	12/15/2011
EG-01	None		Strip Steel Comm Room - Cummins	132 HP	6/17/2013
EG-01	None		Half Moon Comm Room - Cummins	132 HP	5/13/2014
PLANT ROADWAYS AND PARKING LOTS					
0D2/1		F845	Paved Roads and Parking Areas		1930's
0D2/2		F946	Unpaved Roads		1930's

ATTACHMENT D - Title V Equipment Table

ArcelorMittal Weirton LLC
 (includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Point ID ¹	Control Device ¹	Emission Unit ID ¹	Emission Unit Description	Design Capacity	Year Installed/Modified
WWTP					
			A Outfall WWTP – Outlet 002		Late 1970's
			B Outfall WWTP – Outlet 003		1988
			C and E Outfall WWTP – Outlet 004		1990
			Weirlite WWTP – Discharge to B Outfall		1962
			Heavy Metals WWTP		1986
STORAGE TANKS					
			<ul style="list-style-type: none"> • No. 2 Diesel Fuel • Gasoline • Kerosene • Road Dust Suppressant • Sulfuric Acid • Chrome Plating Solution • Tin Plating Solution • Magnesium Oxide Slurry • Rolling Oils • Grease • Sodium Hydroxide • Used Oil 		

¹For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

ATTACHMENT E

Emission Unit Forms

ATTACHMENT E - Emission Unit Form

Emission Unit Description STRIP MILL – No. 5 Pickle Line

Emission unit ID number: 039/2	Emission unit name: No. 5 Pickle Line	List any control devices associated with this emission unit: C124
--	---	---

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 No. 5 Pickle Line – Cleans hot rolled steel using hydrochloric acid. Fed through inline heated acid baths to remove oxide scale from coil surface that formed during hot rolling.

 S124

Manufacturer:	Model number:	Serial number:
Construction date: 1975	Installation date: 1975	Modification date(s):

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
310 tons/hr

Maximum Hourly Throughput: 310 tons/hr	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? ___Yes ___X___ No	If yes, is it? ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	Type and Btu/hr rating of burners:

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Hydrogen chloride	1.42	6.218
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Emission factor estimate based on highest stack test average for pickling line plus 20%.

See Table 2 in Attachment J for additional information.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description STRIP MILL – No. 5 Pickle Line Cooling Tower

Emission unit ID number: 039/3	Emission unit name: No. 5 Pickle Line Cooling Tower	List any control devices associated with this emission unit: N/A
--	---	---

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
No. 5 Pickle Line Cooling Tower – Coil is rinsed with water, trimmed, coated with a thin film of protective oil, and recoiled.

Manufacturer:	Model number:	Serial number:
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Construction date: 1975	Installation date: 1975	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
1500 gpm

Maximum Hourly Throughput: 90,000 gal/hr	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
--	--

Maximum design heat input and/or maximum horsepower rating:	Type and Btu/hr rating of burners:
--	---

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.107	0.468
Particulate Matter (PM ₁₀)	0.107	0.468
Total Particulate Matter (TSP)	0.107	0.468
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Emission factor from AP-42, Table 13.4-1., Section 13.4, Wet Cooling Towers, 1/1995

See Table 3 in Attachment J for additional information.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description STRIP MILL – No. 5 Pickle Line Oil Coating

Emission unit ID number: 039/4	Emission unit name: No. 5 Pickle Line Oil Coating	List any control devices associated with this emission unit: N/A
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
No. 5 Pickle Line Oil Coating – Coil is rinsed with water, trimmed, coated with a thin film of protective oil, and recoiled.

Manufacturer:	Model number:	Serial number:
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Construction date: 1975	Installation date: 1975	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
310 tons/hr

Maximum Hourly Throughput: 310 tons/hr	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
--	--

Maximum design heat input and/or maximum horsepower rating:	Type and Btu/hr rating of burners:
--	---

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)	0.775	3.395
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Emission factor from original Title V permit application for rolling operations.

See Table 2 in Attachment J for additional information.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description STRIP MILL – Strip Steel Tandem Mill Cooling Tower

Emission unit ID number: 040-4	Emission unit name: Strip Steel Tandem Mill Cooling Tower	List any control devices associated with this emission unit: NA
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
#1 & #3 Tandem Cooling Tower

Manufacturer:	Model number:	Serial number:
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Construction date: 1950s	Installation date: 1950s	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
1800 gpm

Maximum Hourly Throughput: 108,000 gal/hr	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? ___Yes <input checked="" type="checkbox"/> No	If yes, is it? ___ Indirect Fired ___ Direct Fired
--	---

Maximum design heat input and/or maximum horsepower rating:	Type and Btu/hr rating of burners:
--	---

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.086	0.374
Particulate Matter (PM ₁₀)	0.086	0.374
Total Particulate Matter (TSP)	0.086	0.374
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Emission factor from AP-42, Table 13.4-1., Section 13.4, Wet Cooling Towers, 1/1995</p> <p>See Table 3 in Attachment J for additional information.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or **construction permit** with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description STRIP MILL – No. 9 Tandem Mill

Emission unit ID number: 042/1	Emission unit name: No. 9 Tandem Mill	List any control devices associated with this emission unit: Cyclone/Mist Eliminator
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):

No. 9 Tandem Mill – Cold rolling of steel coils
S109A
S109B
S109C
S109D
S109E

Manufacturer:	Model number:	Serial number:
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Construction date: 1975	Installation date: 1975	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
150 tons/hr

Maximum Hourly Throughput: 150 tons/hr	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
--	--

Maximum design heat input and/or maximum horsepower rating:	Type and Btu/hr rating of burners:
--	---

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)	0.39	1.708
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Historical Emission Factor from original Title V application in 1995. Based on source test from Wheeling-Pittsburgh Steel.</p> <p>No other emission factors for Cold Rolling Operations could be determined.</p> <p>See Table 4 in Attachment J for additional information.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description STRIP MILL – Strip Steel HCL Acid Storage Tank - Near No. 5 Pickle Line

Emission unit ID number: HCL-R	Emission unit name: Strip Steel HCL Acid Storage Tank	List any control devices associated with this emission unit: Fume Scrubber
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Strip Steel HCL Acid Storage Tank – supplies acid for steel pickling operations at No. 5 Pickle Line. Equipped with a fume scrubber; fugitive emissions - F125.

Manufacturer:	Model number:	Serial number:
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Construction date:	Installation date:	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
24,000 gallons

Maximum Hourly Throughput:	Maximum Annual Throughput: 9,503,600 gallons 36% HCl	Maximum Operating Schedule: 8760 hrs/yr
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? ___Yes ___X_ No	If yes, is it? ___ Indirect Fired ___ Direct Fired
--	--

Maximum design heat input and/or maximum horsepower rating: NA	Type and Btu/hr rating of burners: NA
--	---

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HCl	0.03	0.12
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

USEPA's Tanks 4.09.d software was used to calculate emissions.

See Additional information in Table 12 in Attachments J and K.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (*Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.*)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description STRIP MILL – Strip Steel HCL Acid Storage Tanks - Tank Farm

Emission unit ID number: Waste Pickle Liquor (WPL) HCL-A, B, C, D, E, F Commercial Acid (36%) HCL-G, H	Emission unit name: HCL Acid Storage Tanks (8) In Tank Farm	List any control devices associated with this emission unit: Fume Scrubber
---	--	--

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
HCL Acid Storage Tanks– supplies Commercial Acid (36%) for steel pickling operations at No. 5 Pickle Line and receives Waste Pickle Liquor (WPL) from No. 5 Pickle Line. Equipped with a fume scrubber; fugitive emissions.

Manufacturer:	Model number:	Serial number:
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Construction date:	Installation date:	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
Each tank = 30,000 gallons

Maximum Hourly Throughput:	Maximum Annual Throughput: 9,503,600 gallons 36% HCl 19,007,200 gallons of WPL	Maximum Operating Schedule: 8760 hrs/yr
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? ___Yes ___X_ No	If yes, is it? ___ Indirect Fired ___Direct Fired
--	---

Maximum design heat input and/or maximum horsepower rating: NA	Type and Btu/hr rating of burners: NA
--	---

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HCl	0.042	0.186
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

USEPA's Tanks 4.09.d software was used to calculate emissions.

See Additional information in Table 12 in Attachments J and K.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (*Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.*)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description TIN MILL – Jumbo Anneal 1-4 (East)			
Emission unit ID number: 056/1	Emission unit name: Jumbo Anneal 1-4 (East) 40 MMBtu/hr	List any control devices associated with this emission unit: N/A	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Jumbo Anneal 1-4 (East) – 10 MMBtu/hr each – Box type, natural gas fired furnaces for batch annealing cold-rolled steel coils. The four furnaces are treated as one emission unit. Natural Gas Fired S300			
Manufacturer:	Model number:	Serial number:	
Construction date: 1942	Installation date: 1942	Modification date(s):	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 10 MMBtu/hr each – 4 furnaces total			
Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs	
Fuel Usage Data (fill out all applicable fields)			
Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If yes, is it? <input checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 40 MMBtu/hr (4 Furnaces at 10 MMBtu/hr each)		Type and Btu/hr rating of burners:	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Primary – Natural Gas Secondary – None			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Minimal	N/A	1,020 BTU/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	3.29	14.43
Nitrogen Oxides (NO _x)	3.92	17.18
Lead (Pb)	1.96E-05	8.59E-05
Particulate Matter (PM _{2.5})	0.07	0.33
Particulate Matter (PM ₁₀)	0.07	0.33
Particulate Matter (Condensable)	0.22	0.98
Sulfur Dioxide (SO ₂)	0.02	0.10
Volatile Organic Compounds (VOC)	0.22	0.94
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	8.24E-05	3.61E-04
Dichlorobenzene	4.71E-05	2.06E-04
Naphthalene	2.39E-05	1.05E-04
Toluene	1.33E-04	5.84E-04
Formaldehyde	2.94E-03	1.29E-02
Hexane	7.06E-02	3.09E-01
Zinc	1.14E-03	4.98E-03
Total HAPs		0.324
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide	4705.88	20611.76
N ₂ O	0.09	0.38
Methane	0.09	0.40
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Emission factors from AP-42, Section 1.4, Natural Gas Combustion, 7/1998.</p> <p>See Table 5 in Attachment J for additional information.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **TIN MILL – Jumbo Anneal 5-8 (Middle)**

Emission unit ID number: 057/1	Emission unit name: Jumbo Anneal 5-8 (Middle) 40 MMBtu/hr	List any control devices associated with this emission unit: N/A
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Jumbo Anneal 5-8 (Middle) – 10 MMBtu/hr each – Box type, natural gas fired furnaces for batch annealing cold-rolled steel coils. The four furnaces are treated as one emission unit.

 Natural Gas Fired

 S301

Manufacturer:	Model number:	Serial number:
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Construction date: 1948	Installation date: 1948	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 10 MMBtu/hr each – 4 furnaces total

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
--	---

Maximum design heat input and/or maximum horsepower rating: 40 MMBtu/hr (4 Furnaces at 10 MMBtu/hr each)	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
 Primary – Natural Gas
 Secondary – None

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Minimal	N/A	1,020 BTU/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	3.29	14.43
Nitrogen Oxides (NO _x)	3.92	17.18
Lead (Pb)	1.96E-05	8.59E-05
Particulate Matter (PM _{2.5})	0.07	0.33
Particulate Matter (PM ₁₀)	0.07	0.33
Particulate Matter (Condensable)	0.22	0.98
Sulfur Dioxide (SO ₂)	0.02	0.10
Volatile Organic Compounds (VOC)	0.22	0.94
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	8.24E-05	3.61E-04
Dichlorobenzene	4.71E-05	2.06E-04
Naphthalene	2.39E-05	1.05E-04
Toluene	1.33E-04	5.84E-04
Formaldehyde	2.94E-03	1.29E-02
Hexane	7.06E-02	3.09E-01
Zinc	1.14E-03	4.98E-03
Total HAPs		0.324
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide	4705.88	20611.76
N ₂ O	0.09	0.38
Methane	0.09	0.40
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Emission factors from AP-42, Section 1.4, Natural Gas Combustion, 7/1998.</p> <p>See Table 5 in Attachment J for additional information.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **TIN MILL – Jumbo Anneal 9-12 (West)**

Emission unit ID number: 058/1	Emission unit name: Jumbo Anneal 9-12 (West) 40 MMBtu/hr	List any control devices associated with this emission unit: N/A
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Jumbo Anneal 9-12 (West) – 10 MMBtu/hr each – Box type, natural gas fired furnaces for batch annealing cold-rolled steel coils. The four furnaces are treated as one emission unit.

Natural Gas Fired

S302

Manufacturer:	Model number:	Serial number:
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Construction date: 1956	Installation date: 1956	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
10 MMBtu/hr each – 4 furnaces total

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 40 MMBtu/hr (4 Furnaces at 10 MMBtu/hr each)	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Primary – Natural Gas

Secondary – None

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Minimal	N/A	1,020 BTU/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	3.29	14.43
Nitrogen Oxides (NO _x)	3.92	17.18
Lead (Pb)	1.96E-05	8.59E-05
Particulate Matter (PM _{2.5})	0.07	0.33
Particulate Matter (PM ₁₀)	0.07	0.33
Particulate Matter (Condensable)	0.22	0.98
Sulfur Dioxide (SO ₂)	0.02	0.10
Volatile Organic Compounds (VOC)	0.22	0.94
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	8.24E-05	3.61E-04
Dichlorobenzene	4.71E-05	2.06E-04
Naphthalene	2.39E-05	1.05E-04
Toluene	1.33E-04	5.84E-04
Formaldehyde	2.94E-03	1.29E-02
Hexane	7.06E-02	3.09E-01
Zinc	1.14E-03	4.98E-03
Total HAPs		0.324
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide	4705.88	20611.76
N ₂ O	0.09	0.38
Methane	0.09	0.40
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Emission factors from AP-42, Section 1.4, Natural Gas Combustion, 7/1998.</p> <p>See Table 5 in Attachment J for additional information.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **TIN MILL – Tin Mill Cleaning Lines**

Emission unit ID number: 059/1,2	Emission unit name: Tin Mill Cleaning Line Nos. 3 & 4 Caustic	List any control devices associated with this emission unit: N/A
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Tin Mill Cleaning Line – Cleaning of cold rolled steel coils with caustic cleaning solution.
 Two 400,000 BTU/hr natural gas heaters.
 S303
 S303A

Manufacturer:	Model number:	Serial number:
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Construction date: 1938	Installation date: 1938	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 N/A

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 0.4 MMBtu/hr each line	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
 Natural Gas

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Minimal	Minimal	1,020 Btu/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.07	0.29
Nitrogen Oxides (NO _x)	0.08	0.34
Lead (Pb)	3.92E-07	1.72E-06
Particulate Matter (PM _{2.5})	0.00	0.01
Particulate Matter (PM ₁₀)	0.00	0.01
Particulate Matter (Condensable)	0.00	0.02
Sulfur Dioxide (SO ₂)	0.00	0.00
Volatile Organic Compounds (VOC)	0.00	0.01
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	1.65E-06	7.21E-06
Dichlorobenzene	9.41E-07	4.12E-06
Naphthalene	4.78E-07	2.10E-06
Toluene	2.67E-06	1.17E-05
Formaldehyde	5.88E-05	2.58E-04
Hexane	1.41E-03	6.18E-03
Zinc	2.27E-05	9.96E-05
Total HAPs		6.49E-03
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide	94.12	412.24
N ₂ O	0.00	0.01
Methane	0.00	0.01
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Emission factors from AP-42, Section 1.4, Natural Gas Combustion, 7/1998.</p> <p>See Table 5 in Attachment J for additional information.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **TIN MILL – Tin Mill Continuous Anneal Cooling Tower**

Emission unit ID number: 060/3	Emission unit name: Tin Mill Continuous Anneal Cooling Tower	List any control devices associated with this emission unit: N/A
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Tin Mill Continuous Anneal Cooling Tower -

Manufacturer:	Model number:	Serial number:
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Construction date: 1961	Installation date: 1961	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
4,000 gpm

Maximum Hourly Throughput: 240,000 gal/hr	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating:	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.190	0.832
Particulate Matter (PM ₁₀)	0.190	0.832
Total Particulate Matter (TSP)	0.190	0.832
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Emission factor from AP-42, Table 13.4-1., Section 13.4, Wet Cooling Towers, 1/1995</p> <p>See Table 3 in Attachment J for additional information.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **TIN MILL – Continuous Annealing Line 2**

Emission unit ID number: 061/1	Emission unit name: Continuous Annealing Line 2 Alkaline Cleaning Exhaust	List any control devices associated with this emission unit: N/A
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Continuous Annealing Line 2 – Continuous annealing process for cold-rolled steel; S305
 Alkaline Cleaning Exhaust S305A

Manufacturer:	Model number:	Serial number:
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Construction date: 1961	Installation date: 1961	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 96 MMBtu/hr	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
 Primary – Natural Gas
 Secondary – None

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	minimal	N/A	1,020 BTU/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	7.91	34.63
Nitrogen Oxides (NO _x)	9.41	41.22
Lead (Pb)	4.71E-04	2.06E-04
Particulate Matter (PM _{2.5})	0.18	0.78
Particulate Matter (PM ₁₀)	0.18	0.78
Particulate Matter (Condensable)	0.54	2.35
Sulfur Dioxide (SO ₂)	0.06	0.25
Volatile Organic Compounds (VOC)	0.52	2.27
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	1.98E-04	8.66E-04
Dichlorobenzene	1.13E-04	4.95E-04
Naphthalene	5.74E-05	2.51E-04
Toluene	3.20E-04	1.40E-03
Formaldehyde	7.06E-03	3.09E-02
Hexane	1.69E-01	7.42E-01
Zinc	2.73E-03	1.20E-02
Total HAPs		0.778
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide	11294	49468
N ₂ O	0.21	0.91
Methane	0.22	0.95
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Emission factors from AP-42, Section 1.4, Natural Gas Combustion, 7/1998.</p> <p>See Table 5 in Attachment J for additional information.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **TIN MILL – Continuous Annealing Line 3**

Emission unit ID number: 062/1	Emission unit name: Continuous Annealing Line 3 Alkaline Cleaning Exhaust	List any control devices associated with this emission unit: N/A
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Continuous Annealing Line 3 – Continuous annealing process for cold-rolled steel; S306
 Alkaline Cleaning Exhaust S306A

Manufacturer:	Model number:	Serial number:
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Construction date: 1970	Installation date: 1970	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
--	---

Maximum design heat input and/or maximum horsepower rating: 96 MMBtu/hr	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
 Primary – Natural Gas
 Secondary – None

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	minimal	N/A	1,020 BTU/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	7.91	34.63
Nitrogen Oxides (NO _x)	9.41	41.22
Lead (Pb)	4.71E-04	2.06E-04
Particulate Matter (PM _{2.5})	0.18	0.78
Particulate Matter (PM ₁₀)	0.18	0.78
Particulate Matter (Condensable)	0.54	2.35
Sulfur Dioxide (SO ₂)	0.06	0.25
Volatile Organic Compounds (VOC)	0.52	2.27
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	1.98E-04	8.66E-04
Dichlorobenzene	1.13E-04	4.95E-04
Naphthalene	5.74E-05	2.51E-04
Toluene	3.20E-04	1.40E-03
Formaldehyde	7.06E-03	3.09E-02
Hexane	1.69E-01	7.42E-01
Zinc	2.73E-03	1.20E-02
Total HAPs		0.778
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide	11294	49468
N ₂ O	0.21	0.91
Methane	0.22	0.95
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Emission factors from AP-42, Section 1.4, Natural Gas Combustion, 7/1998.</p> <p>See Table 5 in Attachment J for additional information.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (*Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.*)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **TIN MILL – No. 2 Weirlite Temper Mill**

Emission unit ID number: 064/1	Emission unit name: No. 2 Weirlite Temper Mill	List any control devices associated with this emission unit: N/A
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
No. 2 Weirlite Temper Mill – Cold rolling of steel coils.
F308

Manufacturer:	Model number:	Serial number:
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Construction date: 1965	Installation date: 1965	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
100 tons/hr

Maximum Hourly Throughput: 100 tons/hr	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
--	--

Maximum design heat input and/or maximum horsepower rating:	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)	0.26	1.14
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Historical Emission Factor from original Title V application in 1995. Based on source test from Wheeling-Pittsburgh Steel, Yorkville Plant.</p> <p>No other emission factors for Cold Rolling Operations could be determined.</p> <p>See Table 7 in Attachment J for additional information.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **TIN MILL – No. 5 Temper Mill**

Emission unit ID number: 066/1	Emission unit name: No. 5 Temper Mill	List any control devices associated with this emission unit: N/A
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
No. 5 Temper Mill – Cold rolling of steel coils. Unit does not use rolling oils.

Manufacturer:	Model number:	Serial number:
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Construction date: 1969	Installation date: 1969	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
120 tons/hr

Maximum Hourly Throughput: 120 tons/hr	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
--	--

Maximum design heat input and/or maximum horsepower rating:	Type and Btu/hr rating of burners:
--	---

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions – N/A	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Unit does not use rolling oils. No VOC emissions expected.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **TIN MILL – Tin Mill No. 2 Chrome Plater**

Emission unit ID number: 073/1,2	Emission unit name: No. 2 Chrome Plater Cleaning and Pickling	List any control devices associated with this emission unit: Plater C317 Cleaning and Pickling C330
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):

No. 2 Chrome Plating Line - Electrolytic chrome plating of cold rolled steel coils. Includes an entry welder, alkaline cleaning bath, sulfuric acid pickle bath, electrolytic chrome plater, steam heat dryer, chemical surface treatment and shear/recoil operations. Two fume scrubbers are used.

S317 - Plating

S330 – Alkaline Cleaning and Sulfuric Acid Pickling

Manufacturer:	Model number:	Serial number:

Construction date: 1943	Installation date: 1943	Modification date(s): 1966
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

60 tons/hr

Maximum Hourly Throughput: 60 ton/hr	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
--	--

Maximum design heat input and/or maximum horsepower rating:	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Chromium	0.103	0.451
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Use of maximum value (lb/hr) from source testing as reported in 2002 air emissions inventory.

