Division of Air Quality Permit Application Submittal

Please find attached a permit application for : Nucor Steel West Virginia; Apple Grove, West Virginia

[Company Name; Facility Location]

- DAQ Facility ID (for existing facilities only): 053-00085
- Current 45CSR13 and 45CSR30 (Title V) permits associated with this process (for existing facilities only): R14-0039A

- Type of NSR Application (check all that apply):
  - ☐ Construction
  - ☑ Modification
  - ☐ Class I Administrative Update
  - ☐ Class II Administrative Update
  - ☐ Relocation
  - ☐ Temporary
  - ☐ Permit Determination

- Type of 45CSR30 (TITLE V) Revision (if any)**:
  - ☐ Title V Initial
  - ☐ Title V Renewal
  - ☐ Administrative Update
  - ☐ Minor Modification
  - ☐ Significant Modification
  - ☐ Off Permit Change

****If any box above is checked, include the Title V revision information as ATTACHMENT S to this application.**

- Payment Type:
  - ☐ Credit Card (Instructions to pay by credit card will be sent in the Application Status email.)
  - ☑ Check (Make checks payable to: WVDEP – Division of Air Quality)

    Mail checks to:
    WVDEP – DAQ – Permitting
    Attn: NSR Permitting Secretary
    601 57th Street, SE
    Charleston, WV 25304

Please wait until DAQ emails you the Facility ID Number and Permit Application Number. Please add these identifiers to your check or cover letter with your check.

- If the permit writer has any questions, please contact (all that apply):
  - ☐ Responsible Official/Authorized Representative
    - Name: Johnny Jacobs
    - Email: johnny.jacobs@nucor.com
    - Phone Number: (304) 973-1110
  - ☑ Company Contact
    - Name: Melissa Fortenberry
    - Email: melissa.fortenberry@nucor.com
    - Phone Number: 304-812-2910
  - ☐ Consultant
    - Name:
    - Email:
    - Phone Number:

Received
June 12, 2025
WV DEP/Div of Air Quality

NUCOR STEEL WEST VIRGINIA, LLC
67 Hereford Lane
Apple Grove, WV 25502

June 9, 2025

Mr. Steve Pursley
West Virginia DEP
DAQ – Permitting Division
601 57th Street SE
Charleston, WV 25304

RE: Nucor Steel West Virginia – R14 Air Permit Modification Application

Dear Mr. Pursley:

Nucor Steel West Virginia, LLC (NSWV) received authorization to construct a new, state-of-the-art sheet steel mill near Apple Grove, Mason County, WV through approved permit R14-0039 (effective May 5, 2022) and modification R14-0039A (effective January 14, 2025).

With this submittal, NSWV is revising the current 45CSR14 permit, R14-0039A, to represent current facility design. The substantive revisions are summarized below for ease of reference.

- The annual capacity of each electric arc furnace increased to 280 tons per hour and 1.64 million tons per year. The increase in annual capacity resulted in an increase in raw material throughput and an increase in throughput in downstream process equipment at the mill.
- Added the following emission sources:
  - Ladle Dryers 2 and 3
  - Tundish Dryer 2
  - Subentry Nozzle (SEN) Preheater Oven
  - Hot Mill Matrix Vents
  - Air Make-Up Units 1-18
  - Slag Piles 5-14
  - Emergency Generators #7-26
  - Brick Crushing Operations
  - Scrap Cutting and Scrap Cutting Baghouse
  - Dust Loadout from the Scrap Cutting Baghouse
  - Dust Loadout from Electric Arc Furnace Baghouse 1 and 2
  - Grease Bulk Roll Shop Tank
  - Electrostatic Oilers
  - Parts Washers 1-9
  - Caster Spray Vents 1-2

  - Stenciling
  - Paved Haul roads 11P – 12P
- Narrative Section 3 – Regulatory Applicability Summary
  - Addressed the applicability of all rules in prior application for all newly added emission units.
  - 40 CFR 60, Subpart TT (NSPS TT) – Addressed the applicability of NSPS TT to coating operations from passivation roll coating operations.
  - 40 CFR 63, Subpart MMMM (MACT MMMM) – Addressed the applicability of MACT MMMM to passivation roll coating, electrostatic oiling, and stenciling operations.
  - 40 CFR 63, Subpart SSSS (MACT SSSS) – Addressed the applicability of MACT SSSS to passivation roll coating, electrostatic oiling, and stenciling operations.
  - 40 CFR 63, Subpart HHHHHH (MACT HHHHHH) – Addressed the applicability of MACT HHHHHH to passivation roll coating and electrostatic oiling operations.
  - 45CSR2 – Updated the emission limit applicable to the Water Bath Vaporizer.
  - 45CSR6 – Updated the emission limit applicable to the Vacuum Tank Degasser Flares.
  - 45CSR7 – Revised the process weight rate-based emission limits applicable to the subject emission units.
  - 45CSR10 – Updated the emission limit applicable to the Water Bath Vaporizer.
- Application Narrative Section 4 – BACT Analysis:
  - BACT was evaluated for each new and modified emission unit.
  - Added a VOC BACT section for the following emission units:
    - Caster Spray Vents
    - Hot Rolling Mill
    - Tandem Cold Mill
    - Temper Mill
    - Galvanizing Line 1 and 2 Cleaning
    - Cooling Towers
    - Electrostatic Oilers
    - Parts Washers
    - Air Make-Up Units
  - Added a PM/PM_{10}/$PM_{2.5}$ BACT section for the following emission units:
    - Vacuum Tank Degassers 1 and 2
    - Caster Spray Vents
    - Hot Rolling Mill
    - Electrostatic Oilers
    - Brick Crushing
    - Air Make-Up Units

NUCOR STEEL WEST VIRGINIA, LLC
67 Hereford Lane
Apple Grove, WV 25502

- Added a Lead/Fluoride BACT section for the following emission units:
  - Caster Spray Vents
- Added a NOx, CO, SO2, and GHG BACT section for the Air Make-Up Units

- Application Narrative Appendix B
  - Attachments F and I through P were updated to reflect all new and modified emission units.

***

If you have any questions or comments regarding this air permit application, please do not hesitate to call Mr. William Bruscino with Trinity Consultants at (614) 967-3290 or me at (334) 301-8820.

Sincerely,

NUCOR STEEL WEST VIRGINIA

Dustin Land
Environmental Manager

PSD AIR PERMIT APPLICATION

Nucor Steel West Virginia, LLC
Facility ID 053-00085

Nucor Steel West Virginia, LLC
67 Hereford Lane
Apple Grove, WV 25502

Prepared By:

TRINITY CONSULTANTS
110 Polaris Parkway
Suite 200
Westerville, OH 43082
(614) 433-0733

Revised June 2025

Project 213601.0130

TABLE OF CONTENTS

1. APPLICATION OVERVIEW 1-1

2. CONSTRUCTION PERMIT REQUEST 2-1
- 2.1 Process Overview 2-2
  - 2.1.1 Raw Material Storage and Handling 2-2
  - 2.1.2 Melt Shop 2-3
  - 2.1.3 Hot Mill 2-5
  - 2.1.4 Cold Mill 2-5
  - 2.1.5 Slag Processing 2-6
  - 2.1.6 Auxiliary Operations 2-7
  - 2.1.7 Refractory Brick Recycling 2-8
- 2.2 Summary of Emission Sources 2-8
- 2.3 Proposed Project Emissions 2-10

3. REGULATORY APPLICABILITY 3-1
- 3.1 Construction Permitting Applicability 3-1
- 3.2 Title V Operating Permit Program 3-1
- 3.3 New Source Performance Standards 3-2
  - 3.3.1 40 CFR 60, Subpart AAa –Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 17, 1983 and On or Before May 16, 2022 3-2
  - 3.3.2 40 CFR 60, Subpart AAb –Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After May 16, 2022 3-2
  - 3.3.3 40 CFR 60, Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units 3-2
  - 3.3.4 40 CFR 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial Steam Generating Units 3-3
  - 3.3.5 40 CFR 60, Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) 3-3
  - 3.3.6 NSPS Subpart Kc – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) 3-3
  - 3.3.7 40 CFR 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines 3-4
  - 3.3.8 40 CFR 60, Subpart TT — Standards of Performance for Metal Coil Surface Coating 3-4
- 3.4 National Emission Standards for Hazardous Air Pollutants 3-5
  - 3.4.1 40 CFR 63, Subpart MMMM – National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products 3-5
  - 3.4.2 40 CFR 63, Subpart SSSS — National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Coil 3-6
  - 3.4.3 40 CFR 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) 3-6
  - 3.4.4 40 CFR 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Hazardous Air Pollutants Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters 3-6
  - 3.4.5 40 CFR 63, Subpart YYYYY - Area Source NESHAP for Electric Arc Furnace Steelmaking Facilities. 3-6

3.4.6 40 CFR 63, Subpart ZZZZZ - Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources 3-6
3.4.7 40 CFR 63, Subpart CCCCCC – National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities 3-6
3.4.8 40 CFR 63, Subpart HHHHHH — National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources 3-7
3.4.9 40 CFR 63, Subpart JJJJJJ - Area Sources: Industrial, Commercial, and Institutional Boilers 3-7
3.5 U.S. EPA's Good Neighbor Plan 3-7
3.5.1 40 CFR 52.43 - Requirements of the Federal Implementation Plans (FIPs) relating to ozone season emissions of nitrogen oxides from the Iron and Steel Mills and Ferroalloy Manufacturing Industry 3-7
3.5.2 40 CFR 52.45 - Requirements of the Federal Implementation Plans (FIPs) relating to ozone season emissions of nitrogen oxides from the Basic Chemical Manufacturing, Petroleum and Coal Products Manufacturing, the Pulp, Paper, and Paperboard Mills Industries, Metal Ore Mining, and the Iron and Steel and Ferroalloy Manufacturing Industries 3-7
3.6 State of West Virginia Regulatory Applicability 3-8
3.6.1 45CSR2 - To Prevent and Control Particulate Matter Air Pollution from Combustion of Fuel in Indirect Heat Exchangers 3-8
3.6.2 45CSR6 – To Prevent and Control Air Pollution from Combustion of Refuse 3-8
3.6.3 45CSR7 – To Prevent and Control Particulate Matter Air Pollution from Manufacturing Processes and Associated Operations 3-9
3.6.4 45CSR10 - To Prevent and Control Air Pollution from the Emission of Sulfur Oxides 3-10
3.6.5 45CSR13 - Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation 3-11
3.6.6 45CSR14 - Permits for Construction and Major Modification of Major Stationary Sources for the Prevention of Significant Deterioration of Air Quality 3-11
3.6.7 45CSR16 – Standards of Performance for New Stationary Sources 3-11
3.6.8 45CSR22 - Air Quality Management Fee Program 3-12
3.6.9 45CSR30 – Requirements for Operating Permits 3-12
3.6.10 45CSR34 – Emission Standards for Hazardous Air Pollutants 3-12

4. BEST AVAILABLE CONTROL TECHNOLOGY 4-1
4.1 PSD BACT Top-Down Approach 4-5
4.1.1 Step 1 – Identify All Control Options 4-5
4.1.2 Step 2 – Eliminate Technically Infeasible Options 4-5
4.1.3 Step 3 – Rank Remaining Control Options 4-5
4.1.4 Step 4 – Evaluation of Most Effective Control Option 4-5
4.1.5 Step 5 – Select BACT 4-5
4.2 NO_X BACT Analysis 4-6
4.2.1 Step 1 – Identify All Control Options 4-7
4.2.2 Electric Arc Furnaces/Ladle Metallurgy Furnaces (EU ID EAF1, EAF2, LMF1, and LMF2) 4-7
4.2.3 Miscellaneous Natural Gas Combustion Units (EU ID GALVFN1 and 2, AMU1 - 18) 4-10
4.3 CO BACT Analysis 4-12
4.3.1 Step 1 – Identify All Control Options 4-13
4.3.2 Miscellaneous Natural Gas Combustion Units (EU ID AMU1 - 18) 4-14
4.4 SO_2 BACT Analysis 4-15

4.4.1 Step 1 – Identify All Control Options 4-16
4.4.2 Miscellaneous Natural Gas Combustion Units (EU ID AMU1 - 18) 4-16
4.5 VOC BACT Analysis 4-17
4.5.1 Step 1 – Identify All Control Options 4-19
4.5.2 Miscellaneous Natural Gas Combustion Units (EU ID AMU 1-18) 4-20
4.5.3 Cooling Towers (EU ID CCT4, EU ID CCT6, EU ID LCT7) 4-21
4.5.4 Parts Washers (EU ID WASH1 - 9) 4-22
4.5.5 Electrostatic Oilers (EU ID PLSTEO, STMSTEO, CGLEO1, CGLEO2, RCLEO) 4-22
4.5.6 Galvanizing Lines (EU ID CGL1 and CGL2) 4-24
4.5.7 Caster Spray Vents (EU ID CSP1 and CSP2) 4-24
4.5.8 Hot Mill (EU ID HM) 4-25
4.5.9 Tandem Cold Mill (EU ID TCM) 4-26
4.5.10 Standalone Temper Mill (EU ID STM) 4-27
4.6 $PM/PM_{10}/PM_{2.5}$ BACT Analysis 4-27
4.6.1 Step 1 – Identify All Control Options 4-30
4.6.2 Tunnel Furnace (EU ID TF1) 4-32
4.6.3 Skin Pass Mills (EU ID SPM1 and SPM2) 4-32
4.6.4 Galvanizing Line (EU ID CGL1 and CGL2) 4-33
4.6.5 Tandem Cold Mill (EU ID TCM) 4-34
4.6.6 Standalone Temper Mill (EU ID STM) 4-35
4.6.7 Hot Mill (EU ID HM) 4-36
4.6.8 Miscellaneous Natural Gas Combustion Units (EU ID LD1 through 3, LPHTR1 through 7, TD1 and 2, TPHTR1 and 2, SENPHTR1 through 3, GALVFN1 and 2, BOXANN1 through 12, ASP, SCRAP-CUT, GALVBOILER1 and 2, PLTCMBOILER1 and 2, AMU1 through 18) 4-36
4.6.9 Scrap Yard Stockpiles (EU SCRAP-PILE1 through 3) 4-37
4.6.10 Material Handling Operations (EU RAW-FEED1 through 8, SUBS-FEED1 through 7, EAF-FEED1 through 25, LMF-FEED1 through 51) 4-38
4.6.11 Refractory Brick Recycling (EU BRCKCRSH) 4-39
4.6.12 Caster Spray Vents (EU CSP1 and CSP2) 4-40
4.6.13 Electrostatic Oilers (EU ID PLSTEO, STMSTEO, CGLEO1, CGLEO2, RCLEO) 4-40
4.7 Lead and Fluoride BACT Analysis 4-42
4.7.1 Step 1 – Identify All Control Options 4-42
4.7.2 Caster Spray Vents (EU CSP1 and CSP2) 4-43
4.8 GHG BACT Analysis 4-44
4.8.1 Step 1 – Identify All Control Options 4-44
4.8.2 Step 2 – Eliminate Technically Infeasible Options 4-50
4.8.3 Step 3 – Rank Remaining Options 4-51
4.8.4 Step 4 – Evaluation of Most Effective Control Option 4-51
4.8.5 Step 5 – Select BACT 4-51

APPENDIX A. WVDAQ APPLICATION FORM FOR NSR PERMIT A-1

APPENDIX B. WEST VIRGINIA PERMIT APPLICATION ATTACHMENTS B-1

APPENDIX C. BACT ANALYSIS SUPPORTING DOCUMENTATION C-1

APPENDIX D. PSD MODELING ANALYSIS D-1

LIST OF TABLES

Table 2-1. Facility-Wide Potential Emissions Summary 2-10

Table 3-1. Summary of 45CSR10 SO2 Limits 3-11

Table 4-1. Pollutants Evaluated in the BACT Analysis for Each Emission Unit 4-2

Table 4-2. Summary of Selected BACT for NO_X Emitting Sources 4-6

Table 4-3. Potential NO_x Control Technologies 4-7

Table 4-4. Rank of Remaining Control Technologies for NO_X from EAFs and LMFs 4-8

Table 4-5. Miscellaneous Natural Gas Combustion Units 4-10

Table 4-6. Rank of Remaining Control Technologies for NO_X from Miscellaneous Natural Gas Combustion Units 4-10

Table 4-7. Cost Analysis for Galvanizing Line Furnaces NO_X Control Technologies 4-11

Table 4-8. Summary of Selected BACT for CO Emitting Sources 4-12

Table 4-9. Potential CO Control Technologies 4-13

Table 4-10. Rank of Remaining Control Technologies for CO from Miscellaneous Natural Gas Combustion Units 4-14

Table 4-11. Summary of Selected BACT for SO_2 Emitting Sources 4-15

Table 4-12. Potential SO_2 Control Technologies 4-16

Table 4-13. Rank of Remaining Control Technologies for SO_2 from Miscellaneous Natural Gas Combustion Units 4-17

Table 4-14. Summary of Selected BACT for VOC Emitting Sources 4-17

Table 4-15. Potential VOC Control Technologies 4-19

Table 4-16. Rank of Remaining Control Technologies for VOC from Miscellaneous Natural Gas Combustion Units 4-21

Table 4-17. Rank of Remaining Control Technologies for VOC from Cooling Towers 4-21

Table 4-18. Rank of Remaining Control Technologies for VOC from Parts Washers 4-22