See Table 8 in Attachment J for additional information.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description TIN MILL – Tin Mill No. 4 Tin/Chrome Plater			
Emission unit ID number: 074/1,2,3	Emission unit name: No. 4 Tin Plater Cleaning and Pickling Chemical Surface Treatment	List any control devices associated with this emission unit: Plater C318 Cleaning and Pickling C332 Chemical Surface Treatment C334	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): No 4. Tin Plater – Electrolytic tin plating of cold rolled steel coils. Includes an entry welder, alkaline cleaning bath, sulfuric acid pickle bath, electrolytic tin plater, steam heat dryer, chemical surface treatment and shear/recoil operations. Three fume scrubbers are used. S318 - Plating S332 – Alkaline Cleaning and Sulfuric Acid Pickling S334 – Chemical Surface Treatment			
Manufacturer:	Model number:	Serial number:	
Construction date: 1950	Installation date: 1950	Modification date(s):	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 40 tons/hr			
Maximum Hourly Throughput: 40 tons/hr	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs	
Fuel Usage Data (fill out all applicable fields)			
Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating:		Type and Btu/hr rating of burners:	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions – N/A	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Tin Plating – no regulated air pollutants.

See Table 8 in Attachment J for additional information.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **TIN MILL – Tin Mill No. 6 Tin Plating Line**

Emission unit ID number: 076/1,2,3	Emission unit name: Tin Mill No. 6 Tin Plater Cleaning and Pickling Chemical Surface Treatment	List any control devices associated with this emission unit: Plater C320 Cleaning and Pickling C339 Chemical Surface Treatment C341
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):

No 6. Tin Plater – Electrolytic tin plating of cold rolled steel coils. Includes an entry welder, alkaline cleaning bath, sulfuric acid pickle bath, electrolytic tin plater, steam heat dryer, chemical surface treatment and shear/recoil operations. Three fume scrubbers are used.

S320 - Plating

S339 – Alkaline Cleaning and Sulfuric Acid Pickling

S341 – Chemical Surface Treatment

Manufacturer:	Model number:	Serial number:
Construction date: 1965	Installation date: 1965	Modification date(s):

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

50 tons/hr

Maximum Hourly Throughput: 50 tons/hr	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
Maximum design heat input and/or maximum horsepower rating:	Type and Btu/hr rating of burners:

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions- N/A	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

No regulated pollutants are emitted from this processing line.

See Table 8 in Attachment J for additional information.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **TIN MILL – Roll Shot Blaster 1**

Emission unit ID number: 077/2	Emission unit name: Roll Shot Blaster 1	List any control devices associated with this emission unit: C326
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Roll Shot Blaster 1 – Surface preparation of cold mill work rolls by blasting with steel shot. Steel shot and any PM emissions generated during shot blasting are captured by an enclosure and controlled by a baghouse.
 S326

Manufacturer:	Model number:	Serial number:
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Construction date: 1950	Installation date: 1950	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 2 rolls/hr

Maximum Hourly Throughput: 2 rolls/hr	Maximum Annual Throughput: 7,280 rolls/yr	Maximum Operating Schedule: 5200 hrs (Assumes 20 hrs/day; 5 days per week)
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating:	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.37	0.97
Particulate Matter (PM ₁₀)	0.37	0.97
Total Particulate Matter (TSP)	0.37	0.97
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>See Table 10 in Attachment J for additional information.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **TIN MILL – Roll Shot Blaster 2**

Emission unit ID number: 077/3	Emission unit name: Roll Shot Blaster 2	List any control devices associated with this emission unit: C327
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Roll Shot Blaster 2 – Surface preparation of cold mill work rolls by blasting with steel shot. Steel shot and any PM emissions generated during shot blasting are captured by an enclosure and controlled by a baghouse.
 S327

Manufacturer:	Model number:	Serial number:
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Construction date: 1965	Installation date: 1965	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 2 rolls/hr

Maximum Hourly Throughput: 2 rolls/hr	Maximum Annual Throughput: 7,280 rolls/yr	Maximum Operating Schedule: 5200 hrs (Assumes 20 hrs/day; 5 days per week)
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
--	--

Maximum design heat input and/or maximum horsepower rating:	Type and Btu/hr rating of burners:
--	---

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.37	0.97
Particulate Matter (PM ₁₀)	0.37	0.97
Total Particulate Matter (TSP)	0.37	0.97
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>See Table 10 in Attachment J for additional information.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description TIN MILL – Anode Shop Melting Pots (3)

Emission unit ID number: 078/1, 078/2, 078/3	Emission unit name: Anode Shop Melting Pots (3) 5 MMBtu/hr each	List any control devices associated with this emission unit: N/A
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Anode Shop Melting Pots – Three natural gas fired melting pots to melt zinc and tin bars for molding zinc and tin anodes for the tin mill plating lines.
 Natural Gas Fired
 S322

Manufacturer:	Model number:	Serial number:
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Construction date: 1943	Installation date: 1943	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 15 MMBtu/hr (5 MMBtu/hr each)

Maximum Hourly Throughput: 15 MMBtu/hr (5 MMBtu/hr each)	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 15 MMBtu/hr (5 MMBtu/hr each)	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
 Primary – Natural Gas
 Secondary - None

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	minimal	N/A	1,020 BTU/scf

Emissions Data		
Criteria Pollutants	Potential Emissions – 3 Melting Pots	
	PPH	TPY
Carbon Monoxide (CO)	1.24	5.41
Nitrogen Oxides (NO _x)	1.47	6.44
Lead (Pb)	7.35E-06	3.22E-05
Particulate Matter (PM _{2.5})	0.03	0.12
Particulate Matter (PM ₁₀)	0.03	0.12
Particulate Matter (Condensable)	0.08	0.37
Sulfur Dioxide (SO ₂)	0.01	0.04
Volatile Organic Compounds (VOC)	0.08	0.35
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	3.09E-05	1.35E-04
Dichlorobenzene	1.76E-05	7.73E-05
Naphthalene	8.97E-06	3.93E-05
Toluene	5.00E-05	2.19E-04
Formaldehyde	1.10E-03	4.83E-03
Hexane	2.65E-02	1.16E-01
Zinc	4.26E-04	1.87E-03
Total HAPs		0.122
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide (CO ₂)	1765	7730
N ₂ O	0.03	0.14
Methane (CH ₄)	0.03	0.15
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Emission factors in AP-42, Section 1.4, Natural Gas Combustions, 7/1998.</p> <p>See Table 5 in Appendix J for additional information.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description LIME STORAGE – B-Outfall Lime Silo

Emission unit ID number: 096	Emission unit name: B-Outfall Lime Silo (Truck Unloading)	List any control devices associated with this emission unit: C096
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 B-Outfall Lime Silo – Bin Vent Filter used to control particulate emissions during truck unloading of lime material. Assumes twelve (12) 20 ton truckload delivered per year = 240 tons.
 Approximately 2 hours per delivery = 24 hrs
 S096

Manufacturer:	Model number:	Serial number:
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Construction date:	Installation date:	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 30 tons – silo storage capacity

Maximum Hourly Throughput:	Maximum Annual Throughput: 240 tons/yr	Maximum Operating Schedule: 8760 hrs
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? ___Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___Direct Fired
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Maximum design heat input and/or maximum horsepower rating:	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.122	0.001
Particulate Matter (PM ₁₀)	0.122	0.001
Particulate Matter (Condensable)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Emission factor from AP-42, Section 11.17, Table 11-17.4, Lime Manufacturing, 2/1998.

See Table 19 in Attachment J for additional information.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Miscellaneous Combustion – Maintenance and Space Heaters

Emission unit ID number: 0C3-1	Emission unit name: Miscellaneous Combustion	List any control devices associated with this emission unit: N/A
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Miscellaneous use of Natural Gas for maintenance use and space heating.

Manufacturer:	Model number:	Serial number:
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Construction date:	Installation date:	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule: 4344 hrs (Assumes heater use November – April)
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: Maintenance (est. 10 MMBtu/hr equivalent) Tin Mill Heaters – assumes 100 heaters at 0.4 MMBtu/hr each Sheet Mill Heaters – assumes 50 heaters at 0.4 MMBtu/hr each	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Primary – Natural Gas
Secondary - None

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Negligible	Negligible	1020 BTU/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH*	TPY
Carbon Monoxide (CO)	5.77	12.52
Nitrogen Oxides (NO _x)	6.86	14.91
Lead (Pb)	3.43E-05	7.45E-05
Particulate Matter (PM _{2.5})	0.13	0.28
Particulate Matter (PM ₁₀)	0.13	0.28
Particulate Matter (Condensable)	0.39	0.85
Sulfur Dioxide (SO ₂)	0.04	0.09
Volatile Organic Compounds (VOC)	0.38	0.82
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	1.44E-04	3.13E-04
Dichlorobenzene	8.24E-05	1.79E-04
Naphthalene	4.19E-05	9.09E-05
Toluene	2.33E-04	5.07E-04
Formaldehyde	5.15E-03	4.83E-03
Hexane	1.24E-01	1.12E-02
Zinc	1.99E-03	4.32E-03
Total HAPs		0.281
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide (CO ₂)	8235	17887
N ₂ O	0.15	0.33
Methane (CH ₄)	0.16	0.34
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Emission factors in AP-42, Section 1.4, Natural Gas Combustions, 7/1998.</p> <p>See Table 6 in Appendix J for additional information.</p> <p>* Assumes 4344 hours of operation/year (November – April).</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

NONE – Individual units are considered insignificant sources.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

NONE – Individual units are considered insignificant sources.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Strip Mill Boiler 1

Emission unit ID number: 108	Emission unit name: Strip Mill Boiler 1 PB #1	List any control devices associated with this emission unit: Low-NOx Burners
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Natural gas-fired package boiler at Strip Mill – leased unit.

Manufacturer: Babcock & Wilcox/ Indeck Nationwide Boiler Inc. – Rentals/Leasing	Model number: KD90L Water Tube	Serial number: W-1688
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Construction date: 2013	Installation date: 2014	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
99 MMBtu/hr 82,000 lb/hr steam

Maximum Hourly Throughput: 99 MMBtu/hr	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 99 MMBtu/hr	Type and Btu/hr rating of burners: Coen Low-NOx burners
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Primary – Natural Gas 97,900 cfh; 858,000 Mcf/yr
Secondary - None

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Negligible	Negligible	1020 BTU/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	3.69	16.17
Nitrogen Oxides (NO _x)	3.64	15.94
Lead (Pb)	4.90E-05	2.14E-04
Particulate Matter (PM _{2.5})	0.19	0.82
Particulate Matter (PM ₁₀)	0.19	0.82
Particulate Matter (Condensable)	0.56	2.45
Sulfur Dioxide (SO ₂)	0.06	0.26
Volatile Organic Compounds (VOC)	0.54	2.36
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	2.06E-04	9.01E-04
Dichlorobenzene	1.18E-04	5.15E-04
Naphthalene	5.97E-05	2.62E-04
Toluene	3.33E-04	1.46E-03
Formaldehyde	7.35E-03	3.22E-02
Hexane	1.76E-01	7.72E-01
Zinc	2.84E-03	1.24E-02
Total HAPs	0.18	0.81
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide (CO ₂)	11753	51478
N ₂ O	0.06	0.27
Methane (CH ₄)	0.23	0.99
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Emission factors in AP-42, Section 1.4, Natural Gas Combustions, 7/1998. Manufacturer's guarantees for NOx (30 ppm @ 3%O₂) and CO (50 ppm @ 3%O₂)</p> <p>See Table 16 in Appendix J for additional information.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Tin Mill Boiler 1			
Emission unit ID number: 110	Emission unit name: Tin Mill Boiler 1 PB #2	List any control devices associated with this emission unit: Low-NOx Burners	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Natural gas-fired package Boiler 1 at Tin Mill – leased unit.			
Manufacturer: Nebraska/ Indeck Nationwide Boiler Inc. – Rentals/Leasing	Model number: 03-75/78-A	Serial number: W-1652	
Construction date: 2013	Installation date: 2014	Modification date(s):	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 99 MMBtu/hr 78,000 lb/hr steam			
Maximum Hourly Throughput: 99 MMBtu/hr	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs	
Fuel Usage Data (fill out all applicable fields)			
Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 99 MMBtu/hr		Type and Btu/hr rating of burners: John Zink Low-NOx burners	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Primary – Natural Gas 97,900 cfh; 858,000 Mcf/yr Secondary - None			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Negligible	Negligible	1020 BTU/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	3.69	16.17
Nitrogen Oxides (NO _x)	3.64	15.94
Lead (Pb)	4.90E-05	2.14E-04
Particulate Matter (PM _{2.5})	0.19	0.82
Particulate Matter (PM ₁₀)	0.19	0.82
Particulate Matter (Condensable)	0.56	2.45
Sulfur Dioxide (SO ₂)	0.06	0.26
Volatile Organic Compounds (VOC)	0.54	2.36
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	2.06E-04	9.01E-04
Dichlorobenzene	1.18E-04	5.15E-04
Naphthalene	5.97E-05	2.62E-04
Toluene	3.33E-04	1.46E-03
Formaldehyde	7.35E-03	3.22E-02
Hexane	1.76E-01	7.72E-01
Zinc	2.84E-03	1.24E-02
Total HAPs	0.18	0.81
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide (CO ₂)	11753	51478
N ₂ O	0.06	0.27
Methane (CH ₄)	0.23	0.99
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Emission factors in AP-42, Section 1.4, Natural Gas Combustions, 7/1998. Manufacturer's guarantees for NOx (30 ppm @ 3%O2) and CO (50 ppm @ 3%O2)</p> <p>See Table 17 in Appendix J for additional information.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Tin Mill Boiler 2			
Emission unit ID number: 111	Emission unit name: Tin Mill Boiler 2 PB #3	List any control devices associated with this emission unit: Low-NOx Burners	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Natural gas-fired package Boiler 2 at Tin Mill – leased unit.			
Manufacturer: Nebraska/Indeck Nationwide Boiler Inc. – Rentals/Leasing	Model number: 68L Water Tube	Serial number: W-1690	
Construction date: 2013	Installation date: 2014	Modification date(s):	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 99 MMBtu/hr 82,000 lb/hr steam			
Maximum Hourly Throughput: 99 MMBtu/hr	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs	
Fuel Usage Data (fill out all applicable fields)			
Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 99 MMBtu/hr		Type and Btu/hr rating of burners: Faber Low-NOx burners	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Primary – Natural Gas 97,900 cfh; 858,000 Mcf/yr Secondary - None			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Negligible	Negligible	1020 BTU/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	3.69	16.17
Nitrogen Oxides (NO _x)	3.64	15.94
Lead (Pb)	4.90E-05	2.14E-04
Particulate Matter (PM _{2.5})	0.19	0.82
Particulate Matter (PM ₁₀)	0.19	0.82
Particulate Matter (Condensable)	0.56	2.45
Sulfur Dioxide (SO ₂)	0.06	0.26
Volatile Organic Compounds (VOC)	0.54	2.36
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	2.06E-04	9.01E-04
Dichlorobenzene	1.18E-04	5.15E-04
Naphthalene	5.97E-05	2.62E-04
Toluene	3.33E-04	1.46E-03
Formaldehyde	7.35E-03	3.22E-02
Hexane	1.76E-01	7.72E-01
Zinc	2.84E-03	1.24E-02
Total HAPs	0.18	0.81
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide (CO ₂)	11753	51478
N ₂ O	0.06	0.27
Methane (CH ₄)	0.23	0.99
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Emission factors in AP-42, Section 1.4, Natural Gas Combustions, 7/1998. Manufacturer's guarantees for NOx (30 ppm @ 3%O₂) and CO (50 ppm @ 3%O₂)</p> <p>See Table 17 in Appendix J for additional information.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Tin Mill Boiler 3**

Emission unit ID number: 112	Emission unit name: Tin Mill Boiler 3 PB #4	List any control devices associated with this emission unit: Low-NOx Burners
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Natural gas-fired package Boiler 3 at Tin Mill – leased unit.

Manufacturer: Nebraska/Indeck Nationwide Boiler Inc. – Rentals/Leasing	Model number: OT-75K	Serial number: W-1678
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Construction date: 2013	Installation date: 2014	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
99 MMBtu/hr 80,000 lb/hr steam

Maximum Hourly Throughput: 99 MMBtu/hr	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 99 MMBtu/hr	Type and Btu/hr rating of burners: Faber Low-NOx burners
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Primary – Natural Gas 97,900 cfh; 858,000 Mcf/yr
Secondary - None

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Negligible	Negligible	1020 BTU/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	3.69	16.17
Nitrogen Oxides (NO _x)	3.64	15.94
Lead (Pb)	4.90E-05	2.14E-04
Particulate Matter (PM _{2.5})	0.19	0.82
Particulate Matter (PM ₁₀)	0.19	0.82
Particulate Matter (Condensable)	0.56	2.45
Sulfur Dioxide (SO ₂)	0.06	0.26
Volatile Organic Compounds (VOC)	0.54	2.36
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	2.06E-04	9.01E-04
Dichlorobenzene	1.18E-04	5.15E-04
Naphthalene	5.97E-05	2.62E-04
Toluene	3.33E-04	1.46E-03
Formaldehyde	7.35E-03	3.22E-02
Hexane	1.76E-01	7.72E-01
Zinc	2.84E-03	1.24E-02
Total HAPs	0.18	0.81
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide (CO ₂)	11753	51478
N ₂ O	0.06	0.27
Methane (CH ₄)	0.23	0.99
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Emission factors in AP-42, Section 1.4, Natural Gas Combustions, 7/1998. Manufacturer's guarantees for NOx (30 ppm @ 3%O2) and CO (50 ppm @ 3%O2)</p> <p>See Table 17 in Appendix J for additional information.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Tin Mill Boiler 4**

Emission unit ID number: 113	Emission unit name: Tin Mill Boiler 4 PB #5	List any control devices associated with this emission unit: Low-NOx Burners
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Natural gas-fired package Boiler 4 at Tin Mill – leased unit.

Manufacturer: Nebraska/Indeck Nationwide Boiler Inc. – Rentals/Leasing	Model number: OT-75K	Serial number: W-1677
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Construction date: 2013	Installation date: 2014	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
99 MMBtu/hr 80,000 lb/hr steam

Maximum Hourly Throughput: 99 MMBtu/hr	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 99 MMBtu/hr	Type and Btu/hr rating of burners: Faber Low-NOx burners
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Primary – Natural Gas 97,900 cfh; 858,000 Mcf/yr
Secondary - None

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Negligible	Negligible	1020 BTU/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	3.69	16.17
Nitrogen Oxides (NO _x)	3.64	15.94
Lead (Pb)	4.90E-05	2.14E-04
Particulate Matter (PM _{2.5})	0.19	0.82
Particulate Matter (PM ₁₀)	0.19	0.82
Particulate Matter (Condensable)	0.56	2.45
Sulfur Dioxide (SO ₂)	0.06	0.26
Volatile Organic Compounds (VOC)	0.54	2.36
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	2.06E-04	9.01E-04
Dichlorobenzene	1.18E-04	5.15E-04
Naphthalene	5.97E-05	2.62E-04
Toluene	3.33E-04	1.46E-03
Formaldehyde	7.35E-03	3.22E-02
Hexane	1.76E-01	7.72E-01
Zinc	2.84E-03	1.24E-02
Total HAPs	0.18	0.81
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide (CO ₂)	11753	51478
N ₂ O	0.06	0.27
Methane (CH ₄)	0.23	0.99
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Emission factors in AP-42, Section 1.4, Natural Gas Combustions, 7/1998. Manufacturer's guarantees for NOx (30 ppm @ 3%O2) and CO (50 ppm @ 3%O2)</p> <p>See Table 17 in Appendix J for additional information.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **HYDROGEN PLANT – Cooling Tower**

Emission unit ID number: OG1-1	Emission unit name: Hydrogen Plant Cooling Tower	List any control devices associated with this emission unit: N/A
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Hydrogen Plant Cooling Tower -

Manufacturer:	Model number:	Serial number:
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Construction date:	Installation date:	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
1,000 gpm

Maximum Hourly Throughput: 60,000 gal/hr	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating:	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.095	0.416
Particulate Matter (PM ₁₀)	0.095	0.416
Particulate Matter (Condensable)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Emission factor from AP-42, Table 13.4-1., Section 13.4, Wet Cooling Towers, 1/1995</p> <p>See Table 3 in Attachment J for additional information.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **HYDROGEN PLANT**

Emission unit ID number: OG1-2	Emission unit name: Hydrogen Plant	List any control devices associated with this emission unit: N/A
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Hydrogen Plant – Methane Reforming process

Manufacturer:	Model number:	Serial number:
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Construction date:	Installation date:	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
19717 scfh

Maximum Hourly Throughput: 19717 scfh	Maximum Annual Throughput:	Maximum Operating Schedule: 8760 hrs
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? ___Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___ Direct Fired
---	---

Maximum design heat input and/or maximum horsepower rating:	Type and Btu/hr rating of burners:
--	---

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Particulate Matter (Condensable)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon dioxide (CO ₂)		9873
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>See Table 16 in Attachment J for additional information.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

FACILITY HAS NO APPLICABLE REQUIREMENTS.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

FACILITY HAS NO APPLICABLE REQUIREMENTS.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description TIN MILL – Tin Mill HCL Acid Storage Tank

Emission unit ID number: HCL-T	Emission unit name: Tin Mill HCL Acid Storage Tank	List any control devices associated with this emission unit: 1C Fume Scrubber
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Tin Mill HCL Acid Storage Tank – supplies acid for operations at Tin Mill.
Emission Point 1E

Manufacturer:	Model number:	Serial number:
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Construction date: December 2014	Installation date: December 2014	Modification date(s):
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

8,700 gallons

Maximum Hourly Throughput:	Maximum Annual Throughput: 80,000 gallons 36% HCl	Maximum Operating Schedule: 8760 hrs/yr
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? ___Yes ___X_ No	If yes, is it? ___ Indirect Fired ___ Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	Type and Btu/hr rating of burners: NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HCl	0.002	0.008
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

USEPA's Tanks 4.09.d software was used to calculate emissions.

See Additional information in Table 12 in Attachments J and K.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description – B Outfall Emergency Generator

Emission unit ID number: Group EG-01	Emission unit name: B Outfall Emergency Generator	List any control devices associated with this emission unit: NA
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 #2 Diesel Oil Fired Emergency Generator – routinely fired for maintenance checks.
 Limited to 100 hours/yr operation.