Table 4-19. Rank of Remaining Control Technologies for VOC from Electrostatic Oilers 4-23

Table 4-20. Rank of Remaining Control Technologies for VOC from Galvanizing Line Operations 4-24

Table 4-21. Rank of Remaining Control Technologies for VOC from Caster Spray Vents 4-25

Table 4-22. Rank of Remaining Control Technologies for VOC from Hot Mill Operations 4-26

Table 4-23. Rank of Remaining Control Technologies for VOC from Tandem Cold Mill 4-26

Table 4-24. Rank of Remaining Control Technologies for VOC from Standalone Temper Mill 4-27

Table 4-25. Summary of Selected BACT for PM/PM_{10}/$PM_{2.5}$ Emitting Sources 4-28

Table 4-26. Potential PM/PM_{10}/$PM_{2.5}$ Control Technologies 4-31

Table 4-27. Rank of Remaining Control Technologies for PM/PM_{10}/$PM_{2.5}$ from Tunnel Furnace 4-32

Table 4-28. Rank of Remaining Control Technologies for PM/PM_{10}/$PM_{2.5}$ from Skin Pass Mills 4-33

Table 4-29. Rank of Remaining Control Technologies for PM/PM_{10}/$PM_{2.5}$ from Galvanizing Lines 4-34

Table 4-30. Rank of Remaining Control Technologies for PM/PM_{10}/$PM_{2.5}$ from Tandem Cold Mill 4-34

Table 4-31. Rank of Remaining Control Technologies for PM/PM_{10}/$PM_{2.5}$ from Standalone Temper Mill 4-35

Table 4-32. Rank of Remaining Control Technologies for PM/PM_{10}/$PM_{2.5}$ from Hot Mill 4-36

Table 4-33. Rank of Remaining Control Technologies for PM/PM_{10}/$PM_{2.5}$from Miscellaneous Natural Gas Combustion Units 4-37

Table 4-34. Rank of Remaining Control Technologies for PM/PM_{10}/$PM_{2.5}$ from Scrap Yard Stockpiles 4-38

Table 4-35. Rank of Remaining Control Technologies for PM/PM_{10}/$PM_{2.5}$ from Material Handling Operations 4-38

Table 4-36. Rank of Remaining Control Technologies for PM/PM_{10}/$PM_{2.5}$ from Refractory Brick Recycling System 4-39

Table 4-37. Rank of Remaining Control Technologies for PM/PM_{10}/$PM_{2.5}$ from Caster Spray Vents 4-40

Table 4-38. Rank of Remaining Control Technologies for PM from Electrostatic Oilers 4-41

Table 4-39. Electrostatic Oiler PM/PM_{10}/$PM_{2.5}$ Emission Rates 4-42

Table 4-40. Summary of Selected BACT for Lead and Fluoride Emitting Sources 4-42

Table 4-41. Potential Lead and Fluoride Control Technologies 4-42

Table 4-42. Rank of Remaining Control Technologies for Fluoride from Caster Spray Vents 4-43

Table 4-43. Potential GHG Control Measures for Iron/Steel Industries 4-44

Table 4-44. Rank of Remaining Control Measures for GHGs 4-51

1. APPLICATION OVERVIEW

Nucor Steel West Virginia, LLC (NSWV) received authorization to construct a new, state-of-the-art sheet steel mill near Apple Grove, Mason County, WV through approved permits R14-0039 effective May 5, 2022, and R14-0039A effective January 14, 2025. With this action, NSWV is submitting a reconciliation application to update certain components of the original and modified Permit to Construct in accordance with West Virginia Code of State Rules (CSR), Title 45, Series 14 (45CSR14).

Mason County is currently designated as "attainment" or "unclassified" for all regulated New Source Review (NSR) pollutants. As provided in the facility-wide emissions summary in Section 2 of this application, NSWV will be a major source with respect to the Prevention of Significant Deterioration (PSD) and the Title V operating permit programs. Under the PSD program, NSWV will be a major source for the following pollutants: carbon monoxide (CO), nitrogen oxides (NO_x), sulfur dioxide (SO_2), particulate matter less than or equal to ten microns (PM_{10}), particulate matter less than or equal to 2.5 microns ($PM_{2.5}$), volatile organic compounds (VOC), lead (Pb), fluoride excluding hydrogen fluoride (HF), and greenhouse gases (GHGs). NSWV has developed a PSD modeling analysis to demonstrate that the full project does not cause or contribute to a violation of any National Ambient Air Quality Standards (NAAQS) for these pollutants. That modeling analysis is provided in Appendix D of this application.

Section 2 (Construction Permit Request) of the application contains a process description, air emission source overview, and air emissions summary. Section 3 (Regulatory Applicability) of the application contains a state and federal regulatory applicability analysis for the project. Section 4 (Best Available Control Technology Analysis) provides a summary of the EPA recommended 5-step top-down approach to determining the best available control technology (BACT) for applicable emission units. Additional background documentation from U.S. EPA's RACT/BACT/LAER Clearinghouse to support the BACT determinations is provided in Appendix C for reference.

Due to the reconciliation nature of this application, please note that NSWV has only provided detailed information for sections of the original application that have changed since the last submittal. Equipment that did not fundamentally change through the reconciliation review process will not be revisited, as this information can be referenced in the prior R14 air permit applications and R14-0039 permits.

Finally, Appendix A contains the WVDAQ R14 application form, while Attachments A-S in Appendix B contain the following WVDAQ application components:

- Attachment A: West Virginia Business Certificate
- Attachment B: Site Map
- Attachment C: Installation and Start-up Schedule
- Attachment D: Regulatory Discussion
- Attachment E: Plot Plan
- Attachment F: Detailed Process Flow Diagrams
- Attachment G: Process Description
- Attachment H: Material Safety Data Sheets (MSDS)
- Attachment I: Emission Units Table
- Attachment J: Emission Points Data Summary Sheet
- Attachment K: Fugitive Emissions Data Summary Sheet
- Attachment L: Emission Unit Data Sheets
- Attachment M: Air Pollution Control Device Sheets

- Attachment N: Supporting Emission Calculations
- Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans
- Attachment P: Public Notice
- Attachment Q: Business Confidential Claims (Not Applicable)
- Attachment R: Authority Forms (Not Applicable)
- Attachment S: Title V Permit Revision Information (Not Applicable)

2. CONSTRUCTION PERMIT REQUEST

With this submittal, NSWV is requesting a modification to its Permit to Construct. This section includes a detailed process description of the NSWV. A process flow diagram is provided in Appendix B for reference. NSWV will manufacture high quality sheets of steel primarily from scrap steel, fluxing agents, reducing agents, and scrap substitutes. Iron ore will not be processed at the mill and the mill will not utilize coke ovens or blast furnaces. NSWV is expected to produce approximately 3 million tons of steel product per year. NSWV commenced construction in May 2022, began actual construction of the mill in June 2023, and intends to commence startup operations at the Cold Mill in the fourth quarter of 2025. Startup operations for the Melt Shop are expected to begin in the second quarter of 2026. The mill will include the following major processes:

Melt Shop
- Single-shell direct current (DC) electric arc furnaces (EAFs)
- Ladle metallurgy furnaces (LMFs)
- Vacuum tank degassers (VTDs)
- Subentry nozzle preheaters and preheater ovens
- Ladle dryers and preheaters
- Tundish dryers and preheaters
- Continuous caster

Hot Mill
- Tunnel furnace
- Rolling mill

Cold Mill
- Pickling line
- Pickling line scale breaker
- Pickling line boilers
- Galvanizing lines
    - Cleaning
    - Skin pass mills
    - Two (2) electrostatic oilers
    - Passivation roll coaters
    - Stenciling
    - Furnaces
- Galvanizing line boilers
- Standalone temper mill
- Tandem mill
- Annealing furnaces
- Air make-up units
- Three (3) electrostatic oilers

Auxiliary Processes
- Storage piles and silos
- Raw material, scrap, and slag handling operations
- Scrap cutting
- Air separations plant
- Emergency generators
- Cooling towers
- Storage tanks

- Paved roadways
- Refractory brick recycling
- Parts washers

2.1 Process Overview

2.1.1 Raw Material Storage and Handling

Various raw materials will be purchased from outside vendors and stored and handled at the facility prior to use in the steelmaking process. Material handling operations located indoors are controlled using a canopy hood, baghouses, and bin vents. Transfer rates for raw materials after they are loaded into their respective storage silos and hoppers are limited by the maximum EAF production capacity of 280 tons per hour. Rates for individual raw materials are based on the required composition of the final product.

2.1.1.1 Scrap Metal

Scrap material may include but is not limited to sheet metal, rectangular scrap bundles, shredded scrap, plate scrap, structural scrap, and miscellaneous scrap metal. Scrap will be transported to the facility by trucks, barge, and rail. Scrap will be unloaded from the barge via a clamshell or magnetic crane located on the dock and loaded into hauler trucks for transport to the scrap yard. Railcars of scrap will be unloaded via a magnetic crane into hauler trucks for transport to the scrap yard. Scrap delivered by truck will be transferred to the scrap yard. The scrap yard will consist of various storage piles for the various types of scrap. Prior to entering the melt shop, the scrap is transferred into charge buckets again using hauler trucks. Finished product chemistry and mechanical property requirements as well as cost and scrap inventory determine the charge mix. Subsequently, overhead cranes bring the charge bucket into position over the EAF. Once in position, the charge bucket bottom opens, allowing scrap to fill the EAF.

Potential emissions from scrap unloading to on-site hauler trucks, unloading the hauler trucks to scrap stockpiles, loading the hauler trucks from the stockpiles for transport to the melt shop, and transfer of material between stockpiles are included in the scrap receiving and handling emission points.

Emissions from transportation of the scrap metal from the barge dock to the stockpiles and from the stockpiles to the melt shop are included in the paved road emission points. Emissions from scrap cutting and cutting of recycled coils are included in natural gas combustion emissions and PM emissions are controlled by a portable baghouse. Wind erosion emissions from active scrap stockpiles are included in the scrap stockpile emission calculations.

2.1.1.2 Scrap Substitutes

Scrap substitutes will be delivered to the facility by barge, unloaded and transported using a system of conveyors, and stored in silos controlled with bin vents prior to charging to the EAF.

The scrap substitutes will be unloaded from the barge via a clamshell crane located on the dock and transferred to a receiving bin. The bin will be equipped with multiple bin vents to capture potential PM emissions. From the bottom of the bin, the scrap substitutes will be conveyed to storage silos. The scrap substitute will then be conveyed from the bottom of the silos to one of four bin extraction hoppers located near the melt shop. From the bin extraction equipment, the scrap substitute will be transferred to the melt shop via conveyors where it will be added to the EAF charge through the roof of the EAF.

The scrap substitute storage silos, bin extraction equipment, and conveyor transfer points will be equipped with bin vents to control potential PM emissions generated throughout the material handling process. Outdoor transfer points will be controlled by the Material Handling Exterior Baghouse and transfer points inside the Melt Shop will be controlled by the Material Handling Interior Baghouse. Both of the baghouses exhaust to a common vent header controlled by the EAF Baghouses.

The scrap substitute handling system will include emergency bypass chutes located on scrap substitute silos and at the end of scrap substitute conveyors. The emergency bypass chutes are required to remove scrap substitutes from the system that cannot be fed to the furnaces. Normal operation of the scrap substitute handling system will shut down if the emergency bypass chutes need to be used.

2.1.1.3 Carbon, Alloys, and Lime

Charge carbons, alloys, and lime will be transported to the site by truck. These raw materials will be unloaded via truck dump stations into unloading hoppers, which then drop materials onto associated conveyors controlled by either the exterior baghouse or interior baghouse depending on the location of the transfer point. Carbons, alloys, and lime will each have multiple individual day bins for storage and management of raw materials feed. Materials will be transported through conveyors, elevators, weighing scales, and final hoppers on their way to the EAF, LMF, and the VTD processes as needed to meet product specifications. Transfer points along the carbon, alloy, and lime handling systems will be controlled by the canopy hood, bin vent, or interior/exterior baghouses. Both the interior and exterior baghouses exhaust to a common vent header controlled by the EAF Baghouses. Dust collected from the baghouses will be periodically emptied and potential PM fugitive emissions will occur.

2.1.2 Melt Shop

The primary processing at the facility occurs in the melt shop. The feed materials are processed into liquid steel in the EAF and further refined in the LMF and vacuum tank degassers.

2.1.2.1 EAF Melting and Refining Operations

To initiate the steelmaking process, scrap material and/or scrap substitute will be placed in each EAF. During a "cold" startup of EAF operations, loading of scrap will be accomplished using charge buckets, which are transported into position over the EAFs using overhead cranes. Once the charge bucket is in position, the furnace roof will pivot to the side, and the scrap will be charged to the furnace. Once charging is complete, the furnace roof will be re-positioned, and the steel will be preheated through natural gas fired oxyfuel burners. Once preheated, the furnace electrode will be lowered. Electrical power will be provided to increase the temperature of the scrap to beyond the steel melting point of approximately 3,000 degrees Fahrenheit (°F). The continued use of the natural gas fired oxyfuel burners promotes post combustion of gases in the furnace vapor space and introduces oxygen into the furnace for use in exothermic reactions within the melt.

During the melting process, fluxing agents (e.g., lime and injection carbon) will be used to remove impurities from the steel through the formation of "slag." Oxygen and reducing agents will be injected to make the slag foam. The low-density slag also provides insulation to reduce energy losses and improve heat transfer during the melting process.

Once steel melting in the EAF is complete, the contents of the furnace will be poured ("tapped") into a refractory-lined chamber ("ladle"), which will transport the molten steel to the ladle metallurgy furnaces (LMF) for further refining. A 10 to 20-ton "heel" of molten steel is typically left in the furnace after tapping

in order to assist in the melting of the subsequent heat's scrap charges and to prevent damage to the furnace from thermal and mechanical shock during the next charge. The molten heel is periodically tapped out of the furnace so that the refractory can be inspected and repaired if needed. After tapping the molten heel, a "cold" startup is required, which requires greater than normal energy usage and batch time.

EAF emissions are generated during charging, melting, and tapping. In general, when the furnace roof is closed, emissions will be controlled by a direct-shell evacuation control (DEC) system, which is vented through a large diameter air-cooled duct to the melt shop baghouse for particulate control. When the furnace roof is open, emissions will be captured by the canopy hood above the EAF, which is also vented to the melt shop baghouse. Emissions that are not captured by the DEC system or the canopy hood may be released as fugitives from the melt shop building openings.

EAF dust collected in the melt shop baghouses will be loaded into railcars beneath the silo to be transported to off-site disposal or reclamation facilities.

2.1.2.2 Ladle Metallurgy Furnace

The ladles of molten steel are transferred from the EAF to the LMF for steel refining. Each LMF will consist of a combined furnace and stirring station. The introduction of additional materials, such as metal alloys or lime, will occur in the LMF in order to produce steel that meets specific customer requirements. Emissions from the LMF operations will also be captured and controlled by the Melt Shop canopy hood. Any uncaptured emissions from the canopy hood will be released as fugitives from the Melt Shop building.

2.1.2.3 Vacuum Tank Degassing Operations

A portion of the steel will be further refined in the VTDs to reduce/eliminate dissolved gases, especially hydrogen, nitrogen, and carbon. Ladles are placed directly into the VTD for processing. During the degassing process, material additions are made for deoxidation, decarburization, and alloying. These materials will be supplied to the vacuum degasser by the Alloy, Carbon, and Lime Handling Systems. Once the ladle is enclosed in the VTD, mechanical pumps will be used to draw a vacuum on the ladle. The gas from the VTD is captured and first directed through a particulate filter to protect the mechanical pumps. The gas is then directed to a flare to control the excess carbon emissions, mainly CO.

2.1.2.4 Continuous Casting Operations

Once the molten steel achieves the desired properties in the LMF and/or VTD, the ladle will be removed and transported by overhead crane to a continuous casting machine. In the caster, steel will flow via a bottom slide gate from the ladle into another refractory-lined chamber ("tundish"). From the tundish, the molten steel will flow through a specially designed tundish nozzle into a thin slab caster. As the steel travels through the caster, it will be cooled with process water and formed into a continuous ribbon of steel. Caster spray vents will capture PM and VOC emissions released from the steam produced by contact between the hot steel and cooling water. Any PM emissions not captured by the caster spray vents, will be released as fugitive emissions through matrix vents in the roof of the building.

2.1.3 Hot Mill

2.1.3.1 Tunnel Furnace

After cooling, the ribbon of steel from the caster is sheared to length to form individual slabs and sent to the natural gas fired tunnel furnace. At the tunnel furnace, the slabs are heated to achieve a consistent temperature through the entire slab for feed to the hot rolling mill.

2.1.3.2 Rolling Mill

In the rolling mill, the slab thickness is reduced to meet customer specification then cooled and coiled. Fugitive PM and VOC emissions from this process are vented into the Hot Mill building and will be exhausted through matrix vents in the roof of the building.

2.1.4 Cold Mill

2.1.4.1 Scale Breaker

A tension leveler type scale breaker will apply pressure to the steel slabs, elongating the slab to correct surface defects and breaking the iron oxide layer on the slab surface in order to enrich pickling performance. PM emissions from the scale breaker will be captured and controlled via a cyclone.

2.1.4.2 Pickling Line

The pickling operation cleans steel for shipment or further processing by removing scale and other deposits from the steel surface, which may develop during the manufacturing process. In the cold mill, the steel is chemically cleaned on the continuous pickling line using hydrochloric acid (HCl). HCl emissions will be controlled by a scrubber. Emissions of PM from the pickling line will be controlled by a mist eliminator. After the steel has been pickled, a rust preventative coating may be applied to the finished steel. The coating is applied using an electrostatic spray to provide corrosion and rust resistance. The electrostatic spray evenly coats the steel surface using a controlled electrostatic charge to uniformly disperse oil particles. Emissions from the electrostatic oiler include PM/PM10/PM2.5 and VOC. PM emissions not captured at the oilers will be reduced due to building capture. The remaining portion will be released as fugitives from the Cold Mill building. Pickled coils can be shipped to customers as finished product, or further processed in the tandem cold mill, to further reduce thickness of the coil, or the batch annealing bays.

2.1.4.3 Tandem Cold Mill

A tandem cold mill is a type of cold-rolling mill which uses a rolling solution while compressing the steel coil to achieve a desired thickness and surface quality. PM and VOC emissions from the tandem cold mill process will be captured and controlled via a mist eliminator. The final product of the tandem cold mill is cold rolled steel strips. After the tandem cold mill process, these steel strips may be further annealed and/or tempered on site.

2.1.4.4 Annealing Furnaces

Annealing furnaces will be used to alter the chemical or physical properties of a metal to make it more ductile and reduce its hardness. It will relieve internal stresses that may lead to failure in service and will produce a more uniform, or homogeneous, internal structure. Emissions from natural gas combustion will be released as fugitives and released through matrix vents in the roof of the Cold Mill.

2.1.4.5 Galvanizing Lines

In the galvanizing lines, steel undergoes a process to alter the chemical properties of its surface. First, the steel will go through a cleaning section that removes rolling oils and metal fines from the surface of the steel. This section is controlled by a mist eliminator. The steel will then go through a furnace to heat the strip to the appropriate operating temperature followed by the zinc bath. A skin pass mill is then used to improve the surface of the steel followed by a passivation section where it is roll coated, resulting in the formation of protective layers that combat corrosion. The passivation process will release VOC and HAP emissions. Both skin pass mills will be equipped with a mist eliminator to control PM emissions.

Galvanized steel will be stenciled then electrostatically oiled to provide corrosion resistance and rust prevention. Both processes generate fugitive VOC emissions and electrostatic oiling also generates PM emissions. PM emissions not captured at the oilers will be reduced due to building capture. The remaining portion will be released as fugitives from the Cold Mill building. The final product is galvanized or galvannealed cold rolled steel intended for critical exposed automotive applications. Air make-up units will be placed in finished coil storage buildings to temper outside air and supply to the building for pressure balancing.

2.1.4.6 Standalone Temper Mill

The standalone temper mill is a cold-rolling mill which improves the surface finish on steel products. A variety of surface finishes are used to impart the desired finish to the product. The temper mill will be equipped with a mist eliminator to manage occupational safety considerations at the mill. The temper mill will also have a dedicated electrostatic oiler that will generate fugitive VOC and PM emissions during the application process. PM emissions not captured at the oilers will be reduced due to building capture. The remaining portion will be released as fugitives from the Cold Mill building.

2.1.4.7 Recoiler

Steel may also be rolled into a coil prior to storage or shipment to customer. The recoiling process does not generate emissions on its own, but the recoiler will have a dedicated electrostatic oiler that will generate fugitive VOC and PM emissions during the application process. PM emissions not captured at the oilers will be reduced due to building capture. The remaining portion will be released as fugitives from the Cold Mill building.

2.1.5 Slag Processing

As mentioned in the Melt shop process discussion, slag is formed as lime and carbon are added to the steel bath to remove phosphorous and sulfur in both the EAF and LMF. Slag processing equipment will be required to handle, quench, crush, and screen the slag that is generated as part of the molten steel production in the melt shop.

The slag formed in the EAF tends to be larger in diameter and requires processing prior to resale as a usable aggregate product. The slag formed in the EAF will be emptied into slag pots beneath the furnace. After the slag pot is filled, it is taken to the slag dump station where it will be quenched using process water. The slag formed in the LMF will be emptied from the ladle after the LMF refining operation is complete. LMF slag will then be transported to the slag processing area.

Larger sized slag will first be sent to the ball drop operation to crush the slag prior to processing. Then, in the processing area, slag will be further crushed, screened, and separated into various products. Processed slag products will be transported off-site by truck for sale to customers for use as road-base materials and other uses. Potential fugitive emissions will occur from drop points along the process, controlled by water spray.

Slag processing piles will also be required to temporarily store in process material and final size-specific products prior to transport off site. Potential emissions from the slag piles include material transfer onto the piles and loading material from the piles into trucks, as well as potential emissions from wind erosion. Slag piles will also be controlled by water spray.

Magnets will also be utilized to separate residual metal scrap from slag in the slag processing area so it can be stored and reused in the process.

2.1.6 Auxiliary Operations

Additional sources at the facility include cooling towers, boilers, emergency generators, plant roads, an air separation unit, and other material handling activities such as brick recycling operations.

2.1.6.1 Air Separation Unit

The mill will include an air separation plant to supply process gases, such as nitrogen and oxygen, to various facility operations. The air separation plant will include a Water Bath Vaporizer, an emergency generator, and a cooling tower. The Water Bath Vaporizer is a backup unit employed when the air separation plant is down, or the nitrogen or oxygen demand is more than the air separation plant is generating. During these events, liquefied gas maintained in storage tanks is passed through the Water Bath Vaporizer to vaporize the liquefied gas prior to distributing the gas to the process operations.

2.1.6.2 Emergency Engines

Emergency generators will be needed to provide emergency power for critical operations should the facility power supply be interrupted. The mill will operate twenty-six (26) emergency generators, all powered by natural gas spark ignition engines and the site will be capable of running these generators simultaneously.

2.1.6.3 Storage Tanks

Throughout the mill, there will be a variety of auxiliary storage tanks to store the following materials utilized in operations throughout the mill. The tanks are comprised of horizontal and vertical fixed roof tanks. Tanks will emit VOC and/or HAP emissions.

- Diesel
- Gasoline
- Hydraulic Oil
- Hydrochloric Acid
- Spent Pickle Liquor, and
- Used oil

2.1.6.4 Parts Washers

The mill will operate parts washers that will use solvents to clean grease and oil from metal items within various processes throughout the mill. The parts washers will release fugitive VOC emissions.

2.1.6.5 Cooling Towers

The mill will operate seven (7) cooling towers, that will provide contact and non-contact cooling water to various processes throughout the mill. The cooling towers will release PM emissions from total dissolved solids in process water. Three (3) cooling towers in the hot mill and caster areas that provide contact cooling water will also release VOC and HAP emissions. Emissions will be controlled through the use of drift eliminators incorporated into the design of the cooling tower.

2.1.6.6 Boilers

The mill will operate four (4) natural gas-fired boilers. Two (2) boilers will provide steam to the galvanizing lines and two (2) boilers will provide steam to the pickling and tandem cold mill lines. All boilers will be equipped with low-NO_X burners.

2.1.7 Refractory Brick Recycling

Refractory brick is used to line furnaces for high temperature processes, including the production of steel. Over time, refractory brick will need to be replaced. Rather than disposing of these materials, the mill will collect and recycle the spent refractory. Bricks will be transported via truck and processed through crushing, screening, and material handling operations. Emissions of PM, PM-10, and PM-2.5 occur from these operations and dust suppression will occur through water spray controls.

2.2 Summary of Emission Sources

NSWV plans to install the following air emission units during the construction of the mill. Note that the design information discussed in this application is based on best available design information provided by vendors at the time of this application.

Melt Shop

- Two (2) single shell DC EAFs and two (2) LMFs each with a maximum hourly capacity of 280 tph and annual capacity of 1.64 million tons per year; each controlled by a DEC system, canopy hood, and individual negative pressure baghouses.
- Three (3) ladle dryers firing natural gas each with a rating of 15 MMBtu/hr.
- Five (5) horizontal ladle preheaters firing natural gas each with a rating of 15 MMBtu/hr.
- Two (2) vertical ladle preheaters firing natural gas each with a rating of 10 MMBtu/hr.
- Two (2) tundish dryers firing natural gas each having two (2), 3 MMBtu/hr burners (total is 6 MMBtu/hr for each dryer).
- Two (2) tundish preheaters firing natural gas each having three (3), 3 MMBtu/hr burners (total is 9 MMBtu/hr for each preheater).
- Two (2) subentry nozzle preheaters firing natural gas each having two (2), 0.31 MMBtu/hr burners (total is 0.62 MMBtu/hr for each preheater).
- One (1) subentry nozzle preheater oven firing natural gas with a rating of 0.682 MMBtu/hr
- Two (2) vacuum tank degassers each equipped with a mechanical vacuum pump pulling negative pressure and a flare designed to meet 98% control efficiency. Each vacuum degasser flare will have the ability to fire natural gas assist gas at 12.4 MMBtu/hr.

- One (1) continuous caster equipped with a spray cooling system and two exhaust pickup points (Caster Spray Vents).

Hot Mill

- One (1) tunnel furnace firing natural gas with a rating of 250 MMBtu/hr.
- One (1) hot mill with a maximum hourly capacity of 606 tph will generate fugitive emissions that will be collected and routed through twelve (12) hot mill roof matrix vents.

Cold Mill

- One (1) pickling line scale breaker and one (1) pickling treatment line each with a rating of 560 tph and annual capacity of 3.28 million tons per year.
- Two (2) galvanizing cleaning lines each with a rating of 280 tph and annual capacity of 1.64 million tons per year.
- Two (2) galvanizing passivation roll coaters each with a maximum application rate of 14,235 gallons/yr of corrosion inhibitor.
- Two (2) galvanizing stenciling lines each with a rating of 820 gallons/yr.
- Two (2) galvanizing furnaces firing natural gas rated at 73.3 MMBtu/hr and 79.8 MMBtu/hr, respectively.
- Twelve (12) box annealing furnaces firing natural gas each with a rating of 5.0 MMBtu/hr.
- One (1) tandem cold mill with a rating of 560 tph and annual capacity of 3.28 million tons per year.
- One (1) temper mill with a rating of 560 tph and annual capacity of 3.28 million tons per year.
- Two (2) skin pass mills each with a rating of 280 tph and annual capacity of 1.64 million tons per year.
- Two (2) galvanizing line boilers each rated at 6.7 MMBTU/hr and two (2) pickling line tandem cold mill (PLTCM) boilers rated at 74 MMBtu/hr and 71.64 MMBtu/hr, respectively.
- Five (5) electrostatic oilers rated at 656 ft/min for the pickling line, 1,400 ft/min for the temper mill, 750 ft/min for each galvanizing line, and 700 ft/min for the recoiling line.
- Eighteen (18) air make-up units firing natural gas to provide building heat, each rated at 4.0 MMBtu/hr.

Raw Material Handling

- A carbon, alloy, and lime handling system consisting of a truck unloading station, conveyor systems, weigh stations, day bins, and hoppers.
- A scrap substitute handling system consisting of barge unloading, conveyor systems, storage silos, weigh stations, and day bins.
- A scrap handling system consisting of barge, rail, and truck unloading operations, as well as scrap transfers, storage pile management, and loading for transfer to the EAFs.
- One (1) scrap and coil cutting unit firing natural gas with six (6), 1.2 MMBtu/hr torches (total of 7.2 MMBtu/hr), controlled by a portable baghouse.

Slag Handling

- A slag handling system consisting of various conveyors, crushing operations, and screening operations.

Storage Piles

- Slag stockpiles used for intermediate and product storage.
- A designated scrap yard used to manage multiple scrap storage piles with an estimated 30 acres of surface area.

Refractory Brick Recycling

- One (1) refractory brick recycling system consisting of various conveyor systems, crushing operations, and screening operations.

Auxiliary Equipment

- One (1) air separation unit including a 46.5 MMBtu/hr water bath vaporizer.
- Seven (7) contact and non-contact cooling towers with a total recirculation rate of 320,760 gallons per minute.
- Twenty-six (26) natural gas fired emergency engines with a rating of 777 hp each.
- Sixteen (16) storage tanks containing organic liquids (e.g., diesel, gasoline, hydraulic oil, used oil).
- Twelve (12) storage tanks containing virgin or spent pickle liquor.
- Nine (9) solvent parts washers.
- Paved roadways will be constructed in and around the facility.

2.3 Proposed Project Emissions

Table 2-1 provides a summary of the potential annual emissions attributable to the mill, including particulate matter, particulate matter with an aerodynamic diameter of 10 microns or less, and particulate matter with an aerodynamic diameter of 2.5 microns of less ($PM/PM_{10}/PM_{2.5}$); nitrogen oxides (NO_X); sulfur dioxide (SO_2); carbon monoxide (CO); volatile organic compounds (VOC); lead; fluoride (excludes hydrogen fluoride), total hazardous air pollutants (HAP); and greenhouse gases (i.e., carbon dioxide [CO_2], methane [CH_4], and nitrous oxide [N_2O]) expressed as carbon dioxide equivalents (CO_2e). The detailed emission calculations and supporting documentation is provided in Attachment N.

Table 2-1. Facility-Wide Potential Emissions Summary

	NO_X (tpy)	CO (tpy)	SO_2 (tpy)	VOC (tpy)	PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)	Lead (tpy)	Fluoride (tpy)	Total HAPs (tpy)	CO_2e (tpy)
NSWV PTE	1,000	3,688	396	313	556	818	766	0.74	7.38	19.6	1,092,049

3. REGULATORY APPLICABILITY

This section presents information and data to either confirm non-applicability of or demonstrate compliance with potentially applicable federal and state air permitting and regulatory requirements for NSWV. Please note that for this reconciliation application, only changes that impact regulatory applicability are addressed below. For unchanged equipment, the original regulatory applicability sections from the March 22, 2022, and July 24, 2024 applications remain valid.

The applicability of Prevention of Significant Deterioration (PSD) Review, Nonattainment New Source Review (NANSR), New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP), and West Virginia 45 Code of State Rules (CSR) regulations are addressed in the sections below.

3.1 Construction Permitting Applicability

Construction permitting programs regulate new sources of pollutants under the New Source Review permit program. For areas meeting the National Ambient Air Quality Standards for criteria pollutants, the requirements of Prevention of Significant Deterioration (PSD) apply. If an area does not meet the NAAQS, the Non-Attainment New Source Review (NANSR) requirements are imposed.

Iron and steel mill plants are classified as one of the 28 listed source categories in Title 45, Legislative Rule of the Department of Environmental Protection, Series 14 (45CSR14) Section 2.43.a. with a 100 ton per year (tpy) "major" source PSD threshold. As such, NSWV is considered a new "major" source with regard to PSD due to its facility-wide potential emissions greater than 100 tpy for PSD pollutants. Therefore, the project is subject to PSD review.

As mentioned above, the applicability of NANSR is evaluated for proposed construction, reconstruction, and modification of a major source in an area that is not meeting the NAAQS. NSWV will be located in Mason County, which has been designated as "in attainment" or "unclassifiable" for all regulated NSR pollutants (see 40 CFR 81.349). Therefore, NSWV is not subject to the requirements of NANSR.

3.2 Title V Operating Permit Program

The requirements of 40 CFR Part 70 establish the federal Title V operating permit program elements required for a state to accept delegation of authority from the U.S. EPA. West Virginia has promulgated the necessary provisions of this Title V operating permit program. Initially, U.S. EPA granted final full approval effective on November 19, 2001. Since then, West Virginia adopted the necessary revisions to remain the delegated authority for the Part 70 operating permit program. To date, West Virginia implements a fully approved Part 70 operating permit program under 45CSR30 (see 40 CFR 70, Appendix A).

With respect to the West Virginia Title V operating permit program, the regulatory major source thresholds are 10 tons per year (tpy) of a single hazardous air pollutant (HAP), 25 tpy of any combination of HAPs, and 100 tpy of all other regulated pollutants (except for Greenhouse Gas emissions). The potential emissions of at least one regulated pollutant exceed the corresponding threshold(s) at this facility. Therefore, NSWV is classified as a major source for Title V purposes. NSWV will submit a Title V permit application within twelve (12) months of commencing operation in accordance with 45CSR30-4.1.a.2.

3.3 New Source Performance Standards

The federal NSPS require new, modified, or reconstructed sources to control emissions to the level that is achievable by the best demonstrated technology as specified in the applicable provisions of the rule. The following summary describes the applicability and non-applicability of NSPS subparts relevant to NSWV.

3.3.1 40 CFR 60, Subpart AAa –Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 17, 1983 and On or Before May 16, 2022

The affected sources under 40 CFR 60, Subpart AAa (NSPS AAa) are electric arc furnaces (EAF), argon-oxygen decarburization vessels, and dust-handling systems that are constructed after August 17, 1983 and on or before May 16, 2022.

NSWV entered into site specific contractual obligations prior to May 16, 2022, for the affected sources that could not be cancelled or modified without substantial loss thereby meeting the criteria for "commencing construction" prior to May 16, 2022. Therefore, the EAFs and EAF dust handling system are subject to NSPS Subpart AAa.

With this application update, there are no changes with regards to the applicability of NSPS AAa to the affected sources.