Manufacturer: Caterpillar	Model number: 3412	Serial number: 81Z14619
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Construction date: 1990	Installation date: Pre-1995	Modification date(s): NA
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

676 HP

Maximum Hourly Throughput: NA	Maximum Annual Throughput: NA	Maximum Operating Schedule: 100 hrs /year
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
--	---

Maximum design heat input and/or maximum horsepower rating: 504KW; 676 HP	Type and Btu/hr rating of burners: 4-stroke diesel engine
---	---

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

#2 Diesel fuel - Primary Fuel
 31 gal/hr @ 100% load with fan

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
#2 Diesel Fuel Oil	15 ppm	Negligible	141,000 Btu/gal

Emissions Data – #2 Fuel Oil		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	1.462	0.073
Nitrogen Oxides (NO _x)	5.503	0.275
Lead (Pb)	---	---
Particulate Matter (PM _{2.5})	0.082	0.004
Particulate Matter (PM ₁₀)	0.085	0.004
Particulate Matter (Condensable)	0.013	0.001
Sulfur Dioxide (SO ₂)	1.737	0.087
Volatile Organic Compounds (VOC)	0.155	0.008
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	1.33E-03	6.67E-05
Toluene	4.83E-04	2.42E-05
Xylene	3.32E-04	1.66E-05
Formaldehyde	1.36E-04	6.78E-06
Acetaldehyde	4.33E-05	2.17E-06
Acrolein	1.36E-05	6.78E-07
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide (CO ₂)	280	14
N ₂ O	2.27E-03	1.14E-04
Methane (CH ₄)	1.14E-02	5.68E-04
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Manufacturer's specifications and AP-42 Factors were used to calculate potential emissions. See Attachment J, Table 19</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Emergency generator is equipped with an hour-counter. Facility will keep annual records of hours the emergency generator was fired.

Only No. 2 fuel oil will be used in the Emergency Generator.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description – MAB Emergency Generator

Emission unit ID number: Group EG-01	Emission unit name: MAB Emergency Generator	List any control devices associated with this emission unit: NA
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
#2 Diesel Oil Fired Emergency Generator – routinely fired for maintenance checks.
Limited to 100 hours/yr operation.

Manufacturer: Cummins	Model number: QSB7-G3 NR3	Serial number: 73191343
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Construction date: 1/25/2011	Installation date: 6/30/2012	Modification date(s): NA
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

227 HP

Maximum Hourly Throughput: NA	Maximum Annual Throughput: NA	Maximum Operating Schedule: 100 hrs /year
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
--	---

Maximum design heat input and/or maximum horsepower rating: 169 KW; 227 HP	Type and Btu/hr rating of burners:
--	---

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

#2 Diesel fuel - Primary Fuel

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
#2 Diesel Fuel Oil	15 ppm	Negligible	141,000 Btu/gal

Emissions Data – #2 Fuel Oil		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.548	0.027
Nitrogen Oxides (NO _x)	2.543	0.127
Lead (Pb)	---	---
Particulate Matter (PM _{2.5})	0.179	0.009
Particulate Matter (PM ₁₀)	0.179	0.009
Particulate Matter (Condensable)	---	---
Sulfur Dioxide (SO ₂)	0.167	0.008
Volatile Organic Compounds (VOC)	0.202	0.010
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	5.38E-04	2.69E-05
Toluene	2.36E-04	1.18E-05
Xylene	1.64E-04	8.22E-06
Formaldehyde	6.80E-04	3.40E-05
Acetaldehyde	4.42E-04	2.21E-05
Acrolein	5.35E-05	2.68E-06
1,3-Butadiene	2.25E-05	1.13E-06
Naphthalene	4.89E-05	2.45E-06
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide (CO ₂)	95	4.7
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Manufacturer's specifications and AP-42 Factors were used to calculate potential emissions. (See Attachment J, Table 19)</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description – Tin Mill Comm Room Emergency Generator

Emission unit ID number: Group EG-01	Emission unit name: Tin Mill Emergency Generator	List any control devices associated with this emission unit: NA
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
#2 Diesel Oil Fired Emergency Generator – routinely fired for maintenance checks.
Limited to 100 hours/yr operation.

Manufacturer: Cummins	Model number: QSB5-G3 NR3	Serial number: 73345048
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Construction date: 12/15/2011	Installation date: 7/15/2012	Modification date(s): NA
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

132 HP

Maximum Hourly Throughput: NA	Maximum Annual Throughput: NA	Maximum Operating Schedule: 100 hrs /year
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
--	---

Maximum design heat input and/or maximum horsepower rating: 98 KW; 132 HP	Type and Btu/hr rating of burners:
---	---

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

#2 Diesel fuel - Primary Fuel

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
#2 Diesel Fuel Oil	15 ppm	Negligible	141,000 Btu/gal

Emissions Data – #2 Fuel Oil		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.318	0.016
Nitrogen Oxides (NO _x)	1.475	0.074
Lead (Pb)	---	---
Particulate Matter (PM _{2.5})	0.104	0.005
Particulate Matter (PM ₁₀)	0.104	0.005
Particulate Matter (Condensable)	---	---
Sulfur Dioxide (SO ₂)	0.097	0.005
Volatile Organic Compounds (VOC)	0.117	0.006
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	3.12E-04	1.56E-05
Toluene	1.37E-04	6.84E-06
Xylene	9.53E-05	4.77E-06
Formaldehyde	3.95E-04	1.97E-05
Acetaldehyde	2.56E-04	1.28E-05
Acrolein	3.10E-05	1.55E-06
1,3-Butadiene	1.31E-05	6.54E-07
Naphthalene	2.84E-05	1.42E-06
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide (CO ₂)	55	3
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Manufacturer's specifications and AP-42 Factors were used to calculate potential emissions. See Attachment J, Table 19</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description – Strip Steel Comm Room Emergency Generator

Emission unit ID number: Group EG-01	Emission unit name: Strip Steel Emergency Generator	List any control devices associated with this emission unit: NA
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 #2 Diesel Oil Fired Emergency Generator – routinely fired for maintenance checks.
 Limited to 100 hours/yr operation.

Manufacturer: Cummins	Model number: QSB5-G3 NR3	Serial number: 73548766
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Construction date: 6/17/2013	Installation date: 9/30/2013	Modification date(s): NA
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

132 HP

Maximum Hourly Throughput: NA	Maximum Annual Throughput: NA	Maximum Operating Schedule: 100 hrs /year
---	---	---

Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
--	---

Maximum design heat input and/or maximum horsepower rating: 98 KW; 132 HP	Type and Btu/hr rating of burners:
---	---

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

#2 Diesel fuel - Primary Fuel

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
#2 Diesel Fuel Oil	15 ppm	Negligible	141,000 Btu/gal

Emissions Data – #2 Fuel Oil		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.318	0.016
Nitrogen Oxides (NO _x)	1.475	0.074
Lead (Pb)	---	---
Particulate Matter (PM _{2.5})	0.104	0.005
Particulate Matter (PM ₁₀)	0.104	0.005
Particulate Matter (Condensable)	---	---
Sulfur Dioxide (SO ₂)	0.097	0.005
Volatile Organic Compounds (VOC)	0.117	0.006
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	3.12E-04	1.56E-05
Toluene	1.37E-04	6.84E-06
Xylene	9.53E-05	4.77E-06
Formaldehyde	3.95E-04	1.97E-05
Acetaldehyde	2.56E-04	1.28E-05
Acrolein	3.10E-05	1.55E-06
1,3-Butadiene	1.31E-05	6.54E-07
Naphthalene	2.84E-05	1.42E-06
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide (CO ₂)	55	3
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Manufacturer's specifications and AP-42 Factors were used to calculate potential emissions. See Attachment J, Table 19</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description – Half Moon Comm Room Emergency Generator

Emission unit ID number: Group EG-01	Emission unit name: Half Moon Emergency Generator	List any control devices associated with this emission unit: NA
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
#2 Diesel Oil Fired Emergency Generator – routinely fired for maintenance checks.
Limited to 100 hours/yr operation.

Manufacturer: Cummins	Model number: QSB5-G3 NR3	Serial number: 73684385
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Construction date: 5/13/2014	Installation date: 12/2/2014	Modification date(s): NA
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

132 HP

Maximum Hourly Throughput: NA	Maximum Annual Throughput: NA	Maximum Operating Schedule: 100 hrs /year
---	---	---

Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
Maximum design heat input and/or maximum horsepower rating: 98 KW; 132 HP	Type and Btu/hr rating of burners:

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

#2 Diesel fuel - Primary Fuel

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
#2 Diesel Fuel Oil	15 ppm	Negligible	141,000 Btu/gal

Emissions Data – #2 Fuel Oil		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.318	0.016
Nitrogen Oxides (NO _x)	1.475	0.074
Lead (Pb)	---	---
Particulate Matter (PM _{2.5})	0.104	0.005
Particulate Matter (PM ₁₀)	0.104	0.005
Particulate Matter (Condensable)	---	---
Sulfur Dioxide (SO ₂)	0.097	0.005
Volatile Organic Compounds (VOC)	0.117	0.006
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	3.12E-04	1.56E-05
Toluene	1.37E-04	6.84E-06
Xylene	9.53E-05	4.77E-06
Formaldehyde	3.95E-04	1.97E-05
Acetaldehyde	2.56E-04	1.28E-05
Acrolein	3.10E-05	1.55E-06
1,3-Butadiene	1.31E-05	6.54E-07
Naphthalene	2.84E-05	1.42E-06
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide (CO ₂)	55	3
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Manufacturer's specifications and AP-42 Factors were used to calculate potential emissions. See Attachment J, Table 19</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

SEE ATTACHMENT I.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

SEE ATTACHMENT I.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT G

Air Pollution Control Device Forms

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: C096	List all emission units associated with this control device. (096) B Outfall Lime Storage Silo	
Manufacturer: Torit	Model number: TBV-4	Installation date: MM/DD/YYYY
Type of Air Pollution Control Device: ___X___ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone ___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone ___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank ___ Catalytic Incinerator ___ Condenser ___ Settling Chamber ___ Thermal Incinerator ___ Flare ___ Other (describe) _____ ___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter		98%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.). Bin Vent Filter 400 acfm @ 5.5 inches wc static pressure		
Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes <u> X </u> No If Yes, Complete ATTACHMENT H If No, Provide justification. Pre-control device emissions are less than Title V Major Source threshold level for particulate matter.		
Describe the parameters monitored and/or methods used to indicate performance of this control device. Visible emissions observations during unloading operations.		

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: C124	List all emission units associated with this control device. (039) No. 5 Pickle Line, HCl Pickle Baths, Rinse Bath
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Manufacturer: Heil	Model number: 7410-5	Installation date: 06/01/1975
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Type of Air Pollution Control Device:

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input checked="" type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Hydrochloric Acid		97%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Sieve tray scrubber with exhaust fans.
 Scrubber operating parameters (recirculated flow rate, make up water flow rate, scrubber differential pressure) established during source emissions testing.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.** **Source subject to 40 CFR Part 63, Subpart CCC.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Scrubber operating parameters established during source emissions testing.
 Daily shift review of operating parameters.
 Maintenance according to manufacturer's recommendations and frequency.
 Inspection of scrubber internals every 3 months.
 Annual calibration of instrumentation for scrubber operating parameters.
 Source test conducted every 2-1/2 years.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: C317	List all emission units associated with this control device. (073) No. 2 Chrome Plating Line, Electrolytic Chrome Plating
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Manufacturer:	Model number:	Installation date: 1943
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Type of Air Pollution Control Device:

Baghouse/Fabric Filter Venturi Scrubber Multiclone
 Carbon Bed Adsorber Packed Tower Scrubber Single Cyclone
 Carbon Drum(s) Other Wet Scrubber Cyclone Bank
 Catalytic Incinerator Condenser Settling Chamber
 Thermal Incinerator Flare Other (describe): Fume Scrubber
 Wet Plate Electrostatic Precipitator Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Chromium		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, Complete ATTACHMENT H

If No, Provide justification. Pre-control device emissions are less than Title V Major Source threshold level for particulate matter.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Tin Mill Roof Line VE observations

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: C318	List all emission units associated with this control device. (074) No. 4 Tin Plating Line, Electrolytic Tin Plating
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Manufacturer:	Model number:	Installation date: 1950
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Type of Air Pollution Control Device:

Baghouse/Fabric Filter Venturi Scrubber Multiclone
 Carbon Bed Adsorber Packed Tower Scrubber Single Cyclone
 Carbon Drum(s) Other Wet Scrubber Cyclone Bank
 Catalytic Incinerator Condenser Settling Chamber
 Thermal Incinerator Flare Other (describe): Fume Scrubber
 Wet Plate Electrostatic Precipitator Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
N/A – No regulated pollutants emitted		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.** No regulated air pollutants emitted.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

N/A

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: C320	List all emission units associated with this control device. (076) No. 6 Tin Plating Line, Electrolytic Tin Plating	
Manufacturer:	Model number:	Installation date: 1965
Type of Air Pollution Control Device: <input type="checkbox"/> Baghouse/Fabric Filter <input type="checkbox"/> Venturi Scrubber <input type="checkbox"/> Multiclone <input type="checkbox"/> Carbon Bed Adsorber <input type="checkbox"/> Packed Tower Scrubber <input type="checkbox"/> Single Cyclone <input type="checkbox"/> Carbon Drum(s) <input type="checkbox"/> Other Wet Scrubber <input type="checkbox"/> Cyclone Bank <input type="checkbox"/> Catalytic Incinerator <input type="checkbox"/> Condenser <input type="checkbox"/> Settling Chamber <input type="checkbox"/> Thermal Incinerator <input type="checkbox"/> Flare <input checked="" type="checkbox"/> Other (describe): Fume Scrubber <input type="checkbox"/> Wet Plate Electrostatic Precipitator <input type="checkbox"/> Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
N/A – No regulated pollutants emitted		
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.). 		
Is this device subject to the CAM requirements of 40 C.F.R. 64? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Complete ATTACHMENT H If No, Provide justification. No regulated air pollutants emitted.		
Describe the parameters monitored and/or methods used to indicate performance of this control device. N/A		

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: C326	List all emission units associated with this control device. (077-2) Roll Shot Blaster 1, Baghouse
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Manufacturer:	Model number:	Installation date: 1950
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Type of Air Pollution Control Device:

Baghouse/Fabric Filter
 Venturi Scrubber
 Multiclone
 Carbon Bed Adsorber
 Packed Tower Scrubber
 Single Cyclone
 Carbon Drum(s)
 Other Wet Scrubber
 Cyclone Bank
 Catalytic Incinerator
 Condenser
 Settling Chamber
 Thermal Incinerator
 Flare
 Other (describe) _____
 Wet Plate Electrostatic Precipitator
 Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter (<10µm)	100%	99%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.** Pre-control device emissions are less than Title V Major Source threshold level for particulate matter.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Tin Mill Roof Line VE observations.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: C327	List all emission units associated with this control device. (077-3) Roll Shot Blaster 2, Baghouse
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Manufacturer:	Model number:	Installation date: 1965
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Type of Air Pollution Control Device:

<input checked="" type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter (<10µm)	100%	99%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.** Pre-control device emissions are less than Title V Major Source threshold level for particulate matter.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Tin Mill Roof Line VE observations.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:
C330

List all emission units associated with this control device.
(073) No. 2 Line, Alkaline Cleaning Bath, Sulfuric Acid Pickling

Manufacturer:

Model number:

Installation date:

1966

Type of Air Pollution Control Device:

- | | | |
|---|--|---|
| <input type="checkbox"/> Baghouse/Fabric Filter | <input type="checkbox"/> Venturi Scrubber | <input type="checkbox"/> Multiclone |
| <input type="checkbox"/> Carbon Bed Adsorber | <input type="checkbox"/> Packed Tower Scrubber | <input type="checkbox"/> Single Cyclone |
| <input type="checkbox"/> Carbon Drum(s) | <input type="checkbox"/> Other Wet Scrubber | <input type="checkbox"/> Cyclone Bank |
| <input type="checkbox"/> Catalytic Incinerator | <input type="checkbox"/> Condenser | <input type="checkbox"/> Settling Chamber |
| <input type="checkbox"/> Thermal Incinerator | <input type="checkbox"/> Flare | <input checked="" type="checkbox"/> Other (describe) <u>Fume Scrubber</u> |
| <input type="checkbox"/> Wet Plate Electrostatic Precipitator | | <input type="checkbox"/> Dry Plate Electrostatic Precipitator |

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Chromium		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.** Pre-control device emissions are less than Title V Major Source threshold level for particulate matter.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Tin Mill Roof Line VE observations.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: C332	List all emission units associated with this control device. (074) No. 4 Tin Plating Line, Alkaline Cleaning Bath, Sulfuric Acid Pickling
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Manufacturer:	Model number:	Installation date: 1950
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Type of Air Pollution Control Device:

Baghouse/Fabric Filter Venturi Scrubber Multiclone
 Carbon Bed Adsorber Packed Tower Scrubber Single Cyclone
 Carbon Drum(s) Other Wet Scrubber Cyclone Bank
 Catalytic Incinerator Condenser Settling Chamber
 Thermal Incinerator Flare Other (describe): Fume Scrubber
 Wet Plate Electrostatic Precipitator Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
N/A – No regulated pollutants emitted		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No
 If Yes, **Complete ATTACHMENT H**
 If No, **Provide justification.** No regulated air pollutants emitted.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

N/A

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: C334	List all emission units associated with this control device. (074) No. 4 Tin Plating Line, Chemical Surface Treatment	
Manufacturer:	Model number:	Installation date: 1950
Type of Air Pollution Control Device: ___ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone ___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone ___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank ___ Catalytic Incinerator ___ Condenser ___ Settling Chamber ___ Thermal Incinerator ___ Flare ___X_ Other (describe): Fume Scrubber ___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
N/A – No regulated pollutants emitted		
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.). 		
Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes ___X_ No If Yes, Complete ATTACHMENT H If No, Provide justification. No regulated air pollutants emitted.		
Describe the parameters monitored and/or methods used to indicate performance of this control device. N/A		

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: C339	List all emission units associated with this control device. (076) No. 6 Tin Plating Line, Alkaline Cleaning Bath, Sulfuric Acid Pickling
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Manufacturer:	Model number:	Installation date: 1965
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Type of Air Pollution Control Device:

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input checked="" type="checkbox"/> Other (describe): Fume Scrubber
<input type="checkbox"/> Wet Plate Electrostatic Precipitator		<input type="checkbox"/> Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
N/A – No regulated pollutants emitted		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.** No regulated air pollutants emitted.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

N/A

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: C341	List all emission units associated with this control device. (076) No. 6 Tin Plating Line, Chemical Surface Treatment	
Manufacturer:	Model number:	Installation date: 1965
Type of Air Pollution Control Device: ___ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone ___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone ___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank ___ Catalytic Incinerator ___ Condenser ___ Settling Chamber ___ Thermal Incinerator ___ Flare ___X_ Other (describe): Fume Scrubber ___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
N/A – No regulated pollutants emitted		
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.). _____ _____ _____		
Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes ___X___ No If Yes, Complete ATTACHMENT H If No, Provide justification. No regulated air pollutants emitted.		
Describe the parameters monitored and/or methods used to indicate performance of this control device. N/A		

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	List all emission units associated with this control device. HCl Storage Tank – HCL-T Tin Mill	
Manufacturer:	Model number:	Installation date: 2014
Type of Air Pollution Control Device:		
<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input checked="" type="checkbox"/> Other (describe) <u>Fume Scrubber</u>
<input type="checkbox"/> Wet Plate Electrostatic Precipitator		<input type="checkbox"/> Dry Plate Electrostatic Precipitator
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Hydrochloric Acid	95%	97%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
Is this device subject to the CAM requirements of 40 C.F.R. 64? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If Yes, Complete ATTACHMENT H		
If No, Provide justification. Pre-control device emissions are less than Title V Major Source threshold level for particulate matter (as HCl).		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
Inspection of scrubber every 6 months.		

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	List all emission units associated with this control device. HCl Storage Tanks (8) Commercial Acid [G,H,] Waste Pickle Liquor (WPL) [A, B, C, D,E,F]	
Manufacturer:	Model number:	Installation date: 1996
Type of Air Pollution Control Device:		
<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input checked="" type="checkbox"/> Other (describe) <u>Fume Scrubber</u>
<input type="checkbox"/> Wet Plate Electrostatic Precipitator		<input type="checkbox"/> Dry Plate Electrostatic Precipitator
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Hydrochloric Acid	95%	97%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
Is this device subject to the CAM requirements of 40 C.F.R. 64? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If Yes, Complete ATTACHMENT H		
If No, Provide justification. Pre-control device emissions are less than Title V Major Source threshold level for particulate matter (as HCl).		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
Sem-Annual visual inspections of fume scrubber and closed vent system. Maintenance according to manufacturer's recommendations.		

ATTACHMENT I

Regulatory Applicable Requirements

ATTACHMENT I

**Regulatory Applicable Requirements
ArcelorMittal Weirton LLC, Weirton, West Virginia**

Regulation	Existing Title V Condition	Title	Requirement	Applicable Regulation?	Compliance Method/Comments
<i>FACILITY-WIDE</i>					
45 CSR 4 §4-3.1	3.1.4 3.4.3	To Prevent and Control the Discharge of Air Pollutants into the Open Air which Causes or Contributes to an Objectionable Odor or Odors	No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.	Yes	Investigate possible odor source/cause and take appropriate action if necessary. Records of odor complaints will be maintained.
45 CSR 6 §6-3.1 §6-3.2	3.1.1 3.1.2	To Prevent and Control Air Pollution from Combustion of Refuse	The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1.	Yes	Open burning is generally not allowed on-site. Open burning, if conducted, will meet rule notification and other requirements.
45 CSR §7-5.2	3.1.9.	To Prevent and Control Particulate Matter Air Pollution From Manufacturing Processes and Associated Operations	Must control fugitive particulate matter of plant premises and plant-owned or leased access roads by paving, application of asphalt, chemical dust suppressant or other suitable control measures.	Yes	ArcelorMittal Weirton applies road dust suppressant and sweeps paved roadways on a routine basis.
45 CSR 11 §11-5.2	3.1.5	Prevention of Air Pollution Emergency Episodes	If required, standby plans to reduce the emissions of air pollutants must be submitted.	Yes	Will submit plans, if required.
45 CSR 13		Construction Permits	Must comply with this rule for any construction or modification.	Yes	Will submit applications, if required.
45 CSR 17		Prevention and Control of Particulate Matter Air Pollution from Materials Handling, Preparation, Storage and Other Sources of Fugitive Particulate Matter	Must prevent and control particulate matter air pollution from sources of fugitive particulate matter, including unpaved roads, industrial parking areas, demolition activities, haul roads, etc.	Yes	ArcelorMittal Weirton applies road dust suppressant and sweeps paved roadways on a routine basis. Fugitive dust emissions are minimized during demolition activities.
45 CSR §30-8	3.5.4	Air Quality Management Fee Program	This rule establishes a program to collect fees for certificates to operate and for permits to construct, modify or relocate sources of air pollution.	Yes	Annual fees are paid as required for Certified Emissions Statements (CES) and Certificate to Operate (CTO).
45 CSR 30	3.4.2 3.5 4.5.5	Requirements for Operating Permits	Major sources must submit Title V Permit Applications Permits are for a fixed term of five (5) years.	Yes	Records are to be maintained for five years. Semi-Annual Monitoring Reports (March 15 and September 15) and an Annual Compliance Certification Report (March 15) will be submitted as required. Permit renewal applications are due six (6) months prior to the date of permit expiration. Deviations reported as required.
45 CSR 42		Greenhouse Gas Emissions Inventory	Requires the reporting and inventory of greenhouse gas emissions by stationary sources which emit more than a de minimis amount of greenhouse gases on an annual basis.	Yes	Facility emits more than de minimis amounts of CO ₂ (> 10,000 tpy) and other greenhouse gases and reports these emissions annually.
WV Code §22-5-4(a)(14)	3.1.6	Emissions Inventory	Must submit an annual emissions inventory in accordance with DAQ requirements.	Yes	Annual submittals submitted to WVDEP by March 31.

ATTACHMENT I

**Regulatory Applicable Requirements
ArcelorMittal Weirton LLC, Weirton, West Virginia**

Regulation	Existing Title V Condition	Title	Requirement	Applicable Regulation?	Compliance Method/Comments
WV Code §22-5-4(a)(14-15) 45 CSR §2-8.1 45 CSR 13	3.3	Source Testing	If required, source testing must follow approved methods. Test protocol, test notice and test reports required.	Yes	ArcelorMittal Weirton meets source testing requirements. Records maintained as required.
45 CSR 34 40 CFR 61 Subpart M	3.1.3	National Emission Standard for Asbestos	Requirements when asbestos is encountered during demolition or renovation of property.	Yes	The facility must follow the provisions of this rule should any asbestos be encountered during the demolition or renovation of property.
40 CFR Part 68 Subpart B	3.1.8	Risk Management Plans	A Risk Management Plan is required to be submitted to USEPA for certain chemicals held on-site over threshold values.	No	The facility does store hydrogen, but uses engineering controls to limit the storage amount to less than the threshold of 10,000 lbs. The rule does not apply at this time. An RMP Plan would be developed if thresholds are triggered for an applicable chemical.
40 CFR Part 82 Subpart F	3.1.7	Protection of Stratospheric Ozone, Recycling and Emission Reduction	Must meet requirements when performing maintenance, service, repair or disposal of appliances.	Yes	The facility will follow requirements for maintenance and disposal of Ozone-Depleting Substances (ODS). Only certified technicians will be allowed to perform maintenance on any applicable equipment. Records of ODS containing equipment, ODS purchases, and technician certifications are maintained at the facility.
40 CFR 98		Mandatory Greenhouse Gas Reporting	Must meet reporting requirements for Greenhouse Gas (GHG) emissions for applicable sources.	Yes	ArcelorMittal Weirton meets the threshold for reporting GHG emissions for Boilers and other applicable Facility sources.

ATTACHMENT I

**Regulatory Applicable Requirements
ArcelorMittal Weirton LLC, Weirton, West Virginia**

Regulation	Existing Title V Condition	Title	Requirement	Applicable Regulation?	Compliance Method/Comments
<i>INDIRECT-FIRED FUEL BURNING UNITS - Jumbo Anneals 1-4, 5-8, 9-12; Continuous Annealing Line 2 and 3; Anode Shop Melting Pots</i>					
45 CSR 2	<i>To Prevent and Control Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers</i>				
45 CSR §2-3.1	5.1.1	Visible Emissions of Smoke and/or Particulate Matter Prohibited and Standards of Measurement	Opacity limit of 10% based on a six minute block average.	Yes	ArcelorMittal Weirton operates the furnaces according to manufacturer's recommendations and to minimize emissions. VE observations have not been required.
§2-9.1	5.1.3		VE standards apply at all times except periods of start-ups, shutdowns and malfunctions. (Anode shop melting pots exempt.)		
45 CSR §§2-4.1, 4.1.b and 4.3	5.1.2	Particulate Matter Emission Limitation	Combined PM emission limitation (lb/hr) for Jumbo Anneals and Continuous Annealing Lines	Yes	Records of throughput and fuel consumption are maintained for each furnace or annealing furnace set.
45 CSR §2-9.2	5.1.4	Operational Requirement	Must operate equipment in accordance with good air pollution control practice to minimize emissions. Monitoring may include visible emission observations, operating and maintenance procedures and WVDAQ site inspections. (Anode shop melting pots exempt.)	Yes	ArcelorMittal Weirton operates the furnaces according to manufacturer's recommendations and to minimize emissions. VE observations have not been required.
45 CSR §10-3.1.e	5.1.5	Sulfur Dioxide Emission Limitation	Combined SO ₂ emission limitation (lb/hr) for Jumbo Anneals and Continuous Annealing Lines	Yes	Records of throughput and fuel consumption are maintained for each furnace or annealing furnace set.
45 CSR §10-3.6	5.1.6	Circumvention	No person shall circumvent the provisions of this rule by constructing a fuel burning unit larger than would be necessary to provide heat/power to the manufacturing plant, with the purpose to use the design heat input to raise the allowable sulfur content in fuel. (Anode shop melting pots exempt.)	Yes	ArcelorMittal Weirton does not have plans to install any additional fuel burning equipment at this time.
45 CSR §10-11	5.1.7	Circumvention	Cannot dilute waste stream in order to meet permit limitations.	Yes	ArcelorMittal Weirton does not dilute exhaust gas streams.
CO-SIP-C-2003-28 Condition IV.3(h)	5.1.8	Operational Limitation	Annealing furnaces are limited to firing only natural gas and mixed gas (70% natural gas and 30% air)	Yes	ArcelorMittal Weirton fires only natural gas in the annealing furnaces. Fuel records are maintained.

ATTACHMENT I

**Regulatory Applicable Requirements
ArcelorMittal Weirton LLC, Weirton, West Virginia**

Regulation	Existing Title V Condition	Title	Requirement	Applicable Regulation?	Compliance Method/Comments
<i>MANUFACTURING PROCESS SOURCE REQUIREMENTS - Hot Strip Mill, Tandem Mill, Temper Mills, Weirlite Temper Mills, Plating Lines and Shot Blasters</i>					
45 CSR 7	<i>To Prevent and Control Particulate Matter Air Pollution From Manufacturing Processes and Associated Operations</i>				
45 CSR §7-3.1; §7-3.2	6.1.1	Emissions of Smoke and/or Particulate Matter Prohibited and Standards of Measurement	Opacity limit of 20%. Opacity of less than 40% is allowed for no more than five (5) minutes in any sixty (60) minute period.	Yes	Weekly visible emissions observations are required using USEPA Method 22. If VE's are observed, compliance shall be determined by conducting tests per 45CSR7A-2. If no VEs are observed after one month, VEs shall be conducted monthly. If any VEs are observed during the monthly checks, then VEs are to be conducted weekly. If no VEs are observed after four (4) months, VE checks shall be conducted each calendar quarter. If any VEs are observed during the Quarterly Check, then VEs are to be conducted monthly. Records of all VE checks are maintained.
45 CSR §7-4.1	6.1.2	Particulate Matter Emission Limitation	PM Limits (pph) No. 2 Chrome Plating Line 33.8 pph No. 4 Tin Plating Line 32.2 pph No. 6 Tin Plating Line 33.0 pph	Yes	Emissions are reported in the annual Air Emissions Inventory report.
45 CSR §7-4.1; §7-4.4	6.1.3	Particulate Matter Emission Limitation	PM Limits (pph) No. 1 Weirlite Temper Mill 35.4 pph No. 2 Weirlite Temper Mill 24.2 pph No. 5 Temper Mill 25.8 pph	Yes	Emissions are reported in the annual Air Emissions Inventory report.
45 CSR §7-4.1; §7-4.8	6.1.4	Multiple Stack Arrangements Particulate Matter Emission Limitation	If two or more sources are vented thru separate stacks, allowable emission rates are proportioned per stack. PM Limits (pph) No. 9 Tandem Mill 31.8 pph Roll Shot Blaster 1 15.2 pph Roll Shot Blaster 2 15.2 pph	Yes	Emissions are reported in the annual Air Emissions Inventory report.
45 CSR §7-4.12	6.1.5	Stack Exhaust Requirements	Any stack serving process source operations or air pollution control equipment on process sources shall contain flow straightening devices or utilize a vertical run of sufficient length to establish flow patterns consistent with acceptable stack-sampling procedures.	Yes	Exhaust stacks meet acceptable stack sampling requirements.
45 CSR §7-5.1	6.1.6	Fugitive Particulate Matter	Must minimize fugitive particulate matter from facility manufacturing process equipment. Means to mitigate fugitive PM include process and control equipment design, operation and maintenance procedures. Measures used shall be reasonably achievable.	Yes	ArcelorMittal Weirton minimizes fugitive emissions through proper design, operation, and maintenance of process and control equipment.

ATTACHMENT I

**Regulatory Applicable Requirements
ArcelorMittal Weirton LLC, Weirton, West Virginia**

Regulation	Existing Title V Condition	Title	Requirement	Applicable Regulation?	Compliance Method/Comments
45 CSR §30-5.1.c	6.2.1	Monitoring	Weekly visible emissions observations are required using USEPA Method 22. If VE's are observed, compliance shall be determined by conducting tests per 45CSR7A-2. If no VEs are observed after one month, VEs shall be conducted monthly. If any VEs are observed during the monthly checks, then VEs are to be conducted weekly. If no VEs are observed after four (4) months, VE checks shall be conducted each calendar quarter. If any VEs are observed during the Quarterly Check, then VEs are to be conducted monthly.	Yes	ArcelorMittal Weirton performs required VE checks. Records of VE checks are maintained by Weirton.
45 CSR §7-8.1; §8.2	6.3.1	Testing	If required by the WVDAQ, source testing of process operations for particulate matter will be conducted.	Yes	No source testing is required at this time.
45 CSR §30-5.1.c	6.4.1	Recordkeeping	Maintain records of VE checks for five years. Records shall include date and time of VE check, VE check result, and any corrective actions taken, if applicable.		ArcelorMittal Weirton maintains records of VE checks as required.

Regulatory Applicable Requirements
ArcelorMittal Weirton LLC, Weirton, West Virginia

Regulation	Existing Title V Condition	Title	Requirement	Applicable Regulation?	Compliance Method/Comments
<i>STORAGE STRUCTURES - Lime Storage Silo</i>					
<i>45 CSR 7</i>	<i>To Prevent and Control Particulate Matter Air Pollution From Manufacturing Processes and Associated Operations</i>				
45 CSR §7-3.7	7.1.1	Emission Limitations	Visible emissions are not permitted from any storage structure associated with a manufacturing process that is required to have a full enclosure and be equipped with a PM control device.	Yes	ArcelorMittal Weirton conducts VE observations of the lime storage silo bin vent filter during filling operations.
45 CSR §7-5.1	7.1.2	Fugitive Particulate Matter	Must minimize fugitive particulate matter from facility storage structures. Means to mitigate fugitive PM include process and control equipment design, operation and maintenance procedures. Measures used shall be reasonably achievable.	Yes	ArcelorMittal Weirton minimizes fugitive emissions through proper design, operation, and maintenance of the lime silo storage equipment and bin vent filter.
45 CSR §30-5.1.c	7.2.1	Monitoring	Weekly visible emissions observations are required using USEPA Method 22. If VE's are observed, compliance shall be determined by conducting tests per 45CSR7A-2. If no VEs are observed after one month, VEs shall be conducted monthly. If any VEs are observed during the monthly checks, then VEs are to be conducted weekly. If no VEs are observed after four (4) months, VE checks shall be conducted each calendar quarter. If any VEs are observed during the Quarterly Check, then VEs are to be conducted monthly.	Yes	ArcelorMittal Weirton conducts VE observations of the lime storage silo during filling operations. Records of VE checks are maintained by Weirton.
45 CSR §30-5.1.c	7.4.1	Recordkeeping	Maintain records of VE checks for five years. Records shall include date and time of VE check, VE check result, and any corrective actions taken, if applicable.	Yes	ArcelorMittal Weirton maintains records of VE checks as required.

ATTACHMENT I

**Regulatory Applicable Requirements
ArcelorMittal Weirton LLC, Weirton, West Virginia**

Regulation	Existing Title V Condition	Title	Requirement	Applicable Regulation?	Compliance Method/Comments
<i>NO. 5 PICKLING LINE</i>					
<i>40 CFR Part 63</i>	<i>Subpart CCC - Steel Pickling HCL Process NESHAP</i>				
45 CSR §7-4.13	8.1.1	Potential Hazardous Material Emissions	Manufacturing process sources that have the potential to emit hazardous particulate matter emissions shall consider the potential harmful effects of the emissions resulting from such activities.	Yes	ArcelorMittal Weirton is cognizant of the type, quantity and potential harmful effects of emissions resulting from the processes conducted at the site. Evaluations will be conducted when requested by the WVDAQ.
40 CFR §63.1157 45 CSR 34 45 CSR §7-4.2	8.1.2.a.	Pickle Lines Emission Limitation	HCl emissions from steel pickling (batch or continuous) shall not be in excess of 18 ppm by volume or HCl at a mass emission rate that corresponds to a collection efficiency of less than 97%. Compliance with this limit shall demonstrate compliance with the less stringent limitation of 45 CSR 7-4.2.	Yes	Stack test every 2-1/2 years. Stack test data has shown that ArcelorMittal Weirton meets the HCL stack concentration limit.
40 CFR §63.1159 45 CSR 34	8.1.3.b.	HCL Acid Storage Vessels	A closed-vent system is to be operated at all times, except for loading and unloading of acid. Loading and unloading of acid is to be conducted either through enclosed lines or each point where acid may be exposed to the atmosphere shall be equipped with a local fume capture system, ventilated through an air pollution control device.	Yes	ArcelorMittal Weirton captures the acid fume during tank loading, unloading and transfer operations. The acid fumes are directed to a fume scrubber located at the HCL tank farm. Records of periodic inspections of closed-vent system.
40 CFR §63.1160(b) 45 CSR 34	8.1.4.a. & b.	Operational Requirements - Scrubbers	An operation and maintenance plan is required for each emission control device. For the pickle line scrubber: *Monitor and record pressure drop across scrubber once per shift while the scrubber is operating; *Require manufacturer's recommended maintenance at the recommended intervals for pumps, fans and motors; *Clean the scrubber internals and mist eliminators at intervals sufficient to prevent solids buildup or other fouling; *Inspect the scrubber every three (3) months and clean, repair, replace, adjust equipment as necessary; *If a viewport or access hatch is not used, an alternative approved by the EPA may be used; *Corrective action should be initiated within 1 working day of detection of an operational problem. Corrective actions should be completed as soon as practicable. Failure to initiate or provide appropriate repair, replacement or other corrective action is considered a violation of the maintenance requirements; *Records of each inspection, problems identified, repair/replacement description, and date of repair/replacement must be maintained for each inspection.	Yes	ArcelorMittal Weirton has developed an Operational and Maintenance Plan for the No. 5 Pickle Line Scrubber and inspects, repairs, replaces, adjusts as necessary. Records are maintained for the inspections and maintenance activities as required.

ATTACHMENT I

**Regulatory Applicable Requirements
ArcelorMittal Weirton LLC, Weirton, West Virginia**

Regulation	Existing Title V Condition	Title	Requirement	Applicable Regulation?	Compliance Method/Comments
45 CSR §7-3.1; §7-3.2	8.1.5	Emissions of Smoke and/or Particulate Matter Prohibited and Standards of Measurement	Opacity limit of 20%. Opacity of less than 40% is allowed for no more than five (5) minutes in any sixty (60) minute period.		Weekly visible emissions observations are required using USEPA Method 22. If VE's are observed, compliance shall be determined by conducting tests per 45CSR7A-2. If no VEs are observed after one month, VEs shall be conducted monthly. If any VEs are observed during the monthly checks, then VEs are to be conducted weekly. If no VEs are observed after four (4) months, VE checks shall be conducted each calendar quarter. If any VEs are observed during the Quarterly Check, then VEs are to be conducted monthly. Records of all VE checks are maintained.
40 CFR §63.1161 45 CSR 34 TESTING	8.2.1.a.	Demonstration of Compliance	Initial performance test required.	No	Initial Performance testing has already been conducted.
	8.2.1.b.	Establish Scrubber Operating Parameters	Scrubber operational parameters, such as scrubber makeup water flowrate or recirculation water flowrate, shall be established during stack performance testing. The data are collected during the test continuously or at no less than once every 15 minutes.	Yes	Scrubber operational parameters are established each time there is an required stack performance test conducted - every 2-1/2 years.
	8.2.1.d.	Test Methods	Use of 40 CFR 60 Appendix A Reference Test Methods are to be used to determine compliance.	Yes	ArcelorMittal Weirton utilizes the appropriate test methods during compliance testing.
40 CFR §63.1162 45 CSR 34 MONITORING	8.3.1.a.	Test Frequency and Instrumentation - Pickle Line Scrubber	Source testing is required every 2-1/2 years or other established frequency. Instrumentation must be installed to monitor the scrubber makeup water or scrubber recirculation water flow rate. The instrumentation shall be operated and maintained and certified to be accurate to within 5% and shall be calibrated according to manufacturer's instructions but no less than once per year. The data must be recorded at least once per shift that the scrubber is operating.	Yes	Performance testing has been conducted every 2-1/2 years for operational sources. Instrumentation is in place to monitor scrubber makeup water and is calibrated annually.
40 CFR §63.1162 45 CSR 34 MONITORING	8.3.1.c.	HCL Storage Tanks	Each HCL Storage vessel shall be inspected semi-annually to determine that the closed-vent system is installed and operating properly.	Yes	ArcelorMittal Weirton inspects HCL storage vessel semi-annually as required and maintains records of inspections.

ATTACHMENT I

**Regulatory Applicable Requirements
ArcelorMittal Weirton LLC, Weirton, West Virginia**

Regulation	Existing Title V Condition	Title	Requirement	Applicable Regulation?	Compliance Method/Comments
45 CSR §30-5.1.c	8.3.2	PM Emissions	<p>Shall use VE checks to monitor PM emissions.</p> <p>Weekly visible emissions observations are required using USEPA Method 22. If VE's are observed, compliance shall be determined by conducting tests per 45CSR7A-2. If no VEs are observed after one month, VEs shall be conducted monthly. If any VEs are observed during the monthly checks, then VEs are to be conducted weekly. If no VEs are observed after four (4) months, VE checks shall be conducted each calendar quarter. If any VEs are observed during the Quarterly Check, then VEs are to be conducted monthly.</p>	Yes	ArcelorMittal Weirton conducts VE observations as required. Records of VE checks are maintained by Weirton.
40 CFR §63.1164 45 CSR 34 REPORTING	8.4.1.a.	Notification of Performance Test	EPA and WVDAQ should be notified in writing 60 calendar days before performance tests are scheduled along with a site-specific Test Protocol.	Yes	ArcelorMittal Weirton submits timely Test Notifications and Test Protocols prior to source test events.
	8.4.1.b.	NOCS	A Notification of Compliance Status was required to be submitted to the EPA and WVDAQ following completion of initial compliance testing.	No	The NOCS was previously submitted as required.
	8.4.2.a.	Compliance Test Reports	Source test reports shall be submitted to the EPA and WVDAQ.	Yes	Compliance test reports are submitted to EPA and WVDAQ for operating sources as required.
	8.4.2.b.	<p>Periodic Startup, Shutdown and Malfunction Reports</p> <p>Startup, Shutdown and Malfunction Plan</p>	<p>Emissions should be minimized during periods of startup, shutdown or malfunction (SSM). Air pollution control equipment should be operated in a manner consistent with good air pollution control practices. Malfunctions shall be corrected as soon as practicable in accordance with the required SSM Plan.</p> <p>SSM Plan is required to be developed and implemented that details procedures for operating and maintaining a source during SSM events and includes a program of corrective actions.</p> <p>Immediate reports are to be submitted to EPA and WVDAQ if actions taken during SSM events are not consistent with the SSM Plan.</p> <p>If actions are consistent the SSM Plan, this should be stated in the Facility's Semi-Annual Reports - due September 15 for the reporting period from January 1 - June 30 and due March 15 for the reporting period from July 1 - December 31. These reports shall be certified by a responsible official or owner/operator of the source.</p>	Yes	<p>ArcelorMittal Weirton has developed a written Startup, Shutdown and Malfunction Plan (SSM Plan) for the sources affected by this HCL NESHAP.</p> <p>ArcelorMittal Weirton reports Semi-Annually to the EPA and WVDAQ as required. Reports are signed by a responsible official as required.</p>

ATTACHMENT I

**Regulatory Applicable Requirements
ArcelorMittal Weirton LLC, Weirton, West Virginia**

Regulation	Existing Title V Condition	Title	Requirement	Applicable Regulation?	Compliance Method/Comments
40 CFR §63.1165 45 CSR 34 RECORDKEEPING	8.5.1.a.	General Requirements	Records shall be maintained for 5 years from the date of each record. *Occurrence & duration of each startup, shutdown and malfunction of process equipment; *Occurrence and duration of each malfunction of air pollution control equipment; *Maintenance performed on air pollution control equipment; *Actions taken during SSM events and dates; *Informances necessary to demonstrate conformance with the SSM Plan and corrective actions taken; *Measurements taken to demonstrate compliance with the standards; *Performance test results; *Initial notification and NOCS documentation.	Yes	ArcelorMittal Weirton maintains required records.
	8.5.1.b.1	Subpart CCC Records	Records shall be maintained for 5 years from the date of each record. *Scrubber makeup water flow or recirculation rates *Calibration and manufacturer certification that monitoring devices are accurate to within 5% *Each maintenance, inspection and repair, replacement or other corrective actions *Written operation and maintenance plan - all versions and revisions.	Yes	ArcelorMittal Weirton maintains required records.
	8.5.1.c.	Recent Records	The most recent 2 years of records must be maintained on site.	Yes	ArcelorMittal Weirton maintains required records.