3.3.2 40 CFR 60, Subpart AAb –Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After May 16, 2022

The affected sources under 40 CFR 60, Subpart AAb (NSPS AAb) are electric arc furnaces (EAF), argon-oxygen decarburization vessels, and dust-handling systems constructed or modified after May 16, 2022.

As mentioned above, NSWV commenced construction of the affected sources prior to May 16, 2022. Therefore, NSPS AAb does not currently apply to any emission units at NSWV.

3.3.3 40 CFR 60, Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

The affected source under 40 CFR 60, Subpart Db (NSPS Db) is each steam generating unit for which construction, modification, or reconstruction is commenced after June 19, 1984, and that has a maximum design heat input capacity of greater than 100 million British thermal units per hour (MMBtu/hr).

As provided in 40 CFR 60.41b, a steam-generating unit is defined as:

"…a device that combusts any fuel or byproduct/waste and produces steam or heats water or heats any heat transfer medium. This term includes any municipal-type solid waste incinerator with a heat recovery steam generating unit or any steam generating unit that combusts fuel and is part of a cogeneration system or a combined cycle system. This term does not include process heaters as they are defined in this subpart."

With this application update, there are no changes with regards to the applicability of this subpart to the affected sources.

3.3.4 40 CFR 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial Steam Generating Units

The affected source under 40 CFR 60, Subpart Dc (NSPS Dc) is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989, and that has a maximum design heat input capacity of 100 million British thermal units per hour (MMBtu/hr) or less, but greater than or equal to 10 MMBtu/hr. NSPS Dc contains emission standards for SO_2 and PM.

As provided in 40 CFR 60.41c, a steam-generating unit is defined as:

"…a device that combusts any fuel and produces steam or heats water or heats any heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart."

With this application update, there are no changes with regards to the applicability of this subpart to the following affected sources:

- Ladle Dryer
- Ladle Preheaters #1-7
- Galvanizing Furnace #1-2

Please note the Box Annealing Furnaces #1-12 are no longer sized to a capacity greater than 10 MMBtu/hr and do not need to be considered for NSPS Dc.

Two additional Ladle Dryers (#2-3) have been added since the prior application and are sized to a capacity greater than 10 MMBtu/hr. The new ladle dryers are not subject to NSPS Subpart Dc as they are direct-fired and are therefore exempt from the definition of steam-generating units listed above.

The Water Bath Vaporizer does meet the definition of a steam-generating unit, will heat water as a heat transfer medium, and has a heat input capacity of 47 MMBtu/hr. The Water Bath Vaporizer will only fire natural gas and Subpart Dc does not have any emission standards for units that combust only natural gas. Therefore, the Water Bath Vaporizer is only subject to the nominal record-keeping and reporting requirements given under 40 CFR 60.48c.

3.3.5 40 CFR 60, Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels)

40 CFR 60, Subpart Kb applies to storage vessels with a capacity greater than or equal to 75 m^3 (~19,813 gallons) that are used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984. With this application update, there are no sources subject to the provisions of this subpart.

3.3.6 NSPS Subpart Kc – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels)

NSPS Subpart Kc applies to storage vessels with a capacity greater than or equal to (20,000 gallons) that are used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after October 4, 2023. The existing storage tanks at NSWV are not subject to this subpart because they do not store volatile organic liquids in storage vessels with a capacity greater than 20,000 gallons.

3.3.7 40 CFR 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

According to 40 CFR 60.4230(a)(4), owners and operators of spark-ignition internal combustion engines (SI ICEs) constructed after June 12, 2006, must comply with the standards of 40 CFR 60, Subpart JJJJ (NSPS JJJJ). The emergency engines are subject to the requirements under NSPS Subpart JJJJ.

The emergency engines are required to meet the emission standards in Table 1 of this subpart pursuant to 40 CFR 60.4233(e). This includes:

- NO_X: 2.0 g/hp-hr or 160 ppmvd at 15% O_2
- CO: 4.0 g/hp-hr or 540 ppmvd at 15% O_2
- VOC: 1.0 g/hp-hr of 86 ppmvd at 15% O_2

The 777 hp emergency engines are certified to meet non-emergency standards outlined in 40 CFR 60, Subpart JJJJ for engines greater than 500 hp but less than 1350 hp.

The emergency engines must also meet the operating hour requirements of 40 CFR 60.4243(d) which include:

- No time limit on use in emergency situations
- Up to 100 hours per year for maintenance checks/readiness testing, emergency demand response, or voltage/frequency deviation ≥ 5% below standard.
- 50 hours (of the 100) per year can be for non-emergency operation.

With this application update, there are no changes with regards to the applicability of this subpart to the affected sources. Since the prior application, the number of natural gas fired emergency engines has increased to twenty six (26) total engines, all rated at 777 hp.

3.3.8 40 CFR 60, Subpart TT — Standards of Performance for Metal Coil Surface Coating

The provisions of 40 CFR 60 Subpart TT (NSPS TT) apply to affected facilities in metal coil surface coating, including prime coat, finish coat, and combined prime and finish coat operations at facilities that commenced construction, modification, or reconstruction after January 5, 1981. The galvanizing lines at NSWV will include passivation roll coating where a coating is applied to steel coils to enhance corrosion resistance.

As provided in 40 CFR 60.461, finish coat operations are defined as:

> *"…the coating application station, curing oven, and quench station used to apply and dry or cure the final coating(s) on the surface of the metal coil. Where only a single coating is applied to the metal coil, that coating is considered a finish coat."*

Passivation roll coating operations will be subject to NSPS TT as finish coat operations and will be subject to the following requirements:

- Limit coating operations to 0.28 kilogram VOC per liter (kg VOC/L) of coating solids applied for each calendar month. [40 CFR 60.462(a)(1)]

- Conduct an initial performance test and demonstrate compliance each subsequent calendar month according to 40 CFR 60.463(c)(1). The monthly volume-weighted average emissions of VOC shall be determined according to 40 CFR 60.463(c). [40 CFR 60.463(b)]
- Monitor VOC emissions by recording average VOC content of coatings applied each calendar month. [40 CFR 60.464(a)]
- Submit an initial compliance report including the weighted average of the VOC content of coatings used during a period of one calendar month. [40 CFR 60.465(a)]
- Following the initial performance test, NSWV shall identify, record, and submit a quarterly report of each instance in which the volume-weighted average of the local mass of VOC's emitted to the atmosphere per volume of applied coating solids (N) is greater than the limit specified in 40 CFR 60.462(a)(1). If the limit is not exceeded, a semiannual report will be submitted stating such. [40 CFR 60.465(c)]
- Maintain records for two years of data used to determine monthly VOC calculations. [40 CFR 60.465(e)]
- Compliance with the limit in 40 CFR 60.462(a)(1) will be determined using Method 24 or data supplied by the coating manufacturer. [40 CFR 60.466(a)]

3.4 National Emission Standards for Hazardous Air Pollutants

Maximum achievable control technology (MACT)-based NESHAPs (located in 40 CFR 63) require sources that are "major" for HAPs to control emissions to the level achievable by the best demonstrated technology as specified in the applicable provisions. A major source is defined in 40 CFR 63.2 as:

"…any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants…"

Generally available control technology (GACT)-based NESHAPs (located in 40 CFR 63) require area (i.e., non-major) sources to control emissions to the level achievable by the use of generally available control technologies or management practices to reduce emissions of HAPs.

As demonstrated in Section 2 above, NSWV does not have the potential to emit more than 10 tpy of a single HAP or 25 tpy of combined HAPs. As such, NSWV is considered an area source (i.e., non-major source) of HAPs. Therefore, NSWV has evaluated the potential applicability of GACT requirements for area sources for NSWV.

3.4.1 40 CFR 63, Subpart MMMM – National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products

40 CFR 63, Subpart MMMM applies to the surface coating of miscellaneous metal parts and products including numerous industrial, household, and consumer products using spray guns or dip tanks. This rule is only applicable to sources that use 250 gallons or more per year of HAP-containing coatings, apply to metal industrial, household, or consumer products, and are a major source of emissions of HAP. Electrostatic oiling, passivation roll coating, and stenciling operations at NSWV will not be subject to Subpart MMMM because these operations apply surface coating to metal coils, not miscellaneous metal parts and products.

3.4.2 40 CFR 63, Subpart SSSS — National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Coil

40 CFR 63, Subpart SSSS applies to facilities that perform metal coil surface coating operations located at major sources of HAP. Passivation roll coating, electrostatic oiling, and stenciling operations at NSWV will not be subject to Subpart SSSS because the facility is not a major source of HAP.

3.4.3 40 CFR 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)

40 CFR 63, Subpart ZZZZ applies to facilities that operate stationary reciprocating internal combustion engines (RICE). The emergency engines at NSWV will satisfy the requirements of Subpart ZZZZ by complying with the standards of NSPS JJJJ pursuant to 40 CFR 63.6590(c)(1). No other requirements apply under this subpart. With this application update, there are no changes with regards to the applicability of this subpart to the affected sources.

3.4.4 40 CFR 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Hazardous Air Pollutants Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters

40 CFR 63, Subpart DDDDD applies to industrial boilers and process heaters located at major sources of HAPs and establishes national emission limitations and work practice standards for HAP emissions from these units. The boilers and process heaters at NSWV will not be subject to this rule because the facility is not a major source of HAP in this application update.

3.4.5 40 CFR 63, Subpart YYYYY - Area Source NESHAP for Electric Arc Furnace Steelmaking Facilities.

40 CFR 63, Subpart YYYYY applies to EAF steelmaking facilities located at area source of HAP emissions. With this application update, there are no changes with regards to the applicability of this subpart to the affected sources as the EAF operations located at NSWV will continue to have a production capacity that exceeds 150,000 tons per year (tpy).

3.4.6 40 CFR 63, Subpart ZZZZZ - Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources

40 CFR 63, Subpart ZZZZZ applies to each iron and steel foundry that pours molten metal into molds to produce final or near final shape products for introduction into commerce and is located at an area source of HAP emissions. NSWV does not meet this definition of iron and steel foundry and is exempt from this subpart.

3.4.7 40 CFR 63, Subpart CCCCCC – National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities

40 CFR 63, Subpart CCCCCC establishes national emission limitations and management practices for HAP emitted from the loading of gasoline storage tanks at gasoline dispensing facilities (GDF). With this application update, there are no changes with regards to the applicability of this subpart to the affected sources.

3.4.8 40 CFR 63, Subpart HHHHHH — National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources

40 CFR 63, Subpart HHHHHH applies to area sources of HAP emissions that include the spray application of coatings containing chromium, lead, manganese, nickel, or cadmium to any part or product made of metal that are not motor vehicles or mobile equipment. NSWV does not have any spray coating operations that include the application of coatings containing HAP and is therefore not subject to Subpart HHHHHH. Electrostatic oiling operations only include the spray application of rust preventative materials and not coatings.

3.4.9 40 CFR 63, Subpart JJJJJJ - Area Sources: Industrial, Commercial, and Institutional Boilers

40 CFR 63, Subpart JJJJJJ applies to industrial, commercial, and institutional boilers located at area sources of HAP emissions. Pursuant to 40 CFR 63.11195(e). Natural gas fired units are not subject to this subpart. With this application update, there are no sources subject to the provisions of this subpart.

3.5 U.S. EPA's Good Neighbor Plan

On March 15, 2023, the U.S. EPA issued the final Good Neighbor Plan with provisions intended to reduce ozone-forming emissions of NOx from power plants and industrial facilities. The Supreme Court issued a stay on the rule on June 27, 2024 while the rule is proceeding through the court system with impending lawsuits; however, the current version of the Good Neighbor Plan is evaluated below and may require a re-evaluation once the stay order is lifted.

3.5.1 40 CFR 52.43 - Requirements of the Federal Implementation Plans (FIPs) relating to ozone season emissions of nitrogen oxides from the Iron and Steel Mills and Ferroalloy Manufacturing Industry

The requirements of this section apply to each new or existing reheat furnace at an iron and steel mill or ferroalloy manufacturing facility in affected states that directly emits or has the potential to emit 100 tons per year or more of NO_X on or after August 4, 2023 and does not have low-NO_X burners installed. With this application update, there are no sources subject to the provisions of this subpart.

3.5.2 40 CFR 52.45 - Requirements of the Federal Implementation Plans (FIPs) relating to ozone season emissions of nitrogen oxides from the Basic Chemical Manufacturing, Petroleum and Coal Products Manufacturing, the Pulp, Paper, and Paperboard Mills Industries, Metal Ore Mining, and the Iron and Steel and Ferroalloy Manufacturing Industries

The requirements of this section apply to each new or existing boiler with a design capacity of 100 MMBtu/hr or greater that receives 90% or more of its heat input from coal, residual oil, distillate oil, natural gas, or combinations of these fuels in the previous ozone season, is located at sources that are within the Basic Chemical Manufacturing industry, the Petroleum and Coal Products Manufacturing industry, the Pulp, Paper, and Paperboard industry, the Metal Ore Mining industry, and the Iron and Steel and Ferroalloys Manufacturing industry and which is located at the affected States. Emission units that meet the requirements for a "low-use" exemption are not subject to the requirements of this rule. With this application update, there are no sources subject to the provisions of this subpart.

3.6 State of West Virginia Regulatory Applicability

This section of the permit application identifies specific West Virginia SIP regulations relevant to NSWV.

3.6.1 45CSR2 - To Prevent and Control Particulate Matter Air Pollution from Combustion of Fuel in Indirect Heat Exchangers

This rule contains requirements for particulate matter emissions from the operation of fuel burning units.

A fuel burning unit is defined as:

"…any furnace, boiler apparatus, device, mechanism, stack or structure used in the process of burning fuel or other combustible material for the primary purpose of producing heat or power by indirect heat transfer."

Additionally, the definition of "indirect heat exchanger" specifically excludes process heaters, which are defined as:

"*a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst."*

A Type 'b' fuel burning unit, per the definitions provided in 45CSR2-2.10.b, is any fuel burning unit other than hand-fired or stoker-fired fuel burning units or units that generate steam or other vapor to produce electric power for sale.

Since the prior application, the Water Bath Vaporizer has been resized to fire natural gas at 47 MMbtu/hr, compared to the original design of 11 MMbtu/hr. Per 45CSR2-4.1.b, emissions of particulate matter from a type 'b' fuel burning unit must not exceed the product of 0.09 and the total design heat input in MMBtu/hr of the water bath vaporizer (i.e., 47 MMBtu/hr for a combined allowable emission rate of 4.23 lb/hr).

The water bath vaporizer will continue to comply with the opacity requirements, recordkeeping requirements including operating schedules and monthly natural gas usage, and start-up, shutdown, and malfunction requirements as described in the prior application.

New sources have been added since the prior application, including the Subentry Nozzle Preheater Oven and Air Make-up Units. However, the Subentry Nozzle Preheater Oven and Air Make-Up Units do not meet the definition of fuel burning units since they are direct fired and are therefore not subject to this rule.

With this application update, there are no other changes with regards to the applicability of this subpart to the other affected sources.

3.6.2 45CSR6 – To Prevent and Control Air Pollution from Combustion of Refuse

The provisions of 45CSR6 include emissions standards for particulate and opacity generated through the use of flares as emission control devices. The flares associated with each vacuum tank degasser (VTD) are subject to the requirements of 45CSR6, as they meet the definition of an "incinerator" under this rule, and will comply with the hourly particulate matter emission limit calculated as specified in 45CSR6-4.1. This limit is calculated by multiplying the factor, F, by the hourly flare capacity to obtain an hourly particulate matter emission limit. In this application update, the maximum estimated quantity of waste gas streams to be burned is 1,069 lb/hr (0.53 ton/hr) for each flare, and the calculated PM emission limit is 2.90 lb/hr. NSWV

has estimated that a maximum of 0.075 lb/hr of particulate matter emissions will be emitted from each flare, which is well below this limit.

The flares will continue to be subject to the opacity requirements of 45CSR6-4.3 and 4.4, which limits the opacity from smoke emitted from the flares to less than 20% opacity, except for eight (8) minutes per startup where the smoke emitted from the flares must be limited to less than 40% opacity.

NSWV will continue to comply with 45CSR6-4.5, which prevents the emission of particles of unburned or partially burned refuse or ash from any incinerator which are large enough to be individually distinguished in the open air. NSWV will also continue to comply with 45CSR6-4.6 to design, operate, and maintain flares so as to prevent the emission of objectionable odors. Lastly, NSWV will continue to comply with the malfunction requirements per 45CSR6-8.2.

3.6.3 45CSR7 – To Prevent and Control Particulate Matter Air Pollution from Manufacturing Processes and Associated Operations

45CSR7 includes provisions intended to prevent and control emissions of particulate matter from manufacturing processes and associated operations. "A manufacturing process" means "any action, operation or treatment, embracing chemical, industrial or manufacturing efforts . . . that may emit smoke, particulate matter or gaseous matter." Furthermore, in accordance with 45CSR7-10.1, the provisions of this rule do not apply to particulate matter emissions regulated by 45CSR2, 3, and 5. Because 45CSR2 establishes an opacity limit for NSWV's galvanizing line boilers, PLTCM boilers, and water bath vaporizer, these emission units will continue to be exempt from the provisions of 45CSR7 in this application update.

With this application update, a source of particulate matter emissions that is solely the result of the combustion of natural gas is not considered a "source operation" as defined under 45CSR7-2.40. This is based on the definition that states a source operation is one that "result in the separation of air contaminants from the process materials or in the conversion of the process materials into air contaminants." This determination excludes all operations that solely combust natural gas from 45CSR7 applicability, including the following units:

- Emergency Generators #1-26
- Air Make-up units #1-18
- Hot Mill Tunnel Furnace
- Subentry Nozzle Preheater #1-2
- Subentry Nozzle Preheater Oven
- Ladle Preheater #1-7
- Tundish Dryer #1-2
- Tundish Preheater #1-2
- Ladle Dryer #1-3

The EAFs, LMFs, spray vents, mills, electrostatic oilers, coil cutting and slag processing area, cooling towers, and various material handling operations at the facility meet the definition of manufacturing processes contained in 45CSR7-2.20. Therefore, they are required to comply with the standards provided in 45CSR7-3 and 45CSR7-4 for emissions of opacity and particulate matter, respectively. Please refer to the table titled, "45CSR7-4.1 - Emission Limit Determination based on Process Weight Rate" in the attached emissions calculations for the derivation of the process-weight rate emission limit for each of these sources. In this application update, the process weight rate for prior emission units have been updated. New emission sources have also been added. As shown in the aforementioned table, due to the large process weight-rates used in the production of steel and the BACT-level particulate matter controls on particulate matter-emitting

units, most of the Table 45-7A limits will be easily met, given the potential to emit for these units. BACT-level particulate matter controls for the updated emission units will continue to be used to demonstrate compliance with the 20% opacity limit.

45CSR7-10.5 provides an exemption from the requirements of 45 CSR7-4.1 for any process emitting less than 1 lb/hr (and 1,000 lb/yr from all similar sources). The aforementioned table also identifies units eligible for an exemption.

Emissions of hydrochloric acid mist and/or vapor from the exhaust of the fume scrubber controlling emissions from the pickling line must not exceed 210 milligrams per dry cubic meter per 45CSR7-4.2 and Table 45-7B. The maximum concentration of HCl in the scrubber exhaust was determined to be 6 ppmv and the aggregate mass emission rate of HCl was 0.53 lbs/hr for the Pickling Line. Using the emission rate and the flow rate (15,303 dscfm), the calculated exhaust concentration is 9.24 mg/m^3, which demonstrates that the emission rate is in compliance with this limit.

The requirements of 45CSR7-5 apply to sources of fugitive particulate matter, including the paved roadways and material transfer points. As noted in the prior application, the use of various BACT-level controls (where reasonable) on material transfer points, the use of vacuum sweeping and watering on the haul roads, and the wetting and management of on storage pile activity is considered a reasonable system of minimizing the emissions of fugitive particulate matter at the facility.

3.6.4 45CSR10 - To Prevent and Control Air Pollution from the Emission of Sulfur Oxides

This rule prevents and controls emissions of sulfur oxides (SO_X) from fuel burning sources, manufacturing process sources, and the combustion of refinery and/or process gas streams. According to Table 45-10A of 45CSR10, Mason County is a priority III county.

Per 45CSR10-2.8, a Fuel burning unit is defined as:

"*… any furnace, boiler apparatus, device, mechanism, stack or structure used in the process of burning fuel or other combustible material for the primary purpose of producing heat or power by indirect heat transfer…"*

The water bath vaporizer is subject to the requirements of 45CSR10 and will comply with the hourly SO_2 emission limit calculated as specified in 45CSR10-3.3.f.. Since the prior application, the Water Bath Vaporizer has been resized to fire natural gas at 47 MMbtu/hr, compared to the original design of 11 MMbtu/hr. The emission limit is calculated by multiplying 3.2 lb/MMBtu by the hourly heat input of a fuel burning unit to obtain an hourly SO_2 emission limit as provided below.

Table 3-1. Summary of 45CSR10 SO2 Limits

Unit	Heat Input Capacity (MMBtu/hr)	SO_2 Emission Limit (lb/hr)
Water Bath Vaporizer	47	150.4

With this application update, there are no changes with regards to the applicability of this subpart to the affected sources including the EAFs and VTD flares. All fuel burning units will continue to fire only natural gas, therefore NSWV is exempt from the testing, monitoring, and reporting requirements of 45CSR10-8 and 45CSR10A. Offgases pulled from the Vacuum Tank Degasser to the flares are not expected to produce any detectable amount of H_2S and are therefore not considered a refinery or process gas stream under 45CSR10-5.1.

Please note, the following natural gas fired combustion sources are new sources since the prior application and are not subject to 45CSR10 as they are manufacturing process source operations that have the potential to emit less than 500 lb/yr of SO_2 pursuant to 45CSR10-4.1.5:

- Ladle Dryer #2-3
- Subentry Nozzle Preheater Oven
- Air Make-Up Units #1-18
- Tundish Dryer 2

3.6.5 45CSR13 - Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation

This rule is generally applicable to NSWV, as the facility has the potential to emit a regulated pollutant greater than six (6) lb/hr and ten (10) tpy. NSWV is submitting this permit application to satisfy the requirements of 45CSR13.

3.6.6 45CSR14 - Permits for Construction and Major Modification of Major Stationary Sources for the Prevention of Significant Deterioration of Air Quality

This rule is generally applicable to NSWV, as the facility is listed as one of the source categories under 45CSR14-2.43.a - –"Iron and Steel Mill Plants"- and is defined as a major stationary source based on potential emissions exceeding major source thresholds of 100 TPY for Carbon Monoxide (CO), Oxides of Nitrogen (NOx), Particulate Matter (PM10, PM2.5, and filterable particulate matter), Sulfur Dioxide (SO2), and Volatile Organic Compounds (VOCs). NSWV is submitting this permit application to satisfy the requirements of 45CSR14. See Section 3.1 above for the applicability determination for this rule. Consistent with DAQ Policy, permitting actions reviewed under 45CSR14 are reviewed under 45CSR13 concurrently, with DAQ generally applying the stricter requirement if there are additional or overlapping requirements.

3.6.7 45CSR16 – Standards of Performance for New Stationary Sources

The provisions of 45CSR16 incorporate by reference the NSPS standards contained in 40 CFR 60. Please see Section 3.3 above for a list of NSPS for which NSWV is potentially subject.

3.6.8 45CSR22 - Air Quality Management Fee Program

This rule is generally applicable to NSWV. In addition to permit to construct fees, 45CSR22-4.1a will require NSWV to obtain a certificate to operate, which NSWV will obtain annually upon submittal of Certified Emission Statement.

3.6.9 45CSR30 – Requirements for Operating Permits

This rule is generally applicable to NSWV, as the proposed facility-wide PTE of a regulated pollutant exceeds 100 tpy which classifies the facility as a major source. Therefore, NSWV will submit a Title V permit application within twelve (12) months after commencing operation to satisfy the requirements of 45CSR30.

3.6.10 45CSR34 – Emission Standards for Hazardous Air Pollutants

The provisions of 45CSR34 incorporate by reference the MACT/GACT standards contained in 40 CFR 63. Please see Section 3.4 above for a list of MACT/GACT standards for which NSWV is potentially subject.

4. BEST AVAILABLE CONTROL TECHNOLOGY

The requirement to use best available control technology (BACT) applies to each new or modified emission unit from which there are emissions increases of pollutants subject to PSD review. The facility is subject to PSD permitting for NO_X, CO, SO_2, PM, PM_{10}, $PM_{2.5}$, Lead, Fluoride (excluding HF), VOC, and GHG and is therefore subject to BACT for these pollutants.

Table 4-1 identifies the pollutants considered in the BACT analysis for each emission unit. Refer to Section 2.1 of this report for a detailed discussion of each emission unit.

Table 4-1. Pollutants Evaluated in the BACT Analysis for Each Emission Unit

Emission Unit ID	Emission Unit	NO_X (Yes/No)	CO (Yes/No)	SO_2 (Yes/No)	$PM/PM_{10}/PM_{2.5}$ (Yes/No)	VOC (Yes/No)	Lead/Fluoride (Yes/No)	GHG (Yes/No)
EAF1 and LMF1	EAF1/LMF1	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EAF2 and LMF2	EAF2/LMF2	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CAST1	Casting Operations	--	--	--	Yes	--	--	Yes
TF1	Tunnel Furnace 1	Yes	Yes	Yes	Yes	Yes	--	Yes
VTD1 & 2	Vacuum Tank Degasser 1 & 2	--	Yes	--	Yes	--	--	--
HM	Hot Rolling Mill	--	--	--	Yes	Yes	--	--
CSP1 through 2	Caster Spray Vents	--	--	--	Yes	Yes	Yes	--
PKL-1	Pickling Line 1	--	--	--	Yes	--	--	--
PKLSB	Pickle Line Scale Breaker	--	--	--	Yes	--	--	--
TCM	Tandem Cold Mill	--	--	--	Yes	Yes	--	--
STM	Standalone Temper Mill	--	--	--	Yes	Yes	--	--
SPM1 & 2	Skin Pass Mill 1 & 2	--	--	--	Yes	--	--	--
CGL1 & 2	Galvanizing Lines 1 & 2	--	--	--	Yes	Yes	--	--
NCT1 CCT4 NCT5 CCT6 LCT7 NCT8 ASPCT	Cooling Towers #1 through 7	--	--	--	Yes	Yes (only for CCT4, CCT6, and LCT7)	--	--
EMGEN1 through 26	Emergency Engines #1 through 26	Yes	Yes	Yes	Yes	Yes	--	Yes
FUG-PAVED-01P through 12P	Paved Roadways	--	--	--	Yes	--	--	--
T1 through T30	Storage Tanks #1 through 30	--	--	--	--	Yes	--	--

Emission Unit ID	Emission Unit	NO_X (Yes/No)	CO (Yes/No)	SO_2 (Yes/No)	$PM/PM_{10}/PM_{2.5}$ (Yes/No)	VOC (Yes/No)	Lead/Fluoride (Yes/No)	GHG (Yes/No)
PLSTEO STMSTEO CGLEO1 CGLEO2 RCLEO	Electrostatic Oilers	--	--	--	Yes	Yes	--	--
WASH1 through 9	Parts Washers	--	--	--	--	Yes	--	--
BRCKCRSH	Refractory Brick Recycling Operations	--	--	--	Yes	--	--	--
Misc. Natural Gas Combustion Sources:								
LD1 through 3	Ladle Dryers	Yes	Yes	Yes	Yes	Yes	--	Yes
LPHTR1 through 7	Ladle Preheaters	Yes	Yes	Yes	Yes	Yes	--	Yes
TD1 & 2	Tundish Dryers	Yes	Yes	Yes	Yes	Yes	--	Yes
TPHTR1 & 2	Tundish Preheaters	Yes	Yes	Yes	Yes	Yes	--	Yes
SENPHTR1 through 3	Subentry Nozzle Preheaters and Preheater Oven	Yes	Yes	Yes	Yes	Yes	--	Yes
GALVFN1 & 2	Galvanizing Furnaces	Yes	Yes	Yes	Yes	Yes	--	Yes
BOXANN1 through 12	Box Annealing Furnaces	Yes	Yes	Yes	Yes	Yes	--	Yes
ASP	Water Bath Vaporizer	Yes	Yes	Yes	Yes	Yes	--	Yes
SCRAP-CUT	Scrap and Coil Cutting	Yes	Yes	Yes	Yes	Yes	--	Yes
AMU-1 through 18	Air Make-Up Units #1 through 18	Yes	Yes	Yes	Yes	Yes	--	Yes
GALVBOILER1 and 2	Galvanizing Line Boilers	Yes	Yes	Yes	Yes	Yes	--	Yes
PLTCMBOILER1 and 2	Pickling Line Tandem Cold Mill Boilers	Yes	Yes	Yes	Yes	Yes	--	Yes
Slag and Home Scrap Processing/Handling Operations:								
SLGSKP1 through 14	Slag Stockpile #1 through 14	--	--	--	Yes	--	--	--

Emission Unit ID	Emission Unit	NO_X (Yes/No)	CO (Yes/No)	SO_2 (Yes/No)	$PM/PM_{10}/PM_{2.5}$ (Yes/No)	VOC (Yes/No)	Lead/Fluoride (Yes/No)	GHG (Yes/No)
SLAG-BULK1 through 8, 10, 13 through 29, 41 through 42, 45 through 52 HSCRAP-BULK8 through 9, 11 through 12, 30 through 40, 43 through 44	Slag and Home Scrap Handling	--	--	--	Yes	--	--	--
Scrap Handling Operations:								
SCRAP-RECEIVING1 through 3	Scrap Unloading Operations	--	--	--	Yes	--	--	--
SCRAP-HANDLING1 through 3	Scrap Material Handling Operations	--	--	--	Yes	--	--	--
SCRAP-PILE1 through 3	Scrap Piles	--	--	--	Yes	--	--	--
Raw Material Handling Operations:								
RAW-FEED1 through 8	Raw Material Unloading	--	--	--	Yes	--	--	--
SUBS-FEED1 through 7	Scrap Substitute Handling	--	--	--	Yes	--	--	--
EAF-FEED1 through 25	EAF Raw Material Handling	--	--	--	Yes	--	--	--
LMF-FEED1 through 51	LMF Raw Material Handling	--	--	--	Yes	--	--	--

Note the same control techniques that reduce PM also reduce PM_{10} and $PM_{2.5}$. The BACT analyses for PM, PM_{10}, and $PM_{2.5}$ are combined to eliminate redundancy.

4.1 PSD BACT Top-Down Approach

The following sections contain a description of the five (5) basic steps of U.S. EPA's preferred "top-down" approach for selecting BACT.

4.1.1 Step 1 – Identify All Control Options

In this step, available control technologies with the practical potential for application to the emission unit and regulated air pollutant in question are identified. The selected control technologies vary widely depending on the process technology and pollutant being controlled. The application of demonstrated control technologies in other similar source categories to the emission unit in question may also be considered in this step.

The following resources are typically consulted when identifying potential technologies for criteria pollutants:

- EPA's RBLC database
- Determinations of BACT by regulatory agencies for other similar emission points or air permits and permit files from federal or state agencies;
- Applicable NSPS and NESHAP regulations;
- Engineering experience with similar control applications;
- Information provided by air pollution control equipment vendors with significant market share in the industry; and/or,
- Review of literature from industrial, technical, government, academic and trade organizations.

4.1.2 Step 2 – Eliminate Technically Infeasible Options

In this step, "technically infeasible" control options from the list of "potentially available" control options are eliminated. A control option is "technically feasible" if it has been "demonstrated" or if it is both "available" and "applicable."

4.1.3 Step 3 – Rank Remaining Control Options

All remaining technically feasible control options are ranked based on their overall control effectiveness for the pollutant under review. If there is only one remaining option or if all of the remaining technologies could achieve equivalent control efficiencies, ranking based on control efficiency is not required. Collateral effects are usually not considered until step four of the five step top-down BACT analysis.

4.1.4 Step 4 – Evaluation of Most Effective Control Option

After identifying and ranking available and technically feasible control technologies, the economic, environmental, and energy impacts are evaluated to select the best control option. If collateral impacts do not disqualify the top-ranked option from consideration it is selected as the basis for the BACT emission limit. Alternatively, in the judgment of the permitting agency, if inappropriate economic, environmental, or energy impacts are associated with the top control option, the next most stringent option is evaluated. This process continues until a control technology is identified. This step validates the suitability of the top identified control option or provides a clear justification as to why the top option should not be selected as BACT.

4.1.5 Step 5 – Select BACT

In the final step, the BACT emission limit is determined for each emission unit under review based on evaluations from the previous step.

Although the first four steps of the top-down BACT process involve technical and economic evaluations of potential control options (i.e., defining the appropriate technology), the selection of BACT in the fifth step involves an evaluation of emission rates achievable with the selected control technology.

The most effective control alternative not eliminated in Step 4 is selected as BACT with a corresponding emission limit established. BACT is an emissions limit unless technological or economic limitations of the measurement methodology would make the imposition of an emissions standard infeasible, in which case a work practice or operating standard can be imposed. Selected BACT can be no less stringent than an applicable NSPS, MACT, or RACT.

4.2 NO_X BACT Analysis

Nitrogen dioxide (NO_X) emissions are primarily generated through the combustion of fuel for the purposes of generating heat for direct or indirect heat transfer or for emergency backup power. At elevated temperatures, nitrogen in the air is oxidized to form thermal NO_X. Table 4-2 provides a summary of the selected NO_X BACT for each applicable NO_X emission source.

Table 4-2. Summary of Selected BACT for NO_X Emitting Sources

Emission Unit ID	Emission Unit Description	Selected NO_X BACT	BACT Analysis Status
EAF1/LMF1 EAF2/LMF2	EAF1/LMF1 EAF2/LMF2	0.42 lb NOx/ton steel each	Updated
TF1	Tunnel Furnace #1	0.07 lb/MMBtu	No change (Note the heat input capacity of this source was increased but there is no change to the BACT analysis that was noted in the previous application.)
EMGEN1 through 26	Emergency Engine #1 through #26	NSPS JJJJ and RICE MACT	No change (Note the number and size of the emergency engines have been updated but there is no change to the BACT analysis that was noted in the previous application.)
LD1- 3 LPHTR1- 7 TD1 - 2 TPHTR1- 2 SENPHTR1- 3 ASP SCRAP-CUT	Ladle Dryers (3 Units) Ladle Preheaters (7 Units) Tundish Dryers (2 Units) Tundish Preheaters (2 Units) Subentry Nozzle Preheaters (3 Units) Water Bath Vaporizer (1 Unit) Scrap Cutting (1 Unit)	0.1 lb/MMBtu	No change (Note there are additional ladle dryers, an additional tundish dryer, and some of the sources have updated heat input capacities. However, there is no change to the BACT analysis for each source type that was noted in the previous application.)
BOXANN1- 12	Box Annealing Furnaces (12 Units)	0.05 lb/MMBtu	No change
GALVFN1	Galvanizing Furnace 1	0.07 lb/MMBtu	Updated
GALVFN2	Galvanizing Furnace 2	0.07 lb/MMbtu	Updated

Emission Unit ID	Emission Unit Description	Selected NO_X BACT	BACT Analysis Status
GALVBOILER1- 2	Galvanizing Line Boilers (2 units)	0.05 lb/MMBtu	No change
PLTCMBOILER1-2	Pickling Line Tandem Cold Mill Boilers (2 units)		
AMU1- 18	Air Make-up Units (18 units)	0.1 lb/MMBtu	New

Only the sources that are new or have an updated BACT Analysis Status are addressed in this section. For sources with no change to their BACT Analysis Status, the five step Top-Down BACT Approach that has already been established for these sources is not addressed in this application.