ATTACHMENT I

**Regulatory Applicable Requirements
ArcelorMittal Weirton LLC, Weirton, West Virginia**

Regulation	Existing Title V Condition	Title	Requirement	Applicable Regulation?	Compliance Method/Comments
<i>Tin Min HCL Storage Tank (HCL-T)</i>					
45 CSR §7-4.2; Table 45-7B	8.1.10.a	HCL Emission Limit	HCL emission limit 510 mg/dscm at standard conditions	Yes	Annual air emissions inventory.
R13-0032C Condition 5.1.1	8.1.10.b	Operational Requirement	Conservation vent must be installed and routed to a fume scrubber. Fume scrubber shall be operated during filling operations.	Yes	ArcelorMittal Weirton has installed and operates equipment as required.
R13-0032C Condition 5.1.1	8.1.10.c	Maintenance Requirement	Proper operation and maintenance of fume scrubber and closed vent system required.	Yes	ArcelorMittal Weirton operates equipment as required. Inspections of scrubber every 6 months. Inspection records.
R13-0032C Condition 5.1.2	8.1.11	Malfunction Records	Exceedance of HCL emission limit allowed for 10 days due to unavoidable malfunction of equipment. Application/notification due to WVDEP within 24 hours of malfunction.	Yes	ArcelorMittal Weirton will comply when necessary.

ATTACHMENT I

**Regulatory Applicable Requirements
ArcelorMittal Weirton LLC, Weirton, West Virginia**

Regulation	Existing Title V Condition	Title	Requirement	Applicable Regulation?	Compliance Method/Comments
<i>BOILERS</i>					
	4.1.11.a	Carbon Monoxide Emissions	CO emissions limitation each boiler 3.69 lbs/hr 16.2 tpy	Yes	Records of fuel consumption are maintained for each boiler. Annual air emissions inventory. Annual boiler tune-up (meet 50 ppm CO)
	4.1.11.b	NOx Emissions	NOx emissions limitation each boiler 3.64 lbs/hr 16.0 tpy	Yes	Records of fuel consumption are maintained for each boiler. Annual air emissions inventory. Annual boiler tune-up (meet 30 ppm NOx)
40 CFR 63 Subpart DDDDD §63.7500.(a)(1) Table 3 Condition 3	4.1.11.c 4.4.4	Annual Tune-up	Conduct annual tune-up of each boiler no later than 13 months from previous tune-up	Yes	Conduct annual tune-up of each boiler and maintain records as required.
	4.1.11.e	Boiler Capacity	Each package boiler limited to 99.9 MMBtu/hr heat input. Annual consumption of natural gas per boiler limited to 857.6 mmcf, measured as a rolling yearly total.	Yes	Records of fuel consumption are maintained for each boiler.
	4.4.2	Maintenance Records	Inspection and maintenance records of low-NOx burners required.	Yes	Records maintained as required.
	4.4.3	Malfunction Records	Malfunction records for low-NOx burners required.	Yes	Records maintained as required.
	4.4.5	Operational Records	On a monthly basis, maintain records of hours of operation and amount of natural gas consumed in each boiler.	Yes	Records maintained as required. Records of annual total natural gas consumption - rolling monthly.
	4.5.5	Annual Compliance Report	Annual summary report of boiler activities	Yes	Annual Compliance Report will be submitted. First report due January 17, 2017
45 CSR 2 45 CSR 2A	<i>To Prevent and Control Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers Testing, Monitoring, Recordkeeping, and Reporting Requirements under 45CSR2</i>				
45 CSR §2-9.2	4.1.4 4.1.14	Start-up, Shutdown and Malfunctions; O&M of Air Pollution Control Equipment	The owner must operate fuel burning units and associated air pollution control equipment in a manner consistent with good air pollution control practice to minimize emissions.	Yes	The facility will maintain and operate the Boilers and air pollution control equipment (low-NOx burners) in a manner consistent with good work practices to minimize emissions.
45 CSR §2A-3.1 §2-4.1.b	4.1.11.d	Fuel Restriction	Only use pipeline natural gas.	Yes	Only pipeline natural gas is used in the boilers. ArcelorMittal Weirton maintains records as required.

ATTACHMENT I

**Regulatory Applicable Requirements
ArcelorMittal Weirton LLC, Weirton, West Virginia**

Regulation	Existing Title V Condition	Title	Requirement	Applicable Regulation?	Compliance Method/Comments
40 CFR 60 Subpart Dc - Standards of Performance for Small Industrial, Commercial, Institutional Steam Generating Units					
40 CFR 60 Subpart Dc		Standards of Performance for Small Industrial, Commercial, Institutional Steam Generating Units	Applies to boilers that were installed or modified after June 9, 1989 with heat inputs less than 100 MMBtu/hr, but greater than or equal to 10 MMBtu/hr.	Yes	Applies to the Tin Mill Boilers (4) and Strip Mill Boiler (1) each rated at 99.9 MMBtu/hr.
§60.42c		Standard for Sulfur Dioxide	No requirements for combustion of Natural Gas.	No	Not Applicable
§60.43c		Standard for Particulate Matter	No requirements for combustion of Natural Gas.	No	Not Applicable
§60.48c(f)		Reporting and Recordkeeping	Fuel supplier certifications of sulfur content of fuel.	Yes	ArcelorMittal Weirton maintains record of sulfur content of natural gas from fuel supplier.
§60.48c(g)		Reporting and Recordkeeping	Must record amount and type of fuel combusted daily.	Yes	ArcelorMittal Weirton will maintain natural gas usage records for each boiler.
§60.48c(i)		Reporting and Recordkeeping	Must maintain records for two years.	Yes	ArcelorMittal Weirton maintains records as required.
§60.48c(j)		Reporting and Recordkeeping	Semi-Annual reports required to be sent to USEPA by 30th day following end of reporting period.	Yes	ArcelorMittal Weirton reports as required.

ATTACHMENT I

**Regulatory Applicable Requirements
ArcelorMittal Weirton LLC, Weirton, West Virginia**

Regulation	Existing Title V Condition	Title	Requirement	Applicable Regulation?	Compliance Method/Comments
40 CFR 63 Subpart ZZZZ Reciprocating Internal Combustion Engines (RICE) NESHAP					
§63.6585 §63.6590		Applicability	Rule applies to new and existing RICE at major and area HAP sites.	Yes	Applies to existing B Outfall Emergency Generator (constructed before December 19, 2002)
Table 2d Condition 4 §63.6625(i)		Work Practice Requirements	Change oil/filter and inspect hoses/belts every 500 hours or annually. May use oil analysis program instead of prescribed oil change frequency. Inspect air cleaner every 1,000 hours or annually. Replace hoses/belts/air cleaners as necessary.	Yes	Use of non-resettable hour meter. Inspections and oil changes performed as required. Records are maintained.
Table 6 Condition 9		Compliance Requirement	Operate/maintain engine per manufacturer's instructions or owner-developed maintenance plan.	Yes	ArcelorMittal Weirton operates and maintains the equipment per the manufacturer's recommendations.
§63.6640(f)		Operational Requirements	For emergency engines: (1) There is no limit on the use of the emergency stationary RICE in emergency situations. (2) Maximum of 100 hours per year for operation for maintenance/readiness checks; emergency demand response; and for voltage/frequency deviations. (3) Emergency stationary RICE may be operated up to 50 hours per calendar year in non-emergency situations, which are then counted as part of the 100 hours per year for activities in (2) above.	Yes	ArcelorMittal Weirton will meet these operational limitations. ArcelorMittal Weirton does not have any arrangements with the utility for emergency demand response at this time.
§63.6590(c)		New RICE	At either major or area sources, comply with 40 CFR Part 60, Subpart IIII New Source Performance Standards (NSPS) for new emergency CI engines. (New = manufactured after April 1, 2006)	Yes	Applies to Emergency Engines used as backup for Computer equipment throughout facility. Complies with 40 CFR Part 60 Subpart IIII. Compliance demonstrated via engine manufacturer certifications for specific model years.
§63.6645(a)(5)		Notifications	Not required for emergency engines.	No	NA
Table 7 Condition 4		Reporting	Only required if emergency engine used for emergency demand response or local reliability. Due by March 31 annually.	No	ArcelorMittal Weirton does not have any arrangements with the utility for emergency demand response or local reliability at this time.

ATTACHMENT I

**Regulatory Applicable Requirements
ArcelorMittal Weirton LLC, Weirton, West Virginia**

Regulation	Existing Title V Condition	Title	Requirement	Applicable Regulation?	Compliance Method/Comments
40 CFR 60 Subpart IIII Reciprocating Internal Combustion Engines (RICE) NSPS					
§60.4200(a)(2)		Applicability	Rule applies to owners/operators of stationary CI ICE for engines manufactured after April 1, 2006	Yes	Applies to Emergency Engines used as backup for Computer equipment throughout facility.
§60.4205(b) §60.4211(c)		Emissions Standards	Must comply with emissions standards for new nonroad CI engines in §60.4202 for all pollutants for the same model year and maximum engine power for 2007 model year and later.	Yes	Compliance demonstrated via engine manufacturer certifications for specific model years.
§60.4206		Operation	Owners and operators of stationary CI ICE must operate and maintain the equipment that achieve the emission standards over the life of the engine.	Yes	ArcelorMittal Weirton operates and maintains the equipment per the manufacturer's recommendations.
§60.4207		Fuel Requirement	Must use diesel fuel that meets 40 CFR §80.510(b). Sulfur content: 15 ppm maximum for non-road diesel fuel.	Yes	ArcelorMittal Weirton uses appropriate diesel fuel. ArcelorMittal Weirton maintains fuel purchase records.
§60.4211(f)		Operational Requirements	(1) There is no limit on the use of the emergency stationary RICE in emergency situations. (2) Maximum of 100 hours per year for operation for maintenance/readiness checks; emergency demand response; and for voltage/frequency deviations. (3) Emergency stationary RICE may be operated up to 50 hours per calendar year in non-emergency situations, which are then counted as part of the 100 hours per year for activities in (2) above.	Yes	ArcelorMittal Weirton will meet these operational limitations. ArcelorMittal Weirton does not have any arrangements with the utility for emergency demand response at this time.
§60.4214(b)		Notification, Reporting, Recordkeeping	For emergency stationary ICE, no requirement to submit an initial notification. If model year emissions standards are not met, site must install non-resettable hour meter on the engine and record the time and reason engine was in operation during that time.		Compliance demonstrated via engine manufacturer certifications for specific model years.
40 CFR 63 Subpart JJJJJJ Area Source Boiler NESHAP					
40 CFR Part 63 Subpart JJJJJJ			There are no specific requirements for Natural Gas fired combustion equipment in the regulation.	Yes	Applies to the Jumbo Anneals 1-4, 5-8, 9-12; Continuous Annealing Line 2 and 3; Anode Shop Melting Pots; MAB Comfort Heating Boiler - all are natural gas fired units. ArcelorMittal Weirton maintains fuel records for combustion units.

Regulatory Applicable Requirements
ArcelorMittal Weirton LLC, Weirton, West Virginia

Regulation	Existing Title V Condition	Title	Requirement	Applicable Regulation?	Compliance Method/Comments
<i>40 CFR 63 Subpart CCCCCC Area Source NESHAP Gasoline Dispensing Facilities</i>					
40 CFR §63.11111(a) and (b)		Applicability and Throughput	Applies to gasoline dispensing facilities, cargo tanks during deliveries, and storage tanks. Site utilizes <10,000 gallons gasoline per month	Yes	ArcelorMittal Weirton has throughputs of less than 10,000 gallons of gasoline per month and maintains records as required.
40 CFR §63.11116		Work Practice Requirements	For <10,000 gallons gasoline per month: -Utilize measures to minimize vapor releases -Minimize gasoline spills -Clean up spills as expeditiously as possible -Cover open gasoline containers and fill-pipes with gasketed seal when not in use -Minimize gasoline sent to open collection systems, if applicable Notifications and reports not required to be submitted. Site has 24 hours to document gasoline throughput if requested by USEPA.	Yes	ArcelorMittal Weirton has throughputs of less than 10,000 gallons of gasoline per month and maintains records as required. Work practices followed as required.

ATTACHMENT J

2016 Potential Emissions Inventory

Table 1.

2016 PTE, Emission Calculations, TPY Summary
 Title V Permit Renewal Application
 ArcelorMittal Weirton LLC, Weirton, West Virginia

Source	No. 5 Pickle Line	No. 5 Pickle Line Cooling Tower	Line Oil Coating	Strip Steel Tandem Mill Cooling Tower	No. 9 Tandem Mill	Jumbo Anneal 1-4 (East)	Jumbo Anneal 5-8 (Middle)	Jumbo Anneal 9-12 (West)	Tin Mill Cleaning Lines - Nos. 3 & 4	Tin Mill Cont. Anneal Cooling Tower	Continuous Annealing Line 2	Continuous Annealing Line 3
Release Point SLEIS ID	124		106		109	300	301	302	303	0	305	306
Control Device SLEIS ID	35/C124	Uncontrolled	Uncontrolled	Uncontrolled	Uncontrolled	Uncontrolled	Uncontrolled	Uncontrolled				
Emission Unit ID	039-2	039-3	039-4	040-4	042-1	056-1	057-1	058-1	059-1,2	060-3	061-1	062-1
Pollutant												
PM (filterable)		0.468		0.374		0.326	0.326	0.326	0.007	0.832	0.783	0.783
PM10 (filterable)		0.468		0.374		0.326	0.326	0.326	0.007	0.832	0.783	0.783
PM2.5 (filterable)		0.468		0.374		0.326	0.326	0.326	0.007	0.832	0.783	0.783
PM (condensable)						0.979	0.979	0.979	0.020		2.350	2.350
NOx						17.176	17.176	17.176	0.344		41.224	41.224
SO2						0.103	0.103	0.103	0.002		0.247	0.247
CO						14.428	14.428	14.428	0.289		34.628	34.628
N2O						0.378	0.378	0.378	0.008		0.907	0.907
CO2						20,611.765	20,611.765	20,611.765	412.235		49,468.235	49,468.235
CH4						0.395	0.395	0.395	0.008		0.948	0.948
VOC			3.395		1.708	0.945	0.945	0.945	0.019		2.267	2.267
HCL ¹	6.218					0.000	0.000	0.000	0.000		0.000	0.000
Benzene ¹						3.61E-04	3.61E-04	3.61E-04	7.21E-06		8.66E-04	8.66E-04
Dichlorobenzene ¹						2.06E-04	2.06E-04	2.06E-04	4.12E-06		4.95E-04	4.95E-04
Naphthalene ¹						1.05E-04	1.05E-04	1.05E-04	2.10E-06		2.51E-04	2.51E-04
Toluene ¹						5.84E-04	5.84E-04	5.84E-04	1.17E-05		1.40E-03	1.40E-03
Xylene ¹						0.00E+00	0.00E+00	0.00E+00	0.00E+00		0.00E+00	0.00E+00
POM ¹						1.51E-05	1.51E-05	1.51E-05	3.03E-07		3.64E-05	3.64E-05
Formaldehyde ¹						1.29E-02	1.29E-02	1.29E-02	2.58E-04		3.09E-02	3.09E-02
Hexane ¹						3.09E-01	3.09E-01	3.09E-01	6.18E-03		7.42E-01	7.42E-01
Arsenic ¹						3.44E-05	3.44E-05	3.44E-05	6.87E-07		8.24E-05	8.24E-05
Barium						7.56E-04	7.56E-04	7.56E-04	1.51E-05		1.81E-03	1.81E-03
Beryllium ¹						2.06E-06	2.06E-06	2.06E-06	4.12E-08		4.95E-06	4.95E-06
Cadmium ¹						1.89E-04	1.89E-04	1.89E-04	3.78E-06		4.53E-04	4.53E-04
Chromium ¹						2.40E-04	2.40E-04	2.40E-04	4.81E-06		5.77E-04	5.77E-04
Cobalt ¹						1.44E-05	1.44E-05	1.44E-05	2.89E-07		3.46E-05	3.46E-05
Copper						1.47E-04	1.47E-04	1.47E-04	2.95E-06		3.54E-04	3.54E-04
Lead ¹						8.59E-05	8.59E-05	8.59E-05	1.72E-06		2.06E-04	2.06E-04
Manganese ¹						6.53E-05	6.53E-05	6.53E-05	1.31E-06		1.57E-04	1.57E-04
Mercury ¹						4.47E-05	4.47E-05	4.47E-05	8.93E-07		1.07E-04	1.07E-04
Molybdenum						1.89E-04	1.89E-04	1.89E-04	3.78E-06		4.53E-04	4.53E-04
Nickel ¹						3.61E-04	3.61E-04	3.61E-04	7.21E-06		8.66E-04	8.66E-04
Selenium ¹						4.12E-06	4.12E-06	4.12E-06	8.24E-08		9.89E-06	9.89E-06
Vanadium						3.95E-04	3.95E-04	3.95E-04	7.90E-06		9.48E-04	9.48E-04
Zinc						4.98E-03	4.98E-03	4.98E-03	9.96E-05		1.20E-02	1.20E-02
TOTAL HAPS	6.218	0.000	0.000	0.000	0.000	0.324	0.324	0.324	0.006	0.000	0.778	0.778

1 Hazardous Air Pollutant

Table 1.

Source	No. 2 Weirlite Temper Mill	No. 5 Temper Mill	Tin Mill No. 2 Plater	Tin Mill No. 4 Plater	Tin Mill No. 6 Plater	Roll Shot Blasters 1 & 2	Anode Shop Melting Pots	Cold Solvent Degreasers	Miscellaneous Combustion	Diesel Storage Tanks	Kerosene Storage Tanks	Petrotac Storage Tanks
Release Point SLEIS ID	308	310	317	318	320	326; 327	322	0	600	0	0	0
Control Device SLEIS ID						32/C326 33/C327						
Emission Unit ID	064-1	066-1	073-1,2	074-1,2,3	076-1,2,3	077-3, 4	078-1	0C2-1	0C3-1	0C4	0C6	0C7
Pollutant												
PM (filterable)						1.93	0.122		0.283			
PM10 (filterable)						1.93	0.122		0.283			
PM2.5 (filterable)						1.93	0.122		0.283			
PM (condensable)							0.367		0.850			
NOx							6.441		14.906			
SO2							0.039		0.089			
CO							5.411		12.521			
N2O							0.142		0.328			
CO2							7,729.412		17,887.059			
CH4							0.148		0.343			
VOC	1.139						0.354	12.540	0.820			
HCL ¹							0.000		0.000			
Benzene ¹							1.35E-04		3.13E-04			
Dichlorobenzene ¹							7.73E-05		1.79E-04			
Naphthalene ¹							3.93E-05		9.09E-05			
Toluene ¹							2.19E-04		5.07E-04			
Xylene ¹							0.00E+00		0.00E+00			
POM ¹							5.68E-06		1.31E-05			
Formaldehyde ¹							4.83E-03		1.12E-02			
Hexane ¹							1.16E-01		2.68E-01			
Arsenic ¹							1.29E-05		2.98E-05			
Barium							2.83E-04		6.56E-04			
Beryllium ¹							7.73E-07		1.79E-06			
Cadmium ¹							7.09E-05		1.64E-04			
Chromium ¹			0.451				9.02E-05		2.09E-04			
Cobalt ¹							5.41E-06		1.25E-05			
Copper							5.53E-05		1.28E-04			
Lead ¹							3.22E-05		7.45E-05			
Manganese ¹							2.45E-05		5.66E-05			
Mercury ¹							1.67E-05		3.88E-05			
Molybdenum							7.09E-05		1.64E-04			
Nickel ¹							1.35E-04		3.13E-04			
Selenium ¹							1.55E-06		3.58E-06			
Vanadium							1.48E-04		3.43E-04			
Zinc							1.87E-03		4.32E-03			
TOTAL HAPS	0.000	0.000	0.451	0.000	0.000	0.000	0.122	0.000	0.281	0.000	0.000	0.000

¹ Hazardous Air Pollutant

Table 1.

Source	HCL Storage Tanks	Gasoline Storage Tanks	Chromic Acid Storage Tanks	Plant Paved Roadways and Parking Lots	Plant Unpaved Roadways and Parking Lots	Hydrogen Plant Cooling Tower	Hydrogen Plant Process	Strip Steel Package Boiler	Tin Mill Boiler 1	Tin Mill Boiler 2	Tin Mill Boiler 3	Tin Mill Boiler 4
Release Point SLEIS ID	0	0	0	0	0	0	0	S108	S110	S111	S112	S113
Control Device SLEIS ID	34											
Emission Unit ID	HCL A-H HCL-R HCL-T OC8	OC9	OD1	OD2-1	OD2-2	OG1-1	OG1-2	108	110	111	112	113
Pollutant												
PM (filterable)				39.749	40.953	0.416		0.815	0.815	0.815	0.815	0.815
PM10 (filterable)				7.556	10.914	0.416		0.815	0.815	0.815	0.815	0.815
PM2.5 (filterable)				2.300	1.091	0.416		0.815	0.815	0.815	0.815	0.815
PM (condensable)								2.445	2.445	2.445	2.445	2.445
NOx								15.939	15.939	15.939	15.939	15.939
SO2								0.257	0.257	0.257	0.257	0.257
CO								16.174	16.174	16.174	16.174	16.174
N2O								0.275	0.275	0.275	0.275	0.275
CO2							9,872.75	51,477.882	51,477.882	51,477.882	51,477.882	51,477.882
CH4								0.987	0.987	0.987	0.987	0.987
VOC	0.313							2.359	2.359	2.359	2.359	2.359
HCL ¹	0.313							0.000	0.000	0.000	0.000	0.000
Benzene ¹								9.01E-04	9.01E-04	9.01E-04	9.01E-04	9.01E-04
Dichlorobenzene ¹								5.15E-04	5.15E-04	5.15E-04	5.15E-04	5.15E-04
Naphthalene ¹								2.62E-04	2.62E-04	2.62E-04	2.62E-04	2.62E-04
Toluene ¹								1.46E-03	1.46E-03	1.46E-03	1.46E-03	1.46E-03
Xylene ¹								0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
POM ¹								3.78E-05	3.78E-05	3.78E-05	3.78E-05	3.78E-05
Formaldehyde ¹								3.22E-02	3.22E-02	3.22E-02	3.22E-02	3.22E-02
Hexane ¹								7.72E-01	7.72E-01	7.72E-01	7.72E-01	7.72E-01
Arsenic ¹								8.58E-05	8.58E-05	8.58E-05	8.58E-05	8.58E-05
Barium								1.89E-03	1.89E-03	1.89E-03	1.89E-03	1.89E-03
Beryllium ¹								5.15E-06	5.15E-06	5.15E-06	5.15E-06	5.15E-06
Cadmium ¹								4.72E-04	4.72E-04	4.72E-04	4.72E-04	4.72E-04
Chromium ¹								6.01E-04	6.01E-04	6.01E-04	6.01E-04	6.01E-04
Cobalt ¹								3.60E-05	3.60E-05	3.60E-05	3.60E-05	3.60E-05
Copper								3.68E-04	3.68E-04	3.68E-04	3.68E-04	3.68E-04
Lead ¹								2.14E-04	2.14E-04	2.14E-04	2.14E-04	2.14E-04
Manganese ¹								1.63E-04	1.63E-04	1.63E-04	1.63E-04	1.63E-04
Mercury ¹								1.12E-04	1.12E-04	1.12E-04	1.12E-04	1.12E-04
Molybdenum								4.72E-04	4.72E-04	4.72E-04	4.72E-04	4.72E-04
Nickel ¹								9.01E-04	9.01E-04	9.01E-04	9.01E-04	9.01E-04
Selenium ¹								1.03E-05	1.03E-05	1.03E-05	1.03E-05	1.03E-05
Vanadium								9.87E-04	9.87E-04	9.87E-04	9.87E-04	9.87E-04
Zinc								1.24E-02	1.24E-02	1.24E-02	1.24E-02	1.24E-02
TOTAL HAPS	0.313	0.000	0.000	0.000	0.000	0.000	0.000	0.810	0.810	0.810	0.810	0.810

¹ Hazardous Air Pollutant

Table 1.