4.2.1 Step 1 – Identify All Control Options

NSWV identified and reviewed the following NOx control options which are summarized in Table 4-3 and are evaluated for each NO_X source that is new or has an updated BACT Analysis Status.

Table 4-3. Potential NO_X Control Technologies

Control Option	Description
Selective Catalytic Reduction (SCR)	A nitrogen-based reagent (e.g., ammonia, urea) is injected into the exhaust stream downstream of the combustion unit. The reagent reacts selectively with NOx to produce molecular N_2 and water in a reactor vessel containing a metallic or ceramic catalyst.
Selective Non-Catalytic Reduction (SNCR)	A nitrogen-based reagent (e.g., ammonia, urea) is injected into the exhaust stream and reacts selectively with NOx to produce molecular N_2 and water within the combustion unit.
Non-Selective Catalytic Reduction (NSCR)	Metallic catalysts convert NOx, CO, and hydrocarbons to water, nitrogen, and CO_2.
SCONOX Catalytic Absorption System	Utilizes a single catalyst to remove NOx, CO, and VOC through oxidation.
Xonon Cool Combustion	A catalyst integrated into gas turbine combustors limits the production of NOx through temperature control also resulting in reduced emissions of CO and VOC.
Low-NOx Burners (LNBs)	Low-NOx burners employ multi-staged combustion to inhibit the formation of NOx. Primary combustion occurs at lower temperatures under oxygen-deficient conditions; secondary combustion occurs in the presence of excess air.
Oxy-Fuel Burners	Oxy-fired burners achieve combustion using oxygen rather than air, which reduces nitrogen levels in the furnace. The lower nitrogen levels result in a reduction in NOx emissions.
Good Combustion Practices	Operate and maintain the equipment in accordance with good air pollution control practices and with good combustion practices.

4.2.2 Electric Arc Furnaces/Ladle Metallurgy Furnaces (EU ID EAF1, EAF2, LMF1, and LMF2)

The EAFs and LMFs will generate NOx emissions as a product of combustion and from the exposure of air to the inherently elevated temperature of the EAFs and LMFs. It should be noted that there will be no combustion at the LMF but there will be electrodes to reheat the steel in the ladle. At elevated temperatures, nitrogen in air is oxidized to form thermal NOx. This section covers BACT for both the EAFs

and the LMFs since both will be exhausted to the same stacks (EAF1 and LMF1 both exhaust to BHST-1 and EAF2 and LMF2 both exhaust to BHST-2).

4.2.2.1 Step 2 – Eliminate Technically Infeasible Options

To properly control NOx and prevent premature damage, an SCR or SNCR would have to be located downstream of the baghouse that will be used to control PM emissions. The baghouse emission controls require the temperature of the exhaust stream to be around 300 °F. Therefore, in order to operate an SCR or SNCR the exhaust stream would need to be reheated after passing through the baghouse. Heating a high-volume exhaust stream like this to the proper temperature for the SCR or SNCR control would result in increased emissions of NO_X from the additional fuel that would have to be combusted, defeating the purpose of the control device. Additionally, the reagent-to-NO_X ratio cannot be feasibly maintained under the significant variation in NO_X loading associated with the EAF. SCR and SNCR are typically operated on units that provide consistent pollutant loading. The high variations inherent to the batch process of the EAF/LMF operations do not match the conditions where an SCR or SNCR is effective. Furthermore, no applications of SCR or SNCR control on similar sources were noted in the search of the RBLC database. Therefore, SCR or SNCR control is considered technically infeasible for the EAFs/LMSs.

Additionally, the NSCR control is typically applied only to rich burn engines, the SCONOX Catalytic Absorption System is typically applied to power generation turbines, and the Xonon Cool Combustion control is only integrated into gas turbine combustors. Therefore, they are considered technically infeasible for the EAF.

4.2.2.2 Step 3 – Rank Remaining Options

Table 4-4 shows the rankings of the options for controlling NO_X emissions from the EAFs. The same control technologies will apply for the LMFs except for ones specific to combustion.

Table 4-4. Rank of Remaining Control Technologies for NO_X from EAFs and LMFs

Control Technology	Efficiency	Rank
Low-NOx Burners (LNBs)	Up to 80%	1
Oxy-Fuel Burners	Up to 80%	2
Good Combustion Practices	Varies	3

4.2.2.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.2.2.4 Step 5 – Select BACT

NSWV is proposing BACT for the EAF and the LMF separately as this is how the limits are commonly permitted and shown in the RBLC database. However, since they both will exhaust to the same stack, it is important to consider both together in establishing the BACT emission limit.

4.2.2.4.1 EAF NO_X BACT Emission Limit

The NO_X limits in the RBLC database for EAFs range from 0.2 lb/ton to 1.43 lb/ton with most of the sources falling between 0.2 lb/ton and 0.6 lb/ton. When reviewing the RBLC, it is important to note that many of the mills listed do not produce comparable products or, when producing comparable products, use a different

raw material mix and/or melting process. Additionally, even when comparable products are being produced, the amount of NOx emitted from an EAF is ultimately determined by the raw material mix, the raw material supplier, and the melting process used. The specific nature of market driven activities or proprietary melting processes is not included in the RBLC; therefore, a specific number within the identified range corresponding to the operational parameters at NSWV cannot be identified.

The EAF needs to be able to operate under a diverse set of operating conditions and the corresponding limit should reflect that. Periodic stack testing of the EAF baghouses serves as the basis for the limit of 0.2 lb/ton for Gerdau Macsteel, Inc. and the limit of 0.2159 lb/ton in Permit PSDTX708M6 for Structural Metals Inc. in the RBLC. There are two limits in the RBLC database at 0.28 lb/ton, Nucor Steel in Nebraska (Permit No. 12-027) permitted in 2013 and ERMS Pueblo in Colorado (Permit No. 02PB0492) permitted in 2011. Both limits are based on 30-day rolling averages. The Nucor Nebraska Mill was unable to achieve the initially permitted 0.28 lb/ton limit, in practice, and the permitting authority revised their permit in 2017 to 0.42 lb/ton on a 30-day rolling average. Note that the 2018 determination for Gerdau MacSteel in Monroe, Michigan of 0.27 lb/ton is an entry for LAER in an Ozone non-attainment area, and, therefore, is not directly comparable.

Recently issued permits for CMC Steel Oklahoma (2016) and Steel Dynamics Texas (2020) contain BACT emission limits of 0.30 lb/ton on a rolling 30-day average. Additionally, the permit issued for Nucor Florida (2019) and Big River Steel (2021) contain BACT emission limits of 0.30 lb/ton based on periodic stack testing of the EAF baghouses. CMC Steel WV (2023) contains a combined permitted EAF/LMF BACT emission limit of 0.30 lb/ton on a rolling 30-day average while Ashoka Steel Mills (2023) contains a permitted BACT emission rate of 0.30 lb/ton for routine operations. However, neither facility has demonstrated compliance yet with these limits.

NOx emission rates can vary between facilities due to individual process characteristics and differences in the types of steel products produced. Through compliance demonstrations at similar mills, Nucor has proven that variable product specifications often result in necessary process changes including longer melt times resulting in higher NOx emissions per ton of steel throughput. Further, BACT limits must be achievable over the life of the equipment and across all operating scenarios. Based on monitoring data that NSWV has collected from similar mills, NSWV has identified that the original BACT limits proposed for this site would not be achievable across all operating modes, including during ramp up periods. The NOx BACT limits at other Nucor mills range from 0.35 lb/ton to 0.51 b/ton which are higher than the initial proposed BACT NOx limit 0.30 lb/ton. NSWV proposes a NOx BACT limit of 0.37 lb/ton using oxy-fuel burners and equipped with a DEC and baghouse control. This proposed BACT limit corresponds to limits established at similar Nucor facilities and is consistent with the full range of limits for sources identified in the RBLC.

NSWV proposes as BACT for the EAFs to utilize Oxy-Fuel Burners and an emission rate of 0.37 lb NOx/ton steel demonstrated by initial and periodic stack testing. NSWV proposes to conduct the initial stack test within 60 days of achieving maximum capacity or within 180 days after initial startup. It should be noted that the LMFs will exhaust from the same stack (BHST-1 and BHST-2) as the EAFs. The final BACT emission limit will be the aggregate of all emission sources exhausting from the same stack.

4.2.2.4.2 LMF NOx BACT Emission Limit

NSWV proposes as BACT for the LMFs to utilize good operating practices and a limit of 0.05 lb NOx/ton steel. This is equivalent to the lowest NOx emission limit identified in the RBLC database for LMFs. Because the LMFs exhaust through the EAF stacks (BHST-1 and BHST-2), the BACT emission limit will be the aggregate of all emission sources exhausting from the same stack. Therefore, compliance with the LMF emission limit will also be demonstrated by initial and periodic stack testing. As discussed above, NSWV

proposes to conduct the initial stack test within 60 days of achieving maximum capacity or within 180 days after initial startup.

4.2.2.4.3 Combined NOx BACT Emission Limit

NSWV proposes a combined EAF/LMF BACT emission limit of 0.42 lb NOx/ton steel. This limit will be applied to the combined EAF1 and LMF1 which will exhaust through BHST-1 and the combined EAF2 and LMF2 which will exhaust through BHST-2. NSWV proposes to demonstrate ongoing compliance with the emission limitations through the use of initial and periodic stack testing as described above.

4.2.3 Miscellaneous Natural Gas Combustion Units (EU ID GALVFN1 and 2, AMU1 - 18)

The mill will utilize several small natural gas-fired heaters, dryers, and furnaces throughout the melt shop, hot mill, and cold mill. The following section provides the NO_X BACT the natural gas combustion units identified in Table 4-5 below.

Table 4-5. Miscellaneous Natural Gas Combustion Units

Emission Unit ID	Description	Maximum Heat Input (MMBtu/hr)
GALVFN1 GALVFN2	Galvanizing Furnaces (2 units)	73.3 MMBtu/hr 79.8 MMBtu/hr
AMU1-18	Air Make-Up units (18 units)	4 MMBtu/hr

4.2.3.1 Step 2 – Eliminate Technically Infeasible Options

The natural gas fired, air make-up units are all designed to exhaust indoors, making add-on controls not feasible as there is no duct or stack to route emissions to a control device. Furthermore, no applications of add-on controls on similar natural gas-fired sources were noted in the search of the RBLC database. Therefore, the application of SCR or SNCR control is considered technically infeasible for the sources included in this section with the exception of the galvanizing line furnaces.

Additionally, NSCR control is effective only in a stoichiometric or fuel-rich environment where combustion gas is nearly depleted of oxygen and is typically applied only to rich burn engines, while the SCONOX Catalytic Absorption Systems are typically applied to power generation turbines, and the Xonon Cool Combustion control is only integrated into gas turbine combustors. Therefore, they are considered technically infeasible for all sources in this section with the exception of the galvanizing line furnaces.

4.2.3.2 Step 3 – Rank Remaining Options

Table 4-6 shows the rankings of the options for controlling NO_X emissions from the miscellaneous natural gas combustion units listed in this section.

Table 4-6. Rank of Remaining Control Technologies for NO_X from Miscellaneous Natural Gas Combustion Units

Control Technology	Efficiency	Rank
SCR [Galvanizing Line Furnaces Only]	70-90%	1
Low-NOx Burners (LNBs) [All Other Sources]	Up to 80%	1

SNCR [Galvanizing Line Furnaces Only]	25-75%	2
Oxy-Fuel Burners	Up to 80%	2
Good Combustion Practices	Varies	3

4.2.3.3 Step 4 – Evaluation of Most Effective Control Option

For the galvanizing line furnaces, the highest ranking control technologies for the control of NO_X include SCR and SNCR. NSWV evaluated the cost effectiveness for both SCR and SNCR following inlet emissions from low-NO_X burners. As low-NO_X burners lower the inlet loading of NO_X to the potential control device, SCR or SNCR would not achieve the high end of their respective control efficiencies.

A cost analysis for SCR and SNCR determined that both technologies are beyond the acceptable range of BACT cost effectiveness for this type of emission unit at steady-state operations. Cost analysis calculations are provided in Appendix C along with the RBLC database search results. A summary of the cost feasibility analysis is provided in Table 4-7 below.

Table 4-7. Cost Analysis for Galvanizing Line Furnaces NO_X Control Technologies

Control Technology	Emission Reduction (tpy)	Annualized Control Cost ($)	Cost ($/ton)
SCR	19.3	$330,832	$17,174
SNCR	12.8	$172,216	$13,410

4.2.3.4 Step 5 – Select BACT

The RBLC database search results range from 0.06 lb/MMBtu to 0.1 lb/MMBtu with the majority of the limits at 0.1 lb/MMBtu for similar natural gas combustion units at steel mills. Additionally, recently issued permits for Steel Dynamics Texas (2020) and Big River Steel (2021) contain BACT emission limits of 0.1 lb/MMBtu for similarly sized natural gas combustion units.

NSWV had originally proposed a NOx BACT rate of 0.05 lb/MMBtu, equivalent to the AP-42 low NOx burner emission factor for each galvanizing line furnace. Based on discussions with vendors and review of other galvanizing lines both within Nucor and external to Nucor, this limit is not achievable for the full range of operations expected for both galvanizing lines. For steady-state operation, which applies to Galvanizing Furnace 1, the furnace vendor indicated that 0.07 lb/MMBtu/hr is an achievable baseline rate across all operating scenarios through the use of low-NOx burners.

Galvanizing Furnace 2 will not be operated in a steady-state manner. A variety of products will be run through this emission unit, resulting in frequent fluctuations in furnace firing rates occurring multiple times a day. As such, the furnace vendor cannot guarantee a NOx emission rate of 0.07 lb/MMBtu/hr with the use of low-NOx burners for this type of operation. Therefore, NSWV will install an SCR on Galvanizing Furnace 2 to achieve the requested NOx rate. Note that both galvanizing furnaces cannot be routed to a single, larger SCR because one line will be operating on positive pressure and the other on negative pressure using separate exhaust fans per line to control the pressure in each furnace.

Based on the information above, NSWV proposes to utilize low-NOx Burners, good combustion practices, and an emission rate of 0.07 lb NOx/MMBtu for Galvanizing Furnace 1. For Galvanizing Furnace 2, NSWV proposes to utilize SCR, low-NOx Burners, good combustion practices and an emission rate of 0.07 lb/NOx MMBtu/hr.

For small natural gas fired heaters and dryers, the RBLC database search results showed that the majority of units rated at less than or equal to 5 MMBtu/hr had a limit of 0.1 lb/MMBtu. Therefore, NSWV proposes to utilize good combustion practices and an emission rate of 0.1 lb NOx/MMBtu as BACT for the Air Make-up units (AMU1-18).

4.3 CO BACT Analysis

Carbon Monoxide (CO) emissions are primarily generated through the incomplete combustion of fuel. Various fuels are used for the purposes of generating heat for direct or indirect heat transfer or for emergency backup power. Natural gas is proposed as the primary fuel source and the rate of CO emissions will be dependent on the efficiency of natural gas combustion. Table 4-8 provides a summary of the selected CO BACT for each applicable CO emission source.

Table 4-8. Summary of Selected BACT for CO Emitting Sources

Emission Unit ID	Emission Unit	Selected CO BACT	BACT Analysis Status
EAF1/LMF1 EAF2/LMF2	EAF1/LMF1 EAF2/LMF2	2.02 lb CO/ton steel each	No change
TF1	Tunnel Furnace #1	0.082 lb CO/MMBtu	No change (Note the size of the Tunnel furnace has changed but there is no change to the BACT analysis that was noted in the previous application.)
EMGEN1 through 26	Emergency Engine #1 through #26	NSPS JJJJ and RICE MACT	No change (Note the number and size of the emergency engines have been updated but there is no change to the BACT analysis that was noted in the previous application.)
VTD1 VTD2	Vacuum Tank Degasser #1 Vacuum Tank Degasser #2	Minimum Destruction Efficiency of 98%	No change
LD1- 3 LPHTR1- 7 TD1 - 2 TPHTR1- 2 SENPHTR1- 3 GALVFN1- 2 BOXANN1-12 ASP SCRAP-CUT	Ladle Dryers (3 Units) Ladle Preheaters (7 Units) Tundish Dryers (2 Units) Tundish Preheaters (2 Units) Subentry Nozzle Preheaters (3 Units) Galvanizing Furnaces (2 Units) Box Annealing Furnaces (12 Units) Water Bath Vaporizer (1 Unit) Scrap Cutting (1 Unit)	0.082 lb/MMBtu	No change (Note there are additional ladle dryers, an additional, tundish dryer, and some of the sources have updated heat input capacities. However, there is no change to the BACT analysis for each source type that was noted in

Emission Unit ID	Emission Unit	Selected CO BACT	BACT Analysis Status
			the previous application.)
GALVBOILER1- 2 PLTCMBOILER1- 2	Galvanizing Line Boilers (2 units) Pickling Line Tandem Cold Mill Boilers (2 units)	0.082 lb/MMBtu	No change
AMU1- 18	Air Make-up Units (18 units)	0.082 lb/MMBtu	New

Only the sources that have a new or updated BACT Analysis Status are addressed in this section. For sources with no change to their BACT Analysis Status, the BACT Top-Down Approach that has already been established for these sources is not addressed in this application.

4.3.1 Step 1 – Identify All Control Options

NSWV identified and reviewed the following CO control options which are summarized in Table 4-9 and are evaluated for each CO source that is new or has an updated BACT Analysis Status.

Table 4-9. Potential CO Control Technologies

Control Option	Description
Non-Selective Catalytic Reduction (NSCR)	Metallic catalysts convert NOx, CO, and hydrocarbons to water, nitrogen, and CO2.
SCONOX Catalytic Absorption System	Utilizes a single catalyst to remove NOx, CO, and VOC through oxidation.
Xonon Cool Combustion	A catalyst integrated into gas turbine combustors limits the production of NOx through temperature control also resulting in reduced emissions of CO and VOC.
Recuperative Thermal Oxidation	Oxidizes combustible materials by raising the temperature of the material above the auto-ignition point in the presence of oxygen and maintaining the high temperature for sufficient time to complete combustion.
Regenerative Thermal Oxidation	Oxidizes combustible materials by raising the temperature of the material above the auto-ignition point in the presence of oxygen and maintaining the high temperature for sufficient time to complete combustion.
Catalytic Oxidation	Similar to thermal incineration; waste stream is heated by a flame and then passes through a catalyst bed that increases the oxidation rate more quickly and at lower temperatures.
Good Combustion Practices	Operate and maintain the equipment in accordance with good air pollution control practices and with good combustion practices.

4.3.2 Miscellaneous Natural Gas Combustion Units (EU ID AMU1 - 18)

The mill will utilize several small natural gas-fired heaters, dryers, and furnaces throughout the melt shop, hot mill, and cold mill. The following section provides the CO BACT for these miscellaneous natural gas combustion units. Table 4-8 above has identified the natural gas combustion units covered in this section.

4.3.2.1 Step 2 – Eliminate Technically Infeasible Options

NSCR control is typically applied only to rich burn engines, while SCONOX Catalytic Absorption System is typically applied to power generation turbines, and the Xonon Cool Combustion control is only integrated into gas turbine combustors. Therefore, they are considered technically infeasible for the dryers and preheaters.

The sources in this section are all designed to exhaust indoors, making add-on controls not feasible as there is no duct or stack to route them through a control device. No applications of add-on controls on similar natural gas-fired sources were noted in the search of the RBLC database. Therefore, the application of post-combustion control device is considered technically infeasible for the sources included in this section.

Thermal oxidizers do not reduce CO emissions from properly operated natural gas combustion units without the use of a catalyst since they require further combustion to work.[1] Since this would follow an already efficient combustion process, as well as require additional fuel at the expense of further combustion emissions, these control devices are not well suited for use at these combustion units.

4.3.2.2 Step 3 – Rank Remaining Options

Table 4-10 shows the rankings of the options for controlling CO emissions from the miscellaneous natural gas combustion units listed in this section.

Table 4-10. Rank of Remaining Control Technologies for CO from Miscellaneous Natural Gas Combustion Units

Control Technology	Efficiency	Rank
Good Combustion Practices	Varies	1

4.3.2.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.3.2.4 Step 5 – Select BACT

The RBLC database search results range from 0.082 lb/MMBtu to 0.687 lb/MMBtu with the majority of the limits at 0.082 lb/MMBtu for similar natural gas combustion units at steel mills. Additionally, recently issued permits for Steel Dynamics Texas (2020) and Big River Steel (2021) contain BACT emission limits of 0.082 lb/MMBtu for similarly sized natural gas combustion units.

NSWV proposes to utilize good combustion practices and an emission rate of 0.082 lb CO/MMBtu as BACT for the air make-up units (AMU1 - 18). This is equivalent to the AP-42 emission factor for natural gas combustion in the latest version of Chapter 1.4 and the lowest CO emission limit identified in the RBLC

[1] U.S. EPA. Air Pollution Control Technology Fact Sheet (Regenerative Incinerator), EPA-452/F-03-021.

database for comparable units. Compliance will be demonstrated via the combustion of natural gas and use of good combustion practices.

4.4 SO_2 BACT Analysis

Sulfur dioxide (SO_2) emissions are primarily generated through the combustion of fuel for the purposes of generating heat for direct or indirect heat transfer or for emergency backup power. Incoming sulfur in the fuel stream is oxidized and converted to SO_2. Furthermore, the EAF's and LMF's will generate SO_2 emissions as a product of combustion due to sulfur present in the EAF charge material. Table 4-11 provides a summary of the selected SO_2 BACT for each applicable SO_2 emission source.

Table 4-11. Summary of Selected BACT for SO_2 Emitting Sources

Emission Unit ID	Emission Unit	Selected SO_2 BACT	BACT Analysis Status
EAF1/LMF1 EAF2/LMF2	EAF1/LMF1 EAF2/LMF2	0.24 lb SO_2/ton steel each	No change
TF1	Tunnel Furnace #1	0.000588 lb SO_2/MMBtu	No change (Note the size of the Tunnel furnace has changed but there is no change to the BACT analysis that was noted in the previous application.)
EMGEN1 through 26	Emergency Engine #1 through #26	NSPS JJJJ and RICE MACT	No change (Note the number and size of the emergency engines have been updated but there is no change to the BACT analysis that was noted in the previous application.)
LD1- 3 LPHTR1- 7 TD1 - 2 TPHTR1- 2 SENPHTR1- 3 GALVFN1- 2 BOXANN1-12 ASP SCRAP-CUT	Ladle Dryers (3 Units) Ladle Preheaters (7 Units) Tundish Dryers (2 Units) Tundish Preheaters (2 Units) Subentry Nozzle Preheaters (3 Units) Galvanizing Furnaces (2 Units) Box Annealing Furnaces (12 Units) Water Bath Vaporizer (1 Unit) Scrap Cutting (1 Unit)	0.000588 lb/MMBtu	No change (Note there are additional ladle dryers, an additional tundish dryer, and some of the sources have updated heat input capacities. However, there is no change to the BACT analysis for each source type that was noted in the previous application.)
GALVBOILER1- 2 PLTCMBOILER1- 2	Galvanizing Line Boilers (2 units) Pickling Line Tandem Cold Mill Boilers (2 units)	0.000588 lb/MMBtu	No change
AMU1- 18	Air Make-up Units (18 units)	0.000588 lb/MMBtu	New

Only the sources that have a new or updated BACT Analysis Status are addressed in this section. For sources with no change to their BACT Analysis Status, the BACT Top-Down Approach that has already been established for these sources is not addressed in this application.

4.4.1 Step 1 – Identify All Control Options

NSWV identified and reviewed the following SO_2 control options which are summarized in Table 4-12 and are evaluated for each SO_2 source in this analysis.

Table 4-12. Potential SO_2 Control Technologies

Control Option	Description
Impingement-Plate/ Tray-Tower Scrubber	An impingement-plate scrubber promotes contact between the flue gas and a sorbent slurry in a vertical column with transversely mounted perforated trays. Absorption of SO_2 is accomplished by countercurrent contact between the flue gas and reagent slurry.
Packed-Bed/Packed-Tower Wet Scrubber	Scrubbing liquid (e.g., NaOH), which is introduced above layers of variously-shaped packing material, flows concurrently against the flue gas stream. The acid gases are absorbed into the scrubbing solution and react with alkaline compounds to produce neutral salts.
Spray-Chamber/ Spray-Tower Wet Scrubber	Spray tower scrubbers introduce a reagent slurry as atomized droplets through an array of spray nozzles within the scrubbing chamber. The waste gas enters the bottom of the column and travels upward in a countercurrent flow. Absorption of SO_2 is accomplished by the contact between the gas and reagent slurry, which results in the formation of neutral salts.
Flue Gas Desulfurization	An alkaline reagent is introduced in a spray tower as an aqueous slurry (for wet systems) or is pneumatically injected as a powder in the waste gas ductwork (for dry systems). Absorption of SO_2 is accomplished by the contact between the gas and reagent slurry or powder, which results in the formation of neutral salts.
Good Combustion Practices	Operate and maintain the equipment in accordance with good air pollution control practices and with good combustion practices, including the use of natural gas.

4.4.2 Miscellaneous Natural Gas Combustion Units (EU ID AMU1 - 18)

The mill will utilize several small natural gas-fired heaters, dryers, and furnaces throughout the melt shop, hot mill, and cold mill. The following section provides the SO_2 BACT for these miscellaneous natural gas combustion units. Table 4-11 above has identified the natural gas combustion units covered in this section.

4.4.2.1 Step 2 – Eliminate Technically Infeasible Options

The sources in this section are all designed to exhaust indoors, making add-on controls not feasible as there is no duct or stack to route the emissions through a control device. Furthermore, no applications of add-on controls on similar natural gas-fired sources were noted in the search of the RBLC database. Therefore, the application of add on controls are considered technically infeasible for the sources included in this section.

4.4.2.2 Step 3 – Rank Remaining Options

Table 4-13 shows the rankings of the options for controlling SO_2 emissions from the miscellaneous natural gas combustion units listed in this section.

Table 4-13. Rank of Remaining Control Technologies for SO_2 from Miscellaneous Natural Gas Combustion Units

Control Technology	Efficiency	Rank
Use of Low Sulfur Fuel (Natural Gas)	Varies	1

4.4.2.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.4.2.4 Step 5 – Select BACT

The RBLC database search results indicate that the majority of the similar natural gas combustion units at steel mills have limits set at 0.000588 lb/MMBtu. Additionally, recently issued permits for Steel Dynamics Texas (2020) and Big River Steel Arkansas (2021) contain BACT emission limits of 0.0006 lb/MMBtu.

NSWV proposes to utilize good combustion practices and an emission rate of 0.000588 lb SO_2/MMBtu as BACT for the for the air make-up units (AMU1- 18) identified in Table 4-5. This is equivalent to the AP-42 emission factor for natural gas combustion in the latest version of Chapter 1.4. The proposed emission limit is equivalent to the lowest SO_2 emission limit identified in the RBLC database for comparable units. Compliance will be demonstrated by firing pipeline quality natural gas.

4.5 VOC BACT Analysis

Similar to CO, Volatile Organic Compounds (VOC) emissions are primarily generated through the incomplete combustion of fuel. Various fuels are used for the purposes of generating heat for direct or indirect heat transfer or for emergency backup power. Natural gas is proposed as the primary fuel source and the rate of VOC emissions will be dependent on the efficiency of natural gas combustion. VOC emissions are also generated from the storage and usage of VOC containing materials. Table 4-14 provides a summary of the selected VOC BACT for each applicable VOC emission source.

Table 4-14. Summary of Selected BACT for VOC Emitting Sources

Emission Unit ID	Emission Unit	Selected VOC BACT	BACT Analysis Status
EAF1/LMF1 EAF2/LMF2	EAF1/LMF1 EAF2/LMF2	0.098 lb VOC/ton steel each	No change (Corrected Typo)
TF1	Tunnel Furnace #1	0.00539 lb/MMBtu	No change (Note the size of the Tunnel furnace has changed but there is no change to the BACT analysis that was noted in the previous application.)
CCT4	Caster Cooling Tower #2	0.08 tpy	New
CCT6	Hot Mill Cooling Tower #4	0.37 tpy	New
LCT7	Hot Mill Cooling Tower #5	0.29 tpy	New

Emission Unit ID	Emission Unit	Selected VOC BACT	BACT Analysis Status
EMGEN1 through 26	Emergency Engine #1 through #26	NSPS JJJJ and RICE MACT	No change (Note the number and size of the emergency engines have been updated but there is no change to the BACT analysis that was noted in the previous application.)
LD1- 3 LPHTR1- 7 TD1 - 2 TPHTR1- 2 SENPHTR1- 3 GALVFN1- 2 BOXANN1-12 ASP SCRAP-CUT	Ladle Dryers (3 Units) Ladle Preheaters (7 Units) Tundish Dryers (2 Units) Tundish Preheaters (2 Units) Subentry Nozzle Preheaters (3 Units) Galvanizing Furnaces (2 Units) Box Annealing Furnaces (12 Units) Water Bath Vaporizer (1 Unit) Scrap Cutting (1 Unit)	0.00539 lb/MMBtu	No change (Note there are additional ladle dryers and an additional, tundish dryer, and some of the sources have updated heat input capacities. However, there is no change to the BACT analysis for each source type that was noted in the previous application.)
GALVBOILER1- 2 PLTCMBOILER1- 2	Galvanizing Line Boilers (2 units) Pickling Line Tandem Cold Mill Boilers (2 units)	0.00539 lb/MMBtu	No change
AMU1- 18	Air Make-up Units (18 units)	0.00539 lb/MMBtu	New
T001-T006 and T019-T030	Auxiliary Storage Tanks	Fixed Roof Cover when not in use	No change (Note- number of tanks, capacities, and contents have been updated but there is no change to the BACT analysis that was noted in the previous application.)
WASH1 - 9	Parts Washers (9 units)	0.35 tpy (each)	New
PLSTEO CGLEO1 CGLEO2 RCLEO	Electrostatic Oilers (4 units)	0.03 tpy (each)	New
STMSTEO	Temper Mill Electrostatic Oiler	0.07 tpy	New
CGL1-2	Galvanizing Line 1-2 - Passivation Roll Coater	Use of NSPS compliant materials (0.28 kg VOC/liter coating solids applied	New
	Galvanizing Line 1-2 - Stenciling	820 gallon/yr of material usage with an annual average VOC content of 7.21 lb/gallon	

Emission Unit ID	Emission Unit	Selected VOC BACT	BACT Analysis Status
CSP1	Caster Spray Vent 1	1.45 lb/hr	New
CSP2	Caster Spray Vent 2	2.91 lb/hr	New
HM	Hot Mill	7.14 lb/hr	New
TCM	Tandem Cold Mill	10 mg/Nm^3 (units of mg/m^3 at STP)	New
STM	Standalone Temper Mill	10 mg/Nm^3 (units of mg/m^3 at STP)	New

Only the sources that have a new or updated BACT Analysis Status are addressed in this section. For sources with no change to their BACT Analysis Status, the BACT Top-Down Approach that has already been established for these sources is not addressed in this application.

4.5.1 Step 1 – Identify All Control Options

NSWV identified and reviewed the following VOC control options which are summarized in Table 4-15 and are evaluated for each VOC source in this analysis.

Table 4-15. Potential VOC Control Technologies

Control Option	Description
Recuperative Thermal Oxidation	Oxidizes combustible materials by raising the temperature of the material above the auto-ignition point in the presence of oxygen and maintaining the high temperature for sufficient time to complete combustion.
Regenerative Thermal Oxidation	Oxidizes combustible materials by raising the temperature of the material above the auto-ignition point in the presence of oxygen and maintaining the high temperature for sufficient time to complete combustion.
Catalytic Oxidation	Similar to thermal incineration; waste stream is heated by a flame and then passes through a catalyst bed that increases the oxidation rate more quickly and at lower temperatures.
Carbon / Zeolite Adsorption	Adsorption technology utilizes a porous solid to selectively collect VOC from the gas stream. Adsorption collects VOC but does not destroy it.
Biofiltration	Exhaust gases containing biodegradable organic compounds are vented, under controlled temperature and humidity, through biologically active material. The microorganisms contained in the bed of bio-material digest or biodegrade the organics to CO_2 and water.
Condenser	Condensers convert a gas or vapor stream to a liquid, allowing the organics within the stream to be recovered, refined, or reused and preventing the release of organic streams into the ambient air.
Wet Scrubber/Mist Eliminator	A scrubbing liquid introduced into the gas stream captures and collects entrained particles. In the case of a venturi scrubber, the turbulent airflow atomizes the scrubbing liquid to increase droplet-particle interaction. The droplets containing particles are typically separated from the exhaust gas in a downstream cyclonic separator and/or mist eliminator.