Source	B-Outfall Lime Storage Silo	Emergency Generators	2016 PTE
Release Point SLEIS ID			
Control Device SLEIS ID	Bin Vent Filter		
Emission Unit ID	096-1	EG-01	TONS PER YEAR
Pollutant			
PM (filterable)	0.001	0.029	91.787
PM10 (filterable)	0.001	0.029	29.556
PM2.5 (filterable)	0.001	0.029	14.477
PM (condensable)		0.001	21.100
NOx		0.624	235.987
SO2		0.110	2.331
CO		0.148	211.778
N2O		1.14E-04	4.798
CO2		27.0	454,089.594
CH4		5.68E-04	8.514
VOC		3.54E-02	39.488
HCL ¹			6.531
Benzene ¹		1.40E-04	7.91E-03
Dichlorobenzene ¹			4.44E-03
Naphthalene ¹			2.26E-03
Toluene ¹		5.65E-05	1.26E-02
Xylene ¹		3.91E-05	3.91E-05
POM ¹			3.26E-04
Formaldehyde ¹		1.00E-04	2.78E-01
Hexane ¹			6.66E+00
Arsenic ¹			7.40E-04
Barium			1.63E-02
Beryllium ¹			4.44E-05
Cadmium ¹			4.07E-03
Chromium ¹			4.56E-01
Cobalt ¹			3.11E-04
Copper			3.18E-03
Lead ¹			1.85E-03
Manganese ¹			1.41E-03
Mercury ¹			9.62E-04
Molybdenum			4.07E-03
Nickel ¹			7.77E-03
Selenium ¹			8.88E-05
Vanadium			8.51E-03
Zinc			1.07E-01
TOTAL HAPS	0.000	0.000	13.972

1 Hazardous Air Pollutant

Table 2. 2016 Potential-to-Emit, Emission Calculations, Steel Pickling Process
 Title V Permit Renewal Application
 ArcelorMittal Weirton LLC, Weirton, WV

Strip Steel Pickling Lines

ID	Year Installed	Control Device	Control Device ID	Stack ID	Control Efficiency %	Design Capacity tons/hr	Pollutant	Emission Factor ¹		PTE Uncontrolled Emissions ² (ton/yr)	PTE Controlled Emissions ² (ton/yr)	
								(lb/ton)	(lb/hr)			
No. 5 Pickle Line	039-2	1975	Scrubber	C124	S124	97	310	HCl		1.420	207.262	6.218
Line Oil Coating	039-4	1975	NA	NA	F106	NA	310	VOC	0.0025	0.775	3.395	

¹ Emission Factor estimate based on highest recent Stack Test Average For Pickling Line plus 20%
 Historical stack test averages for No. 5 Pickle Line:

July 23, 2013 = 1.183 lb HCl/hr
 January 28, 2016 = 0.604 lb HCl/hr

² Assume 8760 hours per year

Table 3. 2016 Potential-to-Emit, Emission Calculations, Cooling Towers
 Title V Permit Renewal Application
 ArcelorMittal Weirton LLC, Weirton, WV

Cooling Towers

Emission Unit	Year Installed	Recirculation Rate		Annual Operating Hours	Actual Water Rate (10 ³ gal/yr)	TDS Content (ppm) ³	PM-10 Emission Factor ¹ (lb/10 ³ gal)	Adjusted PM-10 Emission Factor ² (lb/10 ³ gal)	Potential-To-Emit Emissions		
		(GPM)	(GPH)						PM /PM-10/PM-2.5 (lb/hr)	(ton/yr)	
Strip Steel Tandem Mill Cooling Tower	040-4	1950s	1,800	108,000	8,760	946,080	500	0.019	0.00079	0.086	0.374
#5 Pickler Cooling Tower	039-3	1975	1,500	90,000	8,760	788,400	750	0.019	0.00119	0.107	0.468
Tin Mill C.A. Cooling Tower	060-3	1961	4,000	240,000	8,760	2,102,400	500	0.019	0.00079	0.190	0.832
Hydrogen Plant Cooling Tower	0G1-1		1,000	60,000	8,760	525,600	1,000	0.019	0.00158	0.095	0.416
TOTAL COOLING TOWERS									TOTAL	0.477	2.091

¹ Emission factor contained in AP-42, Section 13.4, Wet Cooling Towers, 1/95, Table 13.4-1

² Adjusted emissions factor calculated using following equation

$$AP-42 \text{ Emission Factor} * (\text{Weirton TDS}/AP-42 \text{ TDS}), \text{ where } AP-42 \text{ TSD} = 12,000 \text{ ppm}$$

³ Assume average rounded historical TDS content.

	2010	2011	2012	2013	2014	2015	Avg
SS Tandem Mill Cooling Tower	506	419	377	268	268	850	448
#5 Pickler Cooling Tower	702	633	704	664	737	867	718
Tin Mill C.A. Cooling Tower	690	492	655	450	402	320	502
Hydrogen Plant Cooling Tower	1232	1095	883	859	804	1000	979

Table 4. 2016 Potential-to-Emit, Emission Calculations, Cold Reduction Process
 Title V Permit Renewal Application
 ArcelorMittal Weirton LLC, Weirton, WV

Tandem and Skin Mills - Cold Reduction

	Year Installed	ID	Control Device	Control Device ID	Stack ID	Potential Throughput Tons/hour	Emission Factor ¹ (lb/ton) VOC	PTE	PTE Uncontrolled ²
								Uncontrolled ² lb/hr VOC	Emissions (ton/yr) VOC
No. 9 Tandem	1975	042-1	Cyclone/Mist Eliminator	NA	S109A S109B S109C S109D S109E	150	0.0026	0.39	1.708
Total									1.708

¹ Emission Factor derived from 1995 Title V Application as follows:
 0.0026 lb/ton

² Assumes 8760 hours per year.

Table 6.

2016 Potential-to-Emit, Emission Calculations, Miscellaneous Source Combustion
 Title V Permit Renewal Application
 ArcelorMittal Weirton LLC, Weirton, WV

Source ID	Maintenance		Tin Mill Heating ⁵		Sheet Mill Heating ⁶		TOTAL	Assumes 4344 hrs/yr	
	OC3-1 Natural Gas	OC3-1 Natural Gas	OC3-1 Natural Gas	OC3-1 Natural Gas	OC3-1 Natural Gas	OC3-1 Natural Gas			
Estimated Capacity (MMBtu/hr)	10	40	20	20	20	20			
Potential Natural Gas Usage (mmcf/hr) ²	0.010	0.039	0.020	0.020	0.020	0.020			
Potential Natural Gas Usage (mmcf/yr) ²	43	170	85	85	85	85			
Pollutant	Natural Gas Emission Factor ¹ (lb/mmcf)	PTE Emissions (lb/hr)	PTE Emissions (tons/yr)	PTE Emissions (lb/hr)	PTE Emissions (tons/yr)	PTE Emissions (lb/hr)	PTE Emissions (tons/yr)	TOTAL tpy	Assumes 4344 hrs/yr lb/hr
	PM (filterable)	1.900	0.019	0.040	0.075	0.162	0.075	0.081	0.283
PM10 (filterable)	1.900	0.019	0.040	0.075	0.162	0.075	0.081	0.283	0.130
PM2.5 (filterable)	1.900	0.019	0.040	0.075	0.162	0.075	0.081	0.283	0.130
PM (condensable)	5.700	0.056	0.121	0.224	0.486	0.224	0.243	0.850	0.391
NOx	100.000	0.980	2.129	3.922	8.518	3.922	4.259	14.906	6.863
SO ₂	0.600	0.006	0.013	0.024	0.051	0.024	0.026	0.089	0.041
CO	84.000	0.824	1.789	3.294	7.155	3.294	3.577	12.521	5.765
N ₂ O	2.200	0.022	0.047	0.086	0.187	0.086	0.094	0.328	0.151
CO ₂	120000.000	1176.471	2555.294	4705.882	10221.176	4705.882	5110.588	17887.059	8235.294
CH ₄	2.300	0.023	0.049	0.090	0.196	0.090	0.098	0.343	0.158
VOC	5.500	0.054	0.117	0.216	0.468	0.216	0.234	0.820	0.377
HCL4		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzene ³	2.10E-03	2.06E-05	4.47E-05	8.24E-05	1.79E-04	8.24E-05	8.94E-05	3.13E-04	1.44E-04
Dichlorobenzene	1.20E-03	1.18E-05	2.56E-05	4.71E-05	1.02E-04	4.71E-05	5.11E-05	1.79E-04	8.24E-05
Naphthalene ³	6.10E-04	5.98E-06	1.30E-05	2.39E-05	5.20E-05	2.39E-05	2.60E-05	9.09E-05	4.19E-05
Toluene ³	3.40E-03	3.33E-05	7.24E-05	1.33E-04	2.90E-04	1.33E-04	1.45E-04	5.07E-04	2.33E-04
Xylene ³		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
POM ^{3,4}	8.82E-05	8.65E-07	1.88E-06	3.46E-06	7.51E-06	3.46E-06	3.76E-06	1.31E-05	6.05E-06
Formaldehyde ³	7.50E-02	7.35E-04	1.60E-03	2.94E-03	6.39E-03	2.94E-03	3.19E-03	1.12E-02	5.15E-03
Hexane ³	1.80E+00	1.76E-02	3.83E-02	7.06E-02	1.53E-01	7.06E-02	7.67E-02	2.68E-01	1.24E-01
Arsenic ³	2.00E-04	1.96E-06	4.26E-06	7.84E-06	1.70E-05	7.84E-06	8.52E-06	2.98E-05	1.37E-05
Barium	4.40E-03	4.31E-05	9.37E-05	1.73E-04	3.75E-04	1.73E-04	1.87E-04	6.56E-04	3.02E-04
Beryllium ³	1.20E-05	1.18E-07	2.56E-07	4.71E-07	1.02E-06	4.71E-07	5.11E-07	1.79E-06	8.24E-07
Cadmium ³	1.10E-03	1.08E-05	2.34E-05	4.31E-05	9.37E-05	4.31E-05	4.68E-05	1.64E-04	7.55E-05
Chromium ³	1.40E-03	1.37E-05	2.98E-05	5.49E-05	1.19E-04	5.49E-05	5.96E-05	2.09E-04	9.61E-05
Cobalt ³	8.40E-05	8.24E-07	1.79E-06	3.29E-06	7.15E-06	3.29E-06	3.58E-06	1.25E-05	5.76E-06
Copper	8.58E-04	8.41E-06	1.83E-05	3.36E-05	7.31E-05	3.36E-05	3.65E-05	1.28E-04	5.89E-05
Lead ³	0.0005	4.90E-06	1.06E-05	1.96E-05	4.26E-05	1.96E-05	2.13E-05	7.45E-05	3.43E-05
Manganese ³	3.80E-04	3.73E-06	8.09E-06	1.49E-05	3.24E-05	1.49E-05	1.62E-05	5.66E-05	2.61E-05
Mercury ³	2.60E-04	2.55E-06	5.54E-06	1.02E-05	2.21E-05	1.02E-05	1.11E-05	3.88E-05	1.78E-05
Molybdenum	1.10E-03	1.08E-05	2.34E-05	4.31E-05	9.37E-05	4.31E-05	4.68E-05	1.64E-04	7.55E-05
Nickel ³	2.10E-03	2.06E-05	4.47E-05	8.24E-05	1.79E-04	8.24E-05	8.94E-05	3.13E-04	1.44E-04
Selenium ³	2.40E-05	2.35E-07	5.11E-07	9.41E-07	2.04E-06	9.41E-07	1.02E-06	3.58E-06	1.65E-06
Vanadium	2.30E-03	2.25E-05	4.90E-05	9.02E-05	1.96E-04	9.02E-05	9.80E-05	3.43E-04	1.58E-04
Zinc	2.90E-02	2.84E-04	6.18E-04	1.14E-03	2.47E-03	1.14E-03	1.24E-03	4.32E-03	1.99E-03
TOTAL HAPS			0.040		1.61E-01		8.04E-02	2.81E-01	

1 Emission factors contained in AP-42, Section 1.4, *Natural Gas Combustion*, 7/98. Emission factor for PM is the sum of condensable and filterable.

2 Heating Value of Natural Gas = **1,020** BTU/ct

3 Hazardous Air Pollutant (HAP) chemical

4 POM includes 2-methylnaphthalene, 3-methylchloranthrene, 7,12-dimethylbenz(a)anthracene, acenaphthene, acenaphthylene, anthracene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, phenanthrene, pyrene

5 Assumes 100 heaters at 0.4 MMBtu/hr each;

4344 hours for heater use (Nov - April)

6 Assumes 50 heaters at 0.4 MMBtu/hr each;

4344 hours for heater use (Nov - April)

Table 7. 2016 Potential-to-Emit, Emission Calculations, Tin Mill Processes, Rolling and Cleaning
 Title V Permit Renewal Application
 ArcelorMittal Weirton LLC, Weirton, WV

Cold Rolling

ID	Year Installed	Control Device	Stack ID	Throughput (ton/hr)	Emission Factor ¹ (lb/ton) VOC	Potential Uncontrolled Emissions (lb/hr) VOC	Potential Uncontrolled Emissions (ton/yr) VOC	Notes
No. 2 Weirlite	064-1	1965	None	F308	100	0.0026	0.260	Unit does not use rolling oils. No VOC emissions expected.
No. 5 Temper Mill	066-1	1969	None		120			

¹ Emission Factor from 1995 Title V Permit Application - historical source test Wheeling Pittsburgh Steel Corporation, Yorkville Plant.

Tin Mill Cleaning Lines and Continuous Annealing Alkaline Cleaning

ID	Year Installed	Control Device	Stack ID	Throughput (ton/yr)	Emission Factor (lb/ton) VOC	Potential Uncontrolled Emissions (lb/hr) VOC	Potential Uncontrolled Emissions (ton/yr) VOC	Notes
Tin Mill Cleaning Line No. 3	059-1	1938	None	S302	NA	NA	NA	Processes use alkaline cleaning agents. No regulated pollutants are emitted from these processes.
Tin Mill Cleaning Line No. 4	059-1	1938	None	S303		NA	NA	
Continuous Anneal Line 2	064-1	1961	None	S305		NA	NA	
Continuous Anneal Line 3	065-1	1970	None	S306A		NA	NA	

Table 8. 2016 Potential-to-Emit, Emission Calculations, Tin Mill Processes, Plating Operations
 Title V Permit Renewal Application
 ArcelorMittal Weirton LLC, Weirton, WV

Plating Lines

ID	Year Installed	Control Device	Control Device ID	Stack ID	Capture Efficiency %	Control Efficiency %	Design Capacity (tons/hr)	Potential Controlled	Potential Uncontrolled Emissions		Potential Controlled Emissions		
								Emission Factor ¹ (lb/hr) Cr	(lb/hr) Cr	(tons/yr) Cr	(lb/hr) Cr	(tons/yr) Cr	
Tin Mill No. 2 Plater - Chrome	073-2	1943-1966	Fume Scrubber	C317	S317	95	95	60	0.103	2.058	9.014	0.103	0.451
Tin Mill No. 4 Plater - Tin ²	074-3	1950	Fume Scrubber	C332	S332	95	95	40	NA	NA	NA	NA	NA
Tin Mill No. 6 Plater - Tin ²	076-3	1965	Fume Scrubber	C320	S320	95	95	50	NA	NA	NA	NA	NA

¹ Emission Factor derived from Historical Stack Test Data as Follows:

	2002		
	Emissions (tons/yr)	Operating Hours	Emission (lb/hr)
Tin Mill No. 2 Plater	0.4	7,775	0.103 ** Used this value for PTE calculations as worst case.
Tin Mill No. 4 Plater	0.034	6,520	0.010
Tin Mill No. 6 Plater	0.035	6,377	0.011

Note that 40 CFR 63, Subpart N, Hard and Decorative Chromium Plating NESHAP limits chromium emissions to 0.03 mg total Cr/dscm. The Chromium Plating NESHAP does not apply to continuous chromium plating operations.

² No regulated pollutants emitted from this source.

Table 9. 2016 Potential-to-Emit, Emission Calculations, Tin Mill Processes, Pickling and Treatment Operations
 Title V Permit Renewal Application
 ArcelorMittal Weirton LLC, Weirton, WV

Plating Lines - Sulfuric Acid Pickling

ID	Year Installed	Control Device	Control Device ID	Stack ID	Capture Efficiency %	Control Efficiency %	Design Capacity (tons/hr)	Emission Factor (lb/hr) H2SO4	Potential Uncontrolled Emissions (lb/hr) H2SO4	Potential Uncontrolled Emissions (ton/yr) H2SO4	Notes
Tin Mill No. 2 Plater - Chrome	073-2	1943-1966 Scrubber	C330	S330	95	95	60	NA	NA	NA	Processes use sulfuric acid. No regulated pollutants are emitted from these processes.
Tin Mill No. 4 Plater - Tin	074-3	1950 Scrubber	C332	S332	95	95	40	NA	NA	NA	
Tin Mill No. 6 Plater - Tin	076-3	1965 Scrubber	C339	S339	95	95	50	NA	NA	NA	

Plating Lines - Chemical Surface Treatment

ID	Year Installed	Control Device	Control Device ID	Stack ID	Capture Efficiency %	Control Efficiency %	Design Capacity (tons/hr)	Emission Factor (lb/hr)	Potential Uncontrolled Emissions (lb/hr)	Potential Uncontrolled Emissions (ton/yr)	Notes
Tin Mill No. 2 Plater - Chrome	073-2	1943-1966 Scrubber	C317	S317	95	90	60	NA	NA	NA	Processes use Chemical Treat Solution. No regulated pollutants are emitted from these processes.
Tin Mill No. 4 Plater - Tin	074-3	1950 Scrubber	C334	S334	95	90	40	NA	NA	NA	
Tin Mill No. 6 Plater - Tin	076-3	1965 Scrubber	C341	S341	95	90	50	NA	NA	NA	

Table 10. 2016 Potential-to-Emit, Emission Calculations, Roll Shot Blasters
 Title V Permit Renewal Application
 ArcelorMittal Weirton LLC, Weirton, WV

Roll Shot Blasting

ID	Year Installed	Control Device	Stack Device ID	Control Efficiency %	Throughput ² (roll/hr) (rolls/yr)		Pollutant	Potential Uncontrolled Emissions ¹		Potential Controlled Emissions		BOTH UNITS			
								(lb/hr)	TPY ⁴	(lb/hr)	TPY	(lb/hr)	TPY		
								Roll Shot Blaster No. 1	077-2	1950	Baghouse	C326	S326	99	2
Roll Shot Blaster No. 2	077-3	1965	Baghouse	C327	S327	99	2	7,280	PM10 ³	37.2	96.6	0.37	0.966	0.74	1.93
									PM2.5 ³	37.2	96.6	0.37	0.966	0.74	1.93

1 Emission Factor Discussion per Shot Blaster

Assume steel dust collected per day = 3/4 x volume of 55 gallon drum

Volume of 55 gallon drum = 7.35 cubic feet

Density of steel dust = 150 lb/cubic feet

Dust collected per day = 2/3 x 7.35 x 150 = 735 lbs

Dust collected per year = 735 lbs x 5 days/week x 52 weeks/year = 191,100 lbs = 95.6 tons

Dust exiting baghouse = 191100/0.99 = 1930 lbs/yr = 0.97 tons/yr

2 Assume 20 rolls per day [two 8 hour shifts/day] x 5 days/week x 52 weeks/year = 7280 rolls/yr

3 Assume PM10 and PM2.5 emission factors = PM emission factor

4 Assumes 20 hours per day x 5 days/week x 52 weeks/year = 5200 hours/year

Table 11. 2016 Potential-to-Emit, Emission Calculations, Degreasers
 Title V Permit Renewal Application
 ArcelorMittal Weirton LLC, Weirton, WV

ID	Emission Unit	Emission Unit Type	Number of Emission Units	Total Capacity ² (gallons)	Working Capacity ² (gallons)	Solvent ²	Emission Factor ¹ (tons/yr/unit)	Potential to Emit
								Emissions VOC (ton/yr)
042-2	Strip Steel Degreaser - 9 Tandem Pipe Shop	Cold Cleaner	1	80	40	hi-flash kerosene	0.330	0.330
042-2	Strip Steel Degreaser - 9 Tandem Bearing Shop	Cold Cleaner	1	90	45	hi-flash kerosene	0.330	0.330
055-2	Strip Steel Degreaser - Bearing Shop (Pipe Shop)	Cold Cleaner	1	230	115	hi-flash kerosene	0.330	0.330
055-2	Strip Steel Degreaser - Bearing Shop (Pipe Shop)	Cold Cleaner	1	346	173	hi-flash kerosene	0.330	0.330
055-2	Strip Steel Degreaser - Old Machine Shop	Cold Cleaner	1	325	150	hi-flash kerosene	0.330	0.330
055-2	Strip Steel Degreaser - Old Machine Shop	Cold Cleaner	1	480	240	hi-flash kerosene	0.330	0.330
055-2	Strip Steel Degreaser - Old Machine Shop	Cold Cleaner	1	160	80	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - Cleaning Line Mechanical	Cold Cleaner	1		50	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - #5 Skin Mill Mechanical	Cold Cleaner	1		50	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - Assembly Shop - Plate Roll Buildup Area	Cold Cleaner	1		30	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - Mechanical Roll Buildup Area	Cold Cleaner	1		50	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - Assembly Shop - Slitter Head Repair	Cold Cleaner	1		30	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - Machine Shop By Parts Rack	Cold Cleaner	1		50	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - #2 Weirlite Mechanical	Cold Cleaner	1		70	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - #2 Weirlite - 4th Floor Mechanical	Cold Cleaner	1		50	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - #2 Weirlite Mechanical - By Conveyor	Cold Cleaner	1		50	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - #2 Weirlite - Bearing Oil Storage Room	Cold Cleaner	1		50	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - Weirlite Electric	Cold Cleaner	1		30	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - C.A. Electric Shop	Cold Cleaner	1		50	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - C.A. Mech. Shop	Cold Cleaner	1		50	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - C.A. Mech. Shop	Cold Cleaner	1		20	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - Crane Repair	Cold Cleaner	1		20	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - Main Electric Shop	Cold Cleaner	1		30	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - Truck Shop	Cold Cleaner	1		30	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - Mechanical Area by #5 Plater	Cold Cleaner	1		50	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - Main Electric Shop - Back Room	Cold Cleaner	1		50	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - Assembly Shop by Hyd. Press	Cold Cleaner	1		50	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - Plater Electric Shop	Cold Cleaner	1		20	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - Machine Shop Reel Buildup Area	Cold Cleaner	1		30	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - Bull Gang Work Area Parts Room	Cold Cleaner	1		50	hi-flash kerosene	0.330	0.330
077-1	Tin Mill Degreaser - Paint Shop	Cold Cleaner	1		30	hi-flash kerosene	0.330	0.330
0C4-2	Diesel Shop Degreaser - Air Room	Cold Cleaner	1		15	hi-flash kerosene	0.330	0.330
0C4-2	Diesel Shop Degreaser - Electric Area	Cold Cleaner	1		30	hi-flash kerosene	0.330	0.330
0C4-2	Diesel Shop Degreaser - Truck Shop	Cold Cleaner	1		15	hi-flash kerosene	0.330	0.330
0C4-2	Diesel Shop Degreaser - #3 Platform	Cold Cleaner	1		10	hi-flash kerosene	0.330	0.330
0C4-2	WWTP Degreaser - B Outfall - Compaction Pump Room	Cold Cleaner	1		20	hi-flash kerosene	0.330	0.330
0C4-2	Half Moon Degreaser - FPW - Electric Shop	Cold Cleaner	1		30	hi-flash kerosene	0.330	0.330
0C4-2	Strip Steel Degreaser - SS Cold Mill Electric	Cold Cleaner	1	64	32	hi-flash kerosene	0.330	0.330
TOTAL DEGREASERS	ID	0C-2						12.540

¹ Emission factor contained in AP-42, Section 4.6, *Solvent Degreasing*, 1/95

² Capacities and solvent information were obtained from ISG Weirton, Inc. degreaser inventory, February 4, 2005. Degreaser Inventory updated each year.

Table 12.

2016 Potential-to-Emit, Emission Calculations, Hydrochloric Acid Storage Tanks
 Title V Permit Renewal Application
 ArcelorMittal Weirton LLC, Weirton, WV

	% HCl	Diameter (ft)	Height (ft)	Volume (gallons)	Throughput (gallons)	HCL	HCL	Uncontrolled		Control Type	Control Efficiency (%)	Potential Emissions (ton/yr)
						Working Losses ¹ (lbs/yr)	Standing Losses ² (lbs/yr)	Emissions ¹ (lbs/yr)	Emissions ¹ (tons/yr)			
Commercial HCl (HCL-G)	36	12	30	30000	4,751,800	2831.84	213.15	3044.99	1.5225	Fume Scrubber	95	0.0761
Commercial HCl (HCL-H)	36	12	30	30000	4,751,800	2831.84	213.15	3044.99	1.5225	Fume Scrubber	95	0.0761
TOTAL COMMERCIAL HCl					9,503,600							0.1522
WPL Swing Tank (HCL-A)	1.5	12	30	30000	4,751,800	391.06	53.60	444.66	0.2223	Fume Scrubber	95	0.0111
WPL Swing Tank (HCL-B)	1.5	12	30	30000	4,751,800	391.06	53.60	444.66	0.2223	Fume Scrubber	95	0.0111
WPL (HCL-C)	1.5	12	30	30000	4,751,800	391.06	53.60	444.66	0.2223	Fume Scrubber	95	0.0111
WPL (HCL-D)	1.5	12	30	30000	4,751,800	391.06	53.60	444.66	0.2223	Fume Scrubber	95	0.0111
WPL (HCL-E)	1.5	12	30	30000	4,751,800	391.06	53.60	444.66	0.2223	Fume Scrubber	95	0.0111
WPL (HCL-F)	1.5	12	30	30000	4,751,800	391.06	53.60	444.66	0.2223	Fume Scrubber	95	0.0111
WASTE PICKLE LIQUOR (WPL)					19,007,200							0.0333
Tank Near No. 5 Pickler												
Commercial HCl (HCL-R)	36	12	30	25000	9,503,600	4528.21	244.60	4772.81	2.3864	Fume Scrubber	95	0.1193
Tin Mill (A15) (HCL-T)	36	12	14.5	8700	80,000	145.84	172.75	318.59	0.1593	Fume Scrubber	95	0.0080

¹ Emissions Calculated from the TANKS 4.09.d Software

TOTAL PTE CONTROLLED, TPY **0.3129**
lb/hr **0.071**

Assumptions:

4132 Truckloads 1.5% WPL	2066 Truckloads 36% Commercial Acid
4,600 gallons/Truck	4,600 gallons/Truck
19,007,200 Total Gallons	9,503,600 Total Gallons

2010 Average gallons of 36% acid/ton steel pickled = 3.5
 Maximum throughput of No. 5 pickle line = 310 tons/hr
 Annual consumption of 36% acid = 3.5 gallons 36% HCl/ton steel x 310 tons steel/hr x 8760 hrs/yr
 Assume two truckloads of WPL for each truckload of commercial acid.

Assumed Vapor pressures for TANKS program:

% HCL	Vapor Pressure of Solution (kPa)	Vapor Pressure of Solution (psia)
1.5	2	0.290076487
36	14.5	2.103054528

Vapor Pressure for 1.5% HCL is a conservative estimate

Table 13. 2016 Potential-to-Emit, Emission Calculations, Paved Roadways and Parking Areas

Title V Permit Renewal Application
 ArcelorMittal Weirton LLC, Weirton, WV

TSP

Paved Road/ Parking Areas	EMISSIONS ESTIMATION PARAMETERS					EMISSION RATE (lb/VMT)	VEHICLE MILES TRAVELED PER YEAR	UNCONTROLLED POTENTIAL TO EMIT EMISSIONS (TONS/YR)	CONTROL EFFICIENCY (%)	CONTROLLED POTENTIAL TO EMIT EMISSIONS (TONS/YR)
	ID	k	sL	W	P					
Incoming/Outbound Trucks*	OD2-1	0.011	9.7	10.0	150	0.82	36,500	14.97	10%	13.47
Autos**	OD2-1	0.011	9.7	2.0	150	0.16	365,000	29.20	10%	26.28
TOTAL										39.75

PM10

Paved Road/ Parking Areas	EMISSIONS ESTIMATION PARAMETERS					EMISSION RATE (lb/VMT)	VEHICLE MILES TRAVELED PER YEAR	UNCONTROLLED POTENTIAL TO EMIT EMISSIONS (TONS/YR)	CONTROL EFFICIENCY (%)	CONTROLLED POTENTIAL TO EMIT EMISSIONS (TONS/YR)
	ID	k	sL	W	P					
Incoming/Outbound Trucks*	OD2-1	0.0022	9.7	10.0	150	0.16	36,500	2.92	10%	2.63
Autos**	OD2-1	0.0022	9.7	2.0	150	0.03	365,000	5.48	10%	4.93
TOTAL										7.56

PM2.5

Paved Road/ Parking Areas	EMISSIONS ESTIMATION PARAMETERS					EMISSION RATE (lb/VMT)	VEHICLE MILES TRAVELED PER YEAR	UNCONTROLLED POTENTIAL TO EMIT EMISSIONS (TONS/YR)	CONTROL EFFICIENCY (%)	CONTROLLED POTENTIAL TO EMIT EMISSIONS (TONS/YR)
	ID	k	sL	W	P					
Incoming/Outbound Trucks*	OD2-1	0.00054	9.7	10.0	150	0.04	36,500	0.73	10%	0.66
Autos**	OD2-1	0.00054	9.7	2.0	150	0.01	365,000	1.83	10%	1.64
TOTAL										2.30

Emission factors are derived using the equations and constants contained in AP-42, Section 13.2.3, 01/11, as follows:

$$E = [k * (sL)^{0.91} * (W)^{1.02}] * (1 - P/4N)$$

Where:

- E = Emission factor (lb/VMT)
- k = particle size multiplier, lb/VMT
- sL = road surface silt loading, g/
- W = mean vehicle weight, tons
- P = Number of wet days with at least 0.01 inch of precipitation during the averaging period
- N = Number of days in averaging period = 365 days

* Assume 50 trucks/day; 2 miles/day = 36,500 miles/yr

** Assume 1000 employees; 1 miles/day = 365,000 miles/yr

Table 14. 2016 Potential-to-Emit, Emission Calculations, Unpaved Roadways and Parking Areas

Title V Permit Renewal Application
 ArcelorMittal Weirton LLC, Weirton, WV

TSP

Unpaved Road / Parking Areas	EMISSIONS ESTIMATION PARAMETERS							EMISSION RATE (lb/VMT)	VEHICLE MILES TRAVELED PER YEAR	UNCONTROLLED POTENTIAL TO EMIT EMISSIONS (TONS/YR)	CONTROL EFFICIENCY (%)	CONTROLLED POTENTIAL TO EMIT EMISSIONS (TONS/YR)
	ID	k	a	b	s	W	P					
Incoming/Outbound Trucks*	0D2-2	4.9	0.7	0.45	6.0	10.0	150	3.05	18,250	27.87	50%	13.94
Autos**	0D2-2	4.9	0.7	0.45	6.0	2.0	150	1.48	73,000	54.03	50%	27.02
TOTAL											40.95	

PM10

Unpaved Road / Parking Areas	EMISSIONS ESTIMATION PARAMETERS							EMISSION RATE (lb/VMT)	VEHICLE MILES TRAVELED PER YEAR	UNCONTROLLED POTENTIAL TO EMIT EMISSIONS (TONS/YR)	CONTROL EFFICIENCY (%)	CONTROLLED POTENTIAL TO EMIT EMISSIONS (TONS/YR)
	ID	k	a	b	s	W	P					
Incoming/Outbound Trucks*	0D2-2	1.5	0.9	0.45	6.0	10.0	150	0.81	18,250	7.43	50%	3.71
Autos**	0D2-2	1.5	0.9	0.45	6.0	2.0	150	0.39	73,000	14.40	50%	7.20
TOTAL											10.91	

PM2.5

Unpaved Road / Parking Areas	EMISSIONS ESTIMATION PARAMETERS							EMISSION RATE (lb/VMT)	VEHICLE MILES TRAVELED PER YEAR	UNCONTROLLED POTENTIAL TO EMIT EMISSIONS (TONS/YR)	CONTROL EFFICIENCY (%)	CONTROLLED POTENTIAL TO EMIT EMISSIONS (TONS/YR)
	ID	k	a	b	s	W	P					
Incoming/Outbound Trucks*	0D2-2	0.15	0.9	0.45	6.0	10.0	150	0.08	18,250	0.74	50%	0.37
Autos**	0D2-2	0.15	0.9	0.45	6.0	2.0	150	0.04	73,000	1.44	50%	0.72
TOTAL											1.09	

Emission factors are derived using the equations and constants contained in AP-42, Section 13.2.2.2, 11/06, as follows:

$$E = [k \cdot (s/12) \cdot a \cdot (W/3) \cdot b] \times [(365 - P)/365]$$

Where:

- E = Emission factor (lb/VMT)
- k = particle size multiplier, lb/VMT
- s = surface material silt content (%)
- W = mean vehicle weight, tons
- P = Number of wet days with at least 0.01 inch of precipitation during the averaging period
- N = Number of days in averaging period = 365 days

* Assume 50 trucks/day; 1 miles/day = 18,250 miles/yr

** Assume 1000 employees; 0.2 miles/day = 73,000 miles/yr

Table 15. 2016 Potential-to-Emit, Emission Calculations, Hydrogen Plant Process
 Title V Permit Renewal Application
 ArcelorMittal Weirton LLC, Weirton, WV

Unit ID	Source Description	Methane in Natural Gas, %	Natural Gas scfh	Methane*, CO ₂ Produced** scf/year***	tons	tons
0G1-2	Hydrogen Reformer	93	19,717	172,720,920	3,590	9,873

* Assumes density of methane = 0.0447 lb_m/ft³ at standard temperature and pressure.

** Based on: CH₄ + 2H₂O --> CO₂ + 4H₂

***Assumes 8760 hours per year of operation.

Table 16. 2016 Potential-to-Emit, Emission Calculations, Strip Steel Package Boiler
 Title V Permit Renewal Application
 ArcelorMittal Weirton LLC, Weirton, WV

Unit ID	108		
Boiler MFG and Model	Babcock & Wilcox FMO-66		
Control	Low NOx Burner		
Fuel Usage	Natural Gas		
Steam Rate	75,000 pph		
Heating Value	1,020 Btu/scf		
Boiler Rating	99.9 MMBtu/hr		
	Mcf/hr	97.9	
	Mcf/yr	857,965	
Pollutant	Emission Factor ¹ (lb/mmcf)	Potential Emissions (tons/yr)	Potential Emissions (lbs/hr)
PM (filterable)	1.9	0.82	0.19
PM10 (filterable)	1.9	0.82	0.19
PM2.5 (filterable)	1.9	0.82	0.19
PM (condensable)	5.7	2.45	0.56
NOx ³	37.2	15.94	3.64
SO2	0.6	0.26	0.06
CO ³	37.7	16.17	3.69
N2O	0.64	0.27	0.06
CO2	120,000	51,478	11752.94
CH4	2.3	0.99	0.23
VOC	5.5	2.36	0.54
HCl		0.00	0.00
Benzene ²	2.10E-03	9.01E-04	2.06E-04
Dichlorobenzene ²	1.20E-03	5.15E-04	1.18E-04
Naphthalene ²	6.10E-04	2.62E-04	5.97E-05
Toluene ²	3.40E-03	1.46E-03	3.33E-04
Xylene ²		0.00E+00	0.00E+00
POM ^{2,4}	8.82E-05	3.78E-05	8.64E-06
Formaldehyde ²	7.50E-02	3.22E-02	7.35E-03
Hexane ²	1.80	7.72E-01	1.76E-01
Arsenic ²	2.00E-04	8.58E-05	1.96E-05
Barium	4.40E-03	1.89E-03	4.31E-04
Beryllium ²	1.20E-05	5.15E-06	1.18E-06
Cadmium ²	1.10E-03	4.72E-04	1.08E-04
Chromium ²	1.40E-03	6.01E-04	1.37E-04
Cobalt ²	8.40E-05	3.60E-05	8.23E-06
Copper	8.58E-04	3.68E-04	8.40E-05
Lead ²	0.0005	2.14E-04	4.90E-05
Manganese ²	3.80E-04	1.63E-04	3.72E-05
Mercury ²	2.60E-04	1.12E-04	2.55E-05
Molybdenum	1.10E-03	4.72E-04	1.08E-04
Nickel ²	2.10E-03	9.01E-04	2.06E-04
Selenium ²	2.40E-05	1.03E-05	2.35E-06
Vanadium	2.30E-03	9.87E-04	2.25E-04
Zinc	2.90E-02	1.24E-02	2.84E-03
TOTAL HAPS		0.81	0.18

1 Emission factors contained in AP-42, Section 1.4, Natural Gas Combustion, 7/98.
 Emission factor for PM total is the sum of condensable and filterable; HHV = 1020 Btu/scf
 2 Hazardous Air Pollutant (HAP) chemical
 3 Based On Manufacturer's Guarantees: @ 1020 Btu/scf natural gas
 NOx: 30 ppm @ 3%O2; CO: 50 ppm @ 3% O2
 4 POM includes 2-methylnaphthalene, 3-methylchloranthrene, 7,12-dimethylbenz(a)anthracene, acenaphthene, acenaphthylene, anthracene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, phenanthrene, pyrene

Table 17.

2016 Potential-to-Emit, Emission Calculations, Tin Mill Package Boilers
 Title V Permit Renewal Application
 ArcelorMittal Weirton LLC, Weirton, WV

There are four package boilers at this location.

Unit IDs	110, 111, 112, 113		
Boiler MFG and Model	Nebraska NOS-2A/S-64		
Control	Low NOx Burner		
Fuel Usage	Natural Gas		
Steam Rate	82,500 pph		
Heating Value	1,020 Btu/scf		
Boiler Rating	99.9 MMBtu/hr		
	Mcf/hr	97.9	
	Mcf/yr	857,965	
	EACH BOILER		
Pollutant	Emission Factor ¹ (lb/mmcf)	Potential Emissions (tons/yr)	Potential Emissions (lbs/hr)
PM (Filterable)	1.9	0.82	0.19
PM10 (Filterable)	1.9	0.82	0.19
PM2.5 (Filterable)	1.9	0.82	0.19
PM Condensable	5.7	2.45	0.56
NOx ³	37.2	15.94	3.64
SO2	0.6	0.26	0.06
CO ³	37.7	16.17	3.69
N2O	0.64	0.27	0.06
CO2	120,000	51,478	11752.94
CH4	2.3	0.99	0.23
VOC	5.5	2.36	0.54
HCl		0.00	0.00
Benzene ²	2.10E-03	9.01E-04	2.06E-04
Dichlorobenzene ²	1.20E-03	5.15E-04	1.18E-04
Naphthalene ²	6.10E-04	2.62E-04	5.97E-05
Toluene ²	3.40E-03	1.46E-03	3.33E-04
Xylene ²		0.00E+00	0.00E+00
POM ^{2,4}	8.82E-05	3.78E-05	8.64E-06
Formaldehyde ²	7.50E-02	3.22E-02	7.35E-03
Hexane ²	1.80	7.72E-01	1.76E-01
Arsenic ²	2.00E-04	8.58E-05	1.96E-05
Barium	4.40E-03	1.89E-03	4.31E-04
Beryllium ²	1.20E-05	5.15E-06	1.18E-06
Cadmium ²	1.10E-03	4.72E-04	1.08E-04
Chromium ²	1.40E-03	6.01E-04	1.37E-04
Cobalt ²	8.40E-05	3.60E-05	8.23E-06
Copper	8.58E-04	3.68E-04	8.40E-05
Lead ²	0.0005	2.14E-04	4.90E-05
Manganese ²	3.80E-04	1.63E-04	3.72E-05
Mercury ²	2.60E-04	1.12E-04	2.55E-05
Molybdenum	1.10E-03	4.72E-04	1.08E-04
Nickel ²	2.10E-03	9.01E-04	2.06E-04
Selenium ²	2.40E-05	1.03E-05	2.35E-06
Vanadium	2.30E-03	9.87E-04	2.25E-04
Zinc	2.90E-02	1.24E-02	2.84E-03
TOTAL HAPS		0.81	0.18

¹ Emission factors contained in AP-42, Section 1.4, Natural Gas Combustion, 7/98.

Emission factor for PM total is the sum of condensable and filterable; HHV = 1020 Btu/scf

² Hazardous Air Pollutant (HAP) chemical

³ Based On Manufacturer's Guarantees: @ 1020 Btu/scf natural gas

NOx: 30 ppm @ 3%O₂; CO: 50 ppm @ 3% O₂

⁴ POM includes 2-methylnaphthalene, 3-methylchloranthrene, 7,12-dimethylbenz(a)anthracene, acenaphthene, acenaphthylene, anthracene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, phenanthrene, pyrene

Table 18. 2016 Potential-to-Emit, Emission Calculations, Lime Storage Silo
 Title V Permit Renewal Application
 ArcelorMittal Weirton LLC, Weirton, WV

Lime Storage Silo

Unit ID	Description	Potential		Pollutant	Control ID	Control Equipment	Control Efficiency (%)	Emission Factor ² unit	Potential to Emit Uncontrolled Emissions ³		Potential to Emit Controlled Emissions ³	
		Material Throughput ¹	units						(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
096/1	B-Outfall Lime Silo (Truck Unloading)	Lime	240 ton/yr	PM	C096	Torit Model TBV-4 Bin Vent Filter	98	0.61 lb/ton	6.100	0.073	0.122	0.001
				PM-10				0.61 lb/ton	6.100	0.073	0.122	0.001
				PM-2.5				0.61 lb/ton	6.100	0.073	0.122	0.001

1. Assumes twelve (12) 20-ton truckloads delivered each year.
2. Reference - AP-42, Section 11.17, Table 11-17.4, Lime Manufacturing, 2/98
3. Assume 12 deliveries per year; 2 hours per delivery = 24 hours

Table 19. 2016 Potential-to-Emit, Emission Calculations, Emergency Generators
 Title V Permit Renewal Application
 ArcelorMittal Weirton LLC, Weirton, West Virginia

ENGINE DATA:					Engine Power (KW)	Max. Fuel Input (mmBtu/hr) 1	Engine Power (HP)	Potential Operating Hours	Manuf. Date
Engine Description	Location	Permit Unit ID	Model #	Serial #					
Caterpillar	B Outfall	EG-01	3412	81Z14619	504	1.72	676	100	1990
Cummins	MAB	EG-01	QSB7-G3 NR3	73191343	169	0.58	227	100	1/25/2011
Cummins	TM Comm Room	EG-01	QSB5-G3 NR3	73345048	98	0.33	132	100	12/15/2011
Cummins	SS Comm Room	EG-01	QSB5-G3 NR3	73548766	98	0.33	132	100	6/17/2013
Cummins	Half Moon Comm Room	EG-01	QSB5-G3 NR3	73684385	98	0.33	132	100	5/13/2014

EMISSION CALCULATIONS:

Pollutant	Permit ID: 1 EG-01 Caterpillar 3412		Permit ID: 2 EG-01 Cummins MAB		Permit ID: 3 EG-01 TM Cummins Comm Room		Permit ID: 4 EG-01 SS Cummins Comm Room		Permit ID: 5 EG-01 Half Moon Cummins Comm Room		TOTAL							
	Factors3 for >600hp	Units	Factors4 for <250hp	Units	Factors4 for <250hp	Units	Factors4 for <250hp	Units	Factors4 for <250hp	Units	Factors4 for <250hp	Units						
PM-10 (filterable)	0.0496	lb/MMBtu	0.085	0.0043	0.31	lb/MMBtu	0.179	0.0089	0.31	lb/MMBtu	0.104	0.0052	0.31	lb/MMBtu	0.104	0.0052	0.575	0.029
PM-2.5 (filterable)	0.0479	lb/MMBtu	0.082	0.0041	0.31	lb/MMBtu	0.179	0.0089	0.31	lb/MMBtu	0.104	0.0052	0.31	lb/MMBtu	0.104	0.0052	0.572	0.029
PM (Condensable)	0.0077	lb/MMBtu	0.013	0.0007		lb/MMBtu	0.000	0.0000		lb/MMBtu	0.000	0.0000		lb/MMBtu	0.000	0.0000	0.013	0.001
NOx (Uncontrolled)	3.2	lb/MMBtu	5.503	0.2752	4.41	lb/MMBtu	2.543	0.1272	4.41	lb/MMBtu	1.475	0.0737	4.41	lb/MMBtu	1.475	0.0737	12.470	0.624
SOx	1.01	lb/MMBtu	1.737	0.0868	0.29	lb/MMBtu	0.167	0.0084	0.29	lb/MMBtu	0.097	0.0048	0.29	lb/MMBtu	0.097	0.0048	2.195	0.110
CO	0.85	lb/MMBtu	1.462	0.0731	0.95	lb/MMBtu	0.548	0.0274	0.95	lb/MMBtu	0.318	0.0159	0.95	lb/MMBtu	0.318	0.0159	2.963	0.148
VOC	0.09	lb/MMBtu	0.155	0.0077	0.35	lb/MMBtu	0.202	0.0101	0.35	lb/MMBtu	0.117	0.0059	0.35	lb/MMBtu	0.117	0.0059	0.708	0.035
CO2	1629	lb/MMBtu	280.155	14.0078	164	lb/MMBtu	94.571	4.7285	164	lb/MMBtu	54.840	2.7420	164	lb/MMBtu	54.840	2.7420	539.246	26.962
Methane	6.61E-03	lb/MMBtu	1.14E-02	5.68E-04		lb/MMBtu				lb/MMBtu				lb/MMBtu			1.14E-02	5.68E-04
N2O	1.32E-03	lb/MMBtu	2.27E-03	1.14E-04		lb/MMBtu				lb/MMBtu				lb/MMBtu			2.27E-03	1.14E-04
Benzene	7.76E-04	lb/MMBtu	1.33E-03	6.67E-05	9.33E-04	lb/MMBtu	5.38E-04	2.69E-05	9.33E-04	lb/MMBtu	3.12E-04	1.56E-05	9.33E-04	lb/MMBtu	3.12E-04	1.56E-05	2.81E-03	1.40E-04
Toluene	2.81E-04	lb/MMBtu	4.83E-04	2.42E-05	4.09E-04	lb/MMBtu	2.36E-04	1.18E-05	4.09E-04	lb/MMBtu	1.37E-04	6.84E-06	4.09E-04	lb/MMBtu	1.37E-04	6.84E-06	1.13E-03	5.65E-05
Xylene	1.93E-04	lb/MMBtu	3.32E-04	1.66E-05	2.85E-04	lb/MMBtu	1.64E-04	8.22E-06	2.85E-04	lb/MMBtu	9.53E-05	4.77E-06	2.85E-04	lb/MMBtu	9.53E-05	4.77E-06	7.82E-04	3.91E-05
Formaldehyde	7.89E-05	lb/MMBtu	1.36E-04	6.78E-06	1.18E-03	lb/MMBtu	6.80E-04	3.40E-05	1.18E-03	lb/MMBtu	3.95E-04	1.97E-05	1.18E-03	lb/MMBtu	3.95E-04	1.97E-05	2.00E-03	1.00E-04
Acetaldehyde	2.52E-05	lb/MMBtu	4.33E-05	2.17E-06	7.67E-04	lb/MMBtu	4.42E-04	2.21E-05	7.67E-04	lb/MMBtu	2.56E-04	1.28E-05	7.67E-04	lb/MMBtu	2.56E-04	1.28E-05	1.26E-03	6.28E-05
Acrolein	7.88E-06	lb/MMBtu	1.36E-05	6.78E-07	9.28E-05	lb/MMBtu	5.35E-05	2.68E-06	9.28E-05	lb/MMBtu	3.10E-05	1.55E-06	9.28E-05	lb/MMBtu	3.10E-05	1.55E-06	1.60E-04	8.01E-06
1,3-Butadiene					3.91E-05	lb/MMBtu	2.25E-05	1.13E-06	3.91E-05	lb/MMBtu	1.31E-05	6.54E-07	3.91E-05	lb/MMBtu	1.31E-05	6.54E-07	6.18E-05	3.09E-06
Naphthalene					8.48E-05	lb/MMBtu	4.89E-05	2.45E-06	8.48E-05	lb/MMBtu	2.84E-05	1.42E-06	8.48E-05	lb/MMBtu	2.84E-05	1.42E-06	1.34E-04	6.70E-06

1 Converted to Btu from KW using the following conversion: 1 KW = 3412 BTU/hr
 2 Based on No. 2 Distillate Fuel Oil heat content of 139,000 Btu/gallon
 3 Factors from AP-42, Section 3.4, Tables 3.4-1 and 3.4-2 (10/1996), except that GHG factors are derived from 40 CFR Part 98, Subpart C, Tables C-1 and C-2.
 4 Factors from AP-42, Section 3.3, Tables 3.3-1 and 3.3-2 (10/1996).

ATTACHMENT K

Miscellaneous Supporting Information

Tanks 4.0 Reports

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Identification and Physical Characteristics

Identification

User Identification:	1.5% Waste Pickle Liquor Tank
City:	Weirton
State:	West Virginia
Company:	ArcelorMittal Weirton, LLC
Type of Tank:	Vertical Fixed Roof Tank
Description:	1.5% Waste Pickle Liquor Tank

Tank Dimensions

Shell Height (ft):	30.00
Diameter (ft):	12.00
Liquid Height (ft) :	30.00
Avg. Liquid Height (ft):	18.00
Volume (gallons):	25,380.89
Turnovers:	187.22
Net Throughput(gal/yr):	4,751,800.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	Gray/Light
Shell Condition:	Good
Roof Color/Shade:	Gray/Light
Roof Condition:	Good

Roof Characteristics

Type:	Dome
Height (ft)	2.00
Radius (ft) (Dome Roof)	12.00

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meteorological Data used in Emissions Calculations: Pittsburgh, Pennsylvania (Avg Atmospheric Pressure = 14.11 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

1.5% Waste Pickle Liquor Tank - Vertical Fixed Roof Tank
Weirton, West Virginia

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
1.5% Commercial HCL	All	56.69	48.70	64.69	52.55	0.2900	0.2850	0.2950	36.4600			36.47	

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

1.5% Waste Pickle Liquor Tank - Vertical Fixed Roof Tank
Weirton, West Virginia

Components	Losses(lbs)		
	Working Loss	Breathing Loss	Total Emissions
1.5% Commercial HCL	391.06	53.60	444.66

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Identification and Physical Characteristics

Identification

User Identification:	36% Commercial HCL Tank
City:	Weirton
State:	West Virginia
Company:	ArcelorMittal Weirton, LLC
Type of Tank:	Vertical Fixed Roof Tank
Description:	36% Commercial HCL Tank

Tank Dimensions

Shell Height (ft):	30.00
Diameter (ft):	12.00
Liquid Height (ft) :	30.00
Avg. Liquid Height (ft):	18.00
Volume (gallons):	25,380.89
Turnovers:	187.22
Net Throughput(gal/yr):	4,751,800.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	Gray/Light
Shell Condition:	Good
Roof Color/Shade:	Gray/Light
Roof Condition:	Good

Roof Characteristics

Type:	Dome
Height (ft)	2.00
Radius (ft) (Dome Roof)	12.00

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meteorological Data used in Emissions Calculations: Pittsburgh, Pennsylvania (Avg Atmospheric Pressure = 14.11 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

36% Commercial HCL Tank - Vertical Fixed Roof Tank
Weirton, West Virginia

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
36% Commercial HCL	All	56.69	48.70	64.69	52.55	2.1000	2.0500	2.1500	36.4600			36.47	

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

36% Commercial HCL Tank - Vertical Fixed Roof Tank
Weirton, West Virginia

Components	Losses(lbs)		
	Working Loss	Breathing Loss	Total Emissions
36% Commercial HCL	2,831.84	213.15	3,044.99

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Identification and Physical Characteristics

Identification

User Identification:	36% HCL FPL Tank Near No. 5 Pickler
City:	Weirton
State:	West Virginia
Company:	Mittal Steel USA - Weirton Inc.
Type of Tank:	Vertical Fixed Roof Tank
Description:	36% Commercial HCL Tank

Tank Dimensions

Shell Height (ft):	36.00
Diameter (ft):	12.00
Liquid Height (ft) :	36.00
Avg. Liquid Height (ft):	18.00
Volume (gallons):	30,000.00
Turnovers:	316.79
Net Throughput(gal/yr):	9,503,600.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	Gray/Light
Shell Condition:	Good
Roof Color/Shade:	Gray/Light
Roof Condition:	Good

Roof Characteristics

Type:	Dome
Height (ft)	2.00
Radius (ft) (Dome Roof)	12.00

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meteorological Data used in Emissions Calculations: Pittsburgh, Pennsylvania (Avg Atmospheric Pressure = 14.11 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

36% HCL FPL Tank Near No. 5 Pickler - Vertical Fixed Roof Tank
Weirton, West Virginia

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
36% Commercial HCL	All	56.69	48.70	64.69	52.55	2.1000	2.0500	2.1500	36.4600			36.47	

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

36% HCL FPL Tank Near No. 5 Pickler - Vertical Fixed Roof Tank
Weirton, West Virginia

Components	Losses(lbs)		
	Working Loss	Breathing Loss	Total Emissions
36% Commercial HCL	4,528.21	244.60	4,772.81

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Identification and Physical Characteristics

Identification

User Identification:	Tin Mill Commercial HCl (HCl-T)
City:	Weirton
State:	West Virginia
Company:	Weirton Steel Corporation
Type of Tank:	Vertical Fixed Roof Tank
Description:	Strip Steel HCl - Auxiliary Tank

Tank Dimensions

Shell Height (ft):	14.50
Diameter (ft):	12.00
Liquid Height (ft) :	14.50
Avg. Liquid Height (ft):	7.25
Volume (gallons):	12,267.43
Turnovers:	6.52
Net Throughput(gal/yr):	80,000.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	Gray/Light
Shell Condition:	Good
Roof Color/Shade:	Gray/Light
Roof Condition:	Good

Roof Characteristics

Type:	Dome
Height (ft)	2.00
Radius (ft) (Dome Roof)	12.00

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meteorological Data used in Emissions Calculations: Pittsburgh, Pennsylvania (Avg Atmospheric Pressure = 14.11 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

Tin Mill Commercial HCl (HCl-T) - Vertical Fixed Roof Tank
Weirton, West Virginia

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
36% Hydrochloric Acid	All	56.69	48.70	64.69	52.55	2.1000	2.0500	2.1500	36.4600			36.46	

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

Tin Mill Commercial HCl (HCl-T) - Vertical Fixed Roof Tank
Weirton, West Virginia

Components	Losses(lbs)		
	Working Loss	Breathing Loss	Total Emissions
36% Hydrochloric Acid	145.84	172.75	318.59

TANKS 4.0.9d
Emissions Report - Summary Format
Total Emissions Summaries - All Tanks in Report

Emissions Report for: Annual

Tank Identification				Losses (lbs)
1.5% Waste Pickle Liquor Tank	ArcelorMittal Weirton, LLC	Vertical Fixed Roof Tank	Weirton, West Virginia	444.66
36% Commercial HCL Tank	ArcelorMittal Weirton, LLC	Vertical Fixed Roof Tank	Weirton, West Virginia	3,044.99
36% HCL FPL Tank Near No. 5 Pickler	Mittal Steel USA - Weirton Inc.	Vertical Fixed Roof Tank	Weirton, West Virginia	4,772.81
Tin Mill Commercial HCl (HCl-T)	Weirton Steel Corporation	Vertical Fixed Roof Tank	Weirton, West Virginia	318.59
Total Emissions for all Tanks:				8,581.05

Source Test Summaries

**#5 PICKLING LINE SCRUBBER
HYDROCHLORIC ACID EMISSIONS
TEST REPORT
ARCELORMITTAL WEIRTON LLC
WEIRTON, WEST VIRGINIA**

Title V Permit No. R30-02900001-2012

Test Date: January 28, 2016

Report Date: March 23, 2016

Prepared for:

ArcelorMittal Weirton LLC
100 Pennsylvania Avenue
Weirton, West Virginia 26062

Prepared by:

Air/Compliance Consultants, Inc.
an affiliate of Montrose Air Quality Services, LLC.
1050 William Pitt Way
Pittsburgh, Pennsylvania 15238
(412) 826-3636

PA Lab Registration #02-04775

Project No. 15-275

CERTIFICATION STATEMENT

This statement certifies that "to the best of their knowledge," based on state and federal regulations, operating permits, plan approvals applicable to each source tested, and reasonable inquiry, the statements and information presented in the attached document are true, accurate, and complete.

**#5 PICKLING LINE SCRUBBER
HYDROCHLORIC ACID EMISSIONS
TEST REPORT
ARCELORMITTAL WEIRTON LLC
WEIRTON, WEST VIRGINIA**

Test Date: January 28, 2016

Project No. 15-275

John Wilson

3/23/16

John E. Wilson, QSTI
Technician II and Project Manager
Montrose Air Quality Services, LLC

Date

M-D

3/23/16

Matthew Dallesasse
District Manager
Montrose Air Quality Services, LLC

Date

Michael Mieczkowski

3/23/16

Michael Mieczkowski
Manager - Environmental
ArcelorMittal Weirton LLC

Date

Disclaimer - This document is intended solely for the use of the individual to whom it is addressed and others authorized to receive it.

Table 1. Hydrochloric Acid Emissions Testing Results, Scrubber Outlet
ArcelorMittal Weirton LLC, Weirton, West Virginia

Test Data		Run 1	Run 2	Run 3	Run 4	Average	
Date		1/28/2016	1/28/2016	1/28/2016	1/28/2016		
Start Time		8:55 AM	10:44 AM	12:22 PM	1:50 PM		
End Time		10:02 AM	11:48 AM	1:26 PM	1:55 PM		
Flow Rate	(ACFM)	19,825	17,868	18,827	18,878	18,850	
Flow Rate	(SCFM)	17,283	15,616	16,390	16,418	16,427	
Flow Rate	(DSCFM)	15,793	14,648	14,894	14,738	15,018	
Sample Volume	(DSCF)	38.833	37.382	39.101	38.157	38	
Carbon Dioxide	(dry volume %)	0.00	0.00	0.00	0.00	0	
Oxygen	(dry volume %)	21.00	21.00	21.00	21.00	21	
Water Vapor	(volume %)	8.62	6.20	9.12	10.23	9	
Stack Temperature	(°F)	112.4	110.9	113.2	113.7	113	
Percent of Isokinetic Sampling	(%)	95.9	99.5	102.4	101.0	100	
Production Data							
Scrubber Pressure Drop	(in. H ₂ O)	-1.70	-1.64	-1.58	-1.60	(1.63)	
Scrubber Water Make Up	(GPM)	11.46	11.66	11.46	11.58	11.54	
Recirculation Water Flow Rate	(GPM)	26.08	26.04	25.38	23.94	25.36	
Pickled Steel Production Rate	(Tons/hr)	224.47	185.93	185.34	209.47	201.30	
Pickled Steel Production Rate	(Lineal Feet)	34,533	28,164	30,269	35,870	32,209	
Results							
							Limit
Hydrochloric Acid (HCl)							
Emission Mass (total)	(mg)	10.25	9.64	12.70	16.47	12.266	
Emission Concentration	(ppm _{dv})	6.152	6.008	7.568	10.054	7.445	18.0
Emission Rate	(lb/hr)	0.552	0.500	0.640	0.841	0.633	
Emission Rate	(lb/ton of product)	0.0025	0.0027	0.0035	0.0040	0.003	

% Percent
 °F Degrees Fahrenheit
 ACFM Actual cubic feet per minute
 DSCF Dry standard cubic feet
 DSCFM Dry standard cubic feet per minute
 GPM Gallons per minute
 in. H₂O Inches of water
 lb/DSCF Pounds per dry standard cubic foot
 lb/hr Pounds per hour
 lb/ton of product Pounds per ton of product
 mg Milligrams
 ppm_{dv} Parts per million, volume basis, dry
 SCFM Standard cubic feet per minute

Emergency Engine Certifications



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2014 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT OF 1990**

**OFFICE OF TRANSPORTATION
AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105**

Certificate Issued To: Cummins Inc.
(U.S. Manufacturer or Importer)
Certificate Number: ECEXL0275AAG-010

Effective Date:
04/29/2013

Expiration Date:
12/31/2014

Mary J. Manners

Byron J. Bunker, Division Director
Compliance Division

Issue Date:
04/29/2013

Revision Date:
N/A

Model Year: 2014
Manufacturer Type: Original Engine Manufacturer
Engine Family: ECEXL0275AAG

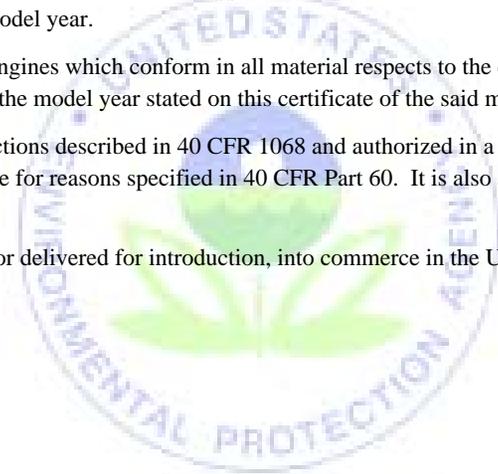
Mobile/Stationary Indicator: Stationary
Emissions Power Category: 75<=kW<130
Fuel Type: Diesel
After Treatment Devices: No After Treatment Devices Installed
Non-after Treatment Devices: No Non-After Treatment Devices Installed

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Part 60, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.

This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 60. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Part 60.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.



**Half Moon Comm Room
Emergency Generator**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF TRANSPORTATION AND AIR QUALITY
WASHINGTON, DC 20460



CERTIFICATE OF CONFORMITY
2011 MODEL YEAR

Manufacturer: **CUMMINS INC.**
Engine Family: **BCEXL0409AAD**
Certificate Number: **CEX-STATCI-11-20**
Intended Service Class: **NR 7 (225-450)**
Fuel Type: **DIESEL**
FELs: g/kW-hr NMHC + NOx: N/A NOx: N/A PM: N/A
Effective Date: **10/14/2010**
Date Issued: **10/14/2010**

Karl J. Simon, Director
Compliance and Innovative Strategies Division
Office of Transportation and Air Quality

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Part 60 and Part 89, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following stationary engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and 89, and produced in the stated model year.

This certificate of conformity covers only those new stationary compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and 89 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 89.129-96 and 89.506-96 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to a revocation or suspension of this certificate for reasons specified in 40 CFR Part 89. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void ab initio for other reasons specified in 40 CFR Part 89.

This certificate does not cover stationary engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate

MAB Emergency Generator

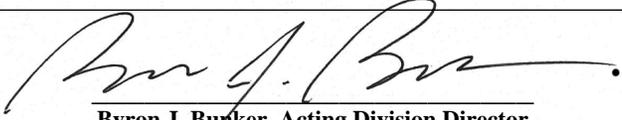


**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2013 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT OF 1990**

**OFFICE OF TRANSPORTATION
AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105**

Certificate Issued To: Cummins Inc.
(U.S. Manufacturer or Importer)
Certificate Number: DCEXL0275AAG-003

Effective Date:
05/01/2012
Expiration Date:
12/31/2013


Byron J. Bunker, Acting Division Director
Compliance Division

Issue Date:
05/01/2012
Revision Date:
N/A

Model Year: 2013
Manufacturer Type: Original Engine Manufacturer
Engine Family: DCEXL0275AAG

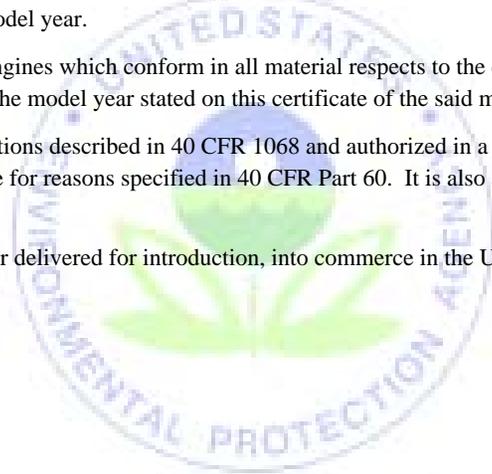
Mobile/Stationary Indicator: Stationary
Emissions Power Category: 75<=kW<130
Fuel Type: Diesel
After Treatment Devices: No After Treatment Devices Installed
Non-after Treatment Devices: No Non-After Treatment Devices Installed

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Part 60, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.

This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 60. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Part 60.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.



**Strip Steel Comm Room
Emergency Generator**



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2012 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT OF 1990**

**OFFICE OF TRANSPORTATION
AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105**

Certificate Issued To: Cummins Inc. (U.S. Manufacturer or Importer) Certificate Number: CCEXL0275AAG-004	<u>Effective Date:</u> 05/16/2011 <u>Expiration Date:</u> 12/31/2012	 <hr/> Karl J. Simon, Director Compliance and Innovative Strategies Division	<u>Issue Date:</u> 05/16/2011 <u>Revision Date:</u> N/A
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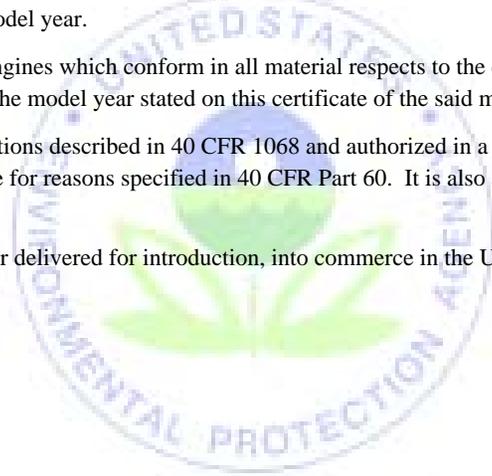
Model Year: 2012 Manufacturer Type: Original Engine Manufacturer Engine Family: CCEXL0275AAG	Mobile/Stationary Indicator: Stationary Emissions Power Category: 75<=kW<130 Fuel Type: Diesel After Treatment Devices: No After Treatment Devices Installed Non-after Treatment Devices: No Non-After Treatment Devices Installed
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Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Part 60, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.

This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 60. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Part 60.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.



Tin Mill Comm Room Emergency Generator