Control Option	Description
Fixed Roof to a Control Device *(Only Applicable to storage tanks)*	A fixed roof tank routed to a vapor control device such as a flare, thermal oxidized, catalytic oxidizer, adsorber, or absorber/scrubber.
Internal Floating Roof or External Floating Roof *(Only Applicable to storage tanks)*	A tank with a roof that floats on the liquid surface to prevent losses from expansion or displacement of the vapor space
Fixed Roof *(Only Applicable to storage tanks)*	A fixed roof prevents wind from blowing over the surface of the liquid which would increase emissions
Submerged Fill *(Only Applicable to storage tanks)*	Submerged fill eliminates splashing to prevent formation of mist that could be entrained in the vent stream and/or increase evaporation rates due to increased liquid surface area caused by the mist.
White or Aluminum surfaces exposed to the sun *(Only Applicable to storage tanks)*	White or aluminum exterior surfaces that are exposed to the sun absorb less heat due to solar insolation resulting in lower breathing (standing) losses
Good Combustion Practices	Operate and maintain the equipment in accordance with good air pollution control practices.
Good Process Operation *(non-combustion sources)*	Operate and maintain the equipment in accordance with good air pollution control practices, as well as implement work practices to minimize VOC emissions.
Material Selection (*Only Applicable to electrostatic oilers, passivation roll coating operations and hot mill)*	Use alternate materials and/or materials that limit VOC air emissions
Application Method *(Only Applicable to electrostatic oilers)*	Utilize the application method that limits overspray and maximizes transfer efficiency

4.5.2 Miscellaneous Natural Gas Combustion Units (EU ID AMU 1-18)

The mill will utilize several small natural gas-fired space heaters (Air Make-up Units 1-18) throughout the cold mill to maintain acceptable temperature control in this area of the plant. The following section provides the VOC BACT for these miscellaneous natural gas combustion units.

4.5.2.1 Step 2 – Eliminate Technically Infeasible Options

The air makeup units are all designed to exhaust indoors, making add-on controls not feasible as there is no duct or stack to route them to a control device. Additionally, no applications of add-on controls to similar sized natural gas-fired sources were noted in the search of the RBLC database. Therefore, all add-on control options are considered technically infeasible for the sources included in this section.

4.5.2.2 Step 3 – Rank Remaining Options

Table 4-16 shows the rankings of the options for controlling VOC emissions from the miscellaneous natural gas combustion units listed in this section.

Table 4-16. Rank of Remaining Control Technologies for VOC from Miscellaneous Natural Gas Combustion Units

Control Technology	Efficiency	Rank
Good Combustion Practices	Varies	1

4.5.2.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.5.2.4 Step 5 – Select BACT

NSWV proposes to utilize good combustion practices and an emission rate of 0.00539 lb VOC/MMBtu, which is based on the AP-42 Chapter 1.4 emission factor of 5.5 lb VOC/MMscf converted to lb/MMBtu using the natural gas heating value of 1,020 Btu/scf as BACT for the miscellaneous natural gas-fired combustion units. This is equivalent to the lowest emission limit identified in the RBLC database and the prevailing emission limit identified in the RBLC database for natural gas fired boilers and process heaters with a capacity less than 100 MMBtu/hr in steel mills.

4.5.3 Cooling Towers (EU ID CCT4, EU ID CCT6, EU ID LCT7)

The mill will operate three (3) direct contact cooling towers to support operations in the hot mill and caster areas and have the potential to release VOC and HAP emissions. The following section provides the VOC BACT for these sources.

4.5.3.1 Step 2 – Eliminate Technically Infeasible Options

Due to the small amount of VOC emissions from the cooling towers, add-on controls to reduce VOC would not be feasible. Further, no applications of add-on controls for VOC emissions from cooling towers were noted in the search of the RBLC database. Therefore, all add-on control options are considered technically infeasible for the sources included in this section.

4.5.3.2 Step 3 – Rank Remaining Options

Table 4-17 shows the rankings of the options for controlling VOC emissions from the cooling towers.

Table 4-17. Rank of Remaining Control Technologies for VOC from Cooling Towers

Control Technology	Efficiency	Rank
Good Process Operation	Varies	1

4.5.3.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.5.3.4 Step 5 – Select BACT

NSWV proposes utilizing good process operations for the cooling towers that emit VOC and HAP which includes the implementation of a monitoring program that would include monthly inspections for oily sheen to ensure compliance with a BACT emission rate of 0.08 tpy of VOC for CCT4, 0.37 tpy of VOC for CCT6, and 0.29 tpy of VOC for LCT7. This control method is consistent with the controls outlined in the RBLC for this source type at other steel mills.

4.5.4 Parts Washers (EU ID WASH1 - 9)

The mill will utilize parts washers that use solvents to clean grease and oil from metal items within various processes throughout the mill. The parts washers will release VOC emissions. The following section provides the VOC BACT for these sources.

4.5.4.1 Step 2 – Eliminate Technically Infeasible Options

Due to the small amount of VOC emissions from the parts washers, add-on controls are not feasible. Furthermore, no applications of add-on controls for parts washers were noted in the search of the RBLC database. Therefore, all add-on control options are considered technically infeasible for the sources included in this section.

4.5.4.2 Step 3 – Rank Remaining Options

Table 4-18 shows the rankings of the options for controlling VOC emissions from the parts washers.

Table 4-18. Rank of Remaining Control Technologies for VOC from Parts Washers

Control Technology	Efficiency	Rank
Good process operation	Varies	1

4.5.4.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.5.4.4 Step 5 – Select BACT

NSWV proposes to utilize good process operation for the parts washers that emit VOC which includes storing the solvent in containers, minimizing spills, inspecting, and immediately repairing any leaks, and operating of the parts washer with a closed lid to ensure a BACT emission rate of 0.35 tpy of VOC for each unit. This control method is consistent with the controls outlined in the RBLC for this source type at other steel mills.

4.5.5 Electrostatic Oilers (EU ID PLSTEO, STMSTEO, CGLEO1, CGLEO2, RCLEO)

Electrostatic oilers will be utilized at the mill for coating the coils of steel with a protective layer of oil, which will release VOC emissions. The following section provides the VOC BACT for these sources.

4.5.5.1 Step 2 – Eliminate Technically Infeasible Options

VOC emissions from each electrostatic oilers are estimated to be insignificant; therefore, add-on controls would not be feasible. Further, no applications of add-on controls for electrostatic oilers were noted in the

search of the RBLC database. Therefore, all add-on control options are considered technically infeasible for the sources included in this section.

The type and amount of oil use are defined by the steel properties that must be achieved. A thin film of oil is applied to create a barrier to moisture in the air so that steel that undergoes pickling will not oxidize when exposed to atmospheric conditions of moderately high humidity. An oil film or similar water-proof coating must be used for acid-pickling. A water-based coating is not technically feasible for water-proof coating substitution, and there are no identified material substitutions with low-VOC and low-solid material at this time. Therefore, a material substitution is not technically feasible for acid- pickling operations.

4.5.5.2 Step 3 – Rank Remaining Options

Table 4-19 shows the rankings of the options for controlling VOC emissions from the electrostatic oilers.

Table 4-19. Rank of Remaining Control Technologies for VOC from Electrostatic Oilers

Control Technology	Efficiency	Rank
Application Method	Up to 60%	1
Good process operation	Varies	1

4.5.5.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.5.5.4 Step 5 – Select BACT

Material application methods include contact systems, electrostatic systems, and spraying systems. When feasible, electrostatic application can significantly reduce material use by enhancing transfer efficiency. In this process, a fluid mist is negatively charged, while the target metal remains at ground potential. As the mist enters a strong electric field, electrostatic pressure causes the droplets to break into smaller, charged particles that repel each other, forming a finely atomized mist. The negatively charged droplets are then attracted to the metal due to the charge difference, ensuring even adhesion across the surface.

Compared to contact and spraying systems, electrostatic application provides a more uniform coating with a higher deposition rate, reducing material usage and emissions. Contact systems, which rely on brushes, rollers, or pads, create uneven film thickness due to surface irregularities. Spraying systems tend to overapply coatings, leading to increased material consumption and higher emissions. In contrast, electrostatic application uses 60% less coating material than contact or spraying methods, further minimizing emissions.

Good process operation, such as storing VOC-containing materials in closed containers, minimizing spills, and inspecting for and immediately repairing any leaks do not have any adverse economic or environmental impacts. Therefore, in addition to the use of electrostatic oilers for efficient oil application/transfer, NSWV proposes to utilize good process operation as discussed above to ensure a BACT emission rate of 0.03 tpy of VOC each for EU PLSTEO, CGLEO1, CGLEO2 and RCLEO and 0.07 tpy of VOC for EU STMSTEO.

4.5.6 Galvanizing Lines (EU ID CGL1 and CGL2)

The mill will utilize two galvanizing lines with each line consisting of multiple operations that emit VOC: passivation roll coater and stenciling. The following section provides the VOC BACT for these sources.

4.5.6.1 Step 2 – Eliminate Technically Infeasible Options

The small amount of VOC emissions from the passivation roll coater operations and stenciling operations indicate that the addition of add-on controls is not feasible. Furthermore, these operations are fugitive sources that vent emissions into the Cold Mill building making add on emission controls infeasible for this operation. No applications of add-on controls for these operations were noted in the search of the RBLC database. Therefore, all add-on control options are considered technically infeasible for the sources included in this section.

4.5.6.2 Step 3 – Rank Remaining Options

Table 4-20 shows the rankings of the options for controlling VOC emissions from the galvanizing lines.

Table 4-20. Rank of Remaining Control Technologies for VOC from Galvanizing Line Operations

Control Technology	Efficiency	Rank
Material Section [passivation roll coater operations only]	Varies	1
Good process operation	Varies	1

4.5.6.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.5.6.4 Step 5 – Select BACT

NSWV proposes to utilize good process operations for the passivation roll coater and stenciling operations that emit VOC. This will include proper equipment maintenance, storing VOC containing materials in closed containers, minimizing spills, and inspecting and immediately repairing any leaks to ensure the following BACT limits for each galvanizing line:

- Passivation roll coater operations - Use of NSPS compliant materials (0.28 kg VOC/liter coating solids applied)
- Stenciling operations- 820 gallon/yr of material usage with an annual average VOC content of 7.21 lb/gallon

4.5.7 Caster Spray Vents (EU ID CSP1 and CSP2)

Caster spray vents utilized by the mill during casting operations will capture and vent VOC and PM emissions released from the steam produced when cooling water is sprayed onto the hot steel reducing the temperature of the steel. The following section provides the VOC BACT for these sources.

4.5.7.1 Step 2 – Eliminate Technically Infeasible Options

Due to the expected low concentration of VOC in the recirculated caster spray vent cooling water, add-on controls are not feasible. Furthermore, no applications of add-on controls for these operations were noted in

the search of the RBLC database for VOC control. Therefore, all add-on control options are considered technically infeasible for the sources included in this section.

4.5.7.2 Step 3 – Rank Remaining Options

Table 4-21 shows the rankings of the options for controlling VOC emissions from the caster spray vents.

Table 4-21. Rank of Remaining Control Technologies for VOC from Caster Spray Vents

Control Technology	Efficiency	Rank
Good process operation	Varies	1

4.5.7.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.5.7.4 Step 5 – Select BACT

NSWV proposes to utilize good process operation for the caster spray vents that emit VOC which include employing a preventative maintenance schedule that is consistent with the manufacturer's instructions for routine and long-term maintenance to minimize process emissions. In addition, NSWV proposes a BACT emission rate of 1.45 lb/hr for Caster Spray Vent #1 and 2.91 lb/hr for Caster Spray Vent #2. These rates are based on engineering testing conducted by Nucor at the caster line vent exhaust stack for a similar mill, which was adjusted for the NSWV site based on one caster and the individual estimated flow rate from each vent.

4.5.8 Hot Mill (EU ID HM)

The hot mill operations reduce the thickness of the steel to meet customer specifications prior to being cooled and coiled. Fugitive PM and VOC emissions from this process are vented into the Hot Mill building and will be exhausted through matrix vents in the roof of the building. The following section provides the VOC BACT for these sources.

4.5.8.1 Step 2 – Eliminate Technically Infeasible Options

The hot rolling mill equipment will encompass a substantial area across which fugitive VOC emissions are generated and vented into the Hot Mill building making add on emission controls infeasible for this operation. No applications of add-on controls for these operations were noted in the search of the RBLC database for VOC control. Therefore, all add-on control options are considered technically infeasible for the sources included in this section.

Additionally, there are no identified material substitutions with low-VOC and low-solid material at this time that could be used to reduce VOC emissions. Therefore, a material substitution is not technically feasible for the hot mill operations.

4.5.8.2 Step 3 – Rank Remaining Options

Table 4-22 shows the rankings of the options for controlling VOC emissions from the hot mill.

Table 4-22. Rank of Remaining Control Technologies for VOC from Hot Mill Operations

Control Technology	Efficiency	Rank
Good process operation	Varies	1

4.5.8.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.5.8.4 Step 5 – Select BACT

NSWV proposes to utilize good process operation for the hot mill matrix vents that emit VOC which includes performing periodic maintenance to minimize leaks of oil and grease from seals and a BACT emission rate of 7.14 lb/hr of VOC.

4.5.9 Tandem Cold Mill (EU ID TCM)

The tandem cold mill operations include the use of a rolling solution during compression of the steel strip which releases VOC emissions. The following section provides the VOC BACT for this source.

4.5.9.1 Step 2 – Eliminate Technically Infeasible Options

No applications of add-on controls for similar sources or operations were noted in the search of the RBLC database for VOC control. Additionally, there are no identified material substitutions with low-VOC and low-solid material at this time that could be used to reduce VOC emissions. Therefore, a material substitution is not technically feasible for the tandem cold mill operations.

4.5.9.2 Step 3 – Rank Remaining Options

Table 4-23 shows the rankings of the options for controlling VOC emissions from the tandem cold mill.

Table 4-23. Rank of Remaining Control Technologies for VOC from Tandem Cold Mill

Control Technology	Efficiency	Rank
Wet scrubber/Mist eliminator	70 to 99%	1
Application method	Up to 60%	2
Good process operation	Varies	3

4.5.9.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.5.9.4 Step 5 – Select BACT

NSWV proposes to use good process operation through proper equipment maintenance for the tandem cold mill operations that emit VOC. Though there were no similar sources found in the RBLC database that controlled VOC emissions using an add-on control, NSWV also intends to utilize a mist eliminator for the tandem cold mill which will control PM and VOC. Therefore, NSWV proposes a BACT limit of 10 mg VOC /Nm^3 (units of mg/m^3 at STP) with mist eliminator control along with good process operation.

4.5.10 Standalone Temper Mill (EU ID STM)

The standalone temper mill can include wet or dry tempering operations used to improve the material properties and surface finish grade of the steel, which releases VOC emissions. The following section provides the VOC BACT for this source.

4.5.10.1 Step 2 – Eliminate Technically Infeasible Options

No applications of add-on controls for similar sources or operations were noted in the search of the RBLC database for VOC control. Additionally, there are no identified material substitutions with low-VOC and low-solid material at this time that could be used to reduce VOC emissions. Therefore, a material substitution is not technically feasible for the standalone temper mill operations.

4.5.10.2 Step 3 – Rank Remaining Options

Table 4-24 shows the rankings of the options for controlling VOC emissions from the standalone temper mill.

Table 4-24. Rank of Remaining Control Technologies for VOC from Standalone Temper Mill

Control Technology	Efficiency	Rank
Wet scrubber/Mist eliminator	70 to 99%	1
Application method	Up to 60%	2
Good process operation	Varies	3

4.5.10.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.5.10.4 Step 5 – Select BACT

The RBLC database search only yields results for temper mills combined with other rolling/reducing operations. There were no results for standalone temper mills, which is the process being installed at NSWV. Mist eliminators are typically used for VOC control in cold reducing operations; however, due to the low inlet loading for the standalone temper mill (an insignificant source at other mills), the mist eliminator would be ineffective. Therefore, NSWV proposes BACT as good process operation for the standalone temper mill. Nevertheless, NSWV plans to install a mist eliminator to manage occupational safety considerations at the mill and achieve an emission rate of 10 mg VOC /Nm^3 (units of mg/m^3 at STP), based on vendor estimates.

4.6 PM/PM_{10}/$PM_{2.5}$ BACT Analysis

Particulate matter (PM/PM_{10}/$PM_{2.5}$) emissions at the mill will primarily be generated from EAF operations and material handling operations. Minor amounts of PM/PM_{10}/$PM_{2.5}$ will be generated through the combustion of fuel as the principal fuel source for the mill is natural gas, which generates inherently low PM/PM_{10}/$PM_{2.5}$ emissions. Table 4-25 provides a summary of the selected PM/PM_{10}/$PM_{2.5}$ BACT for each applicable emission source of PM/PM_{10}/$PM_{2.5}$.

Table 4-25. Summary of Selected BACT for $PM/PM_{10}/PM_{2.5}$ Emitting Sources

Emission Unit ID	Emission Unit	Selected $PM/PM_{10}/PM_{2.5}$ BACT	BACT Analysis Status
EAF1/LMF1 EAF2/LMF2 CAST1	EAF1/LMF1 EAF2/LMF2 Casting Operations	PM – 0.0018 gr/dscf $PM_{10}/PM_{2.5}$ – 0.0052 gr/dscf	No change
TF1	Tunnel Furnace #1	PM – 1.86E-03 lb/MMBtu PM_{10} – 5.10E-04 lb/MMBtu $PM_{2.5}$ – 4.22E-04	Revised emission factors for PM_{10} / $PM_{2.5}$
VTD1 VTD2	Vacuum Tank Degasser #1 Vacuum Tank Degasser #2	$PM/PM_{10}/PM_{2.5}$ – 6.05E-03 lb/MMBtu	No change
PKL-1	Pickling Line #1	PM/ $PM_{10}/PM_{2.5}$ – 0.01 gr/dscf	No change
PKLSB	Pickling Line Scale Breaker	PM/ $PM_{10}/PM_{2.5}$ – 0.003 gr/dscf	No change
SPM1 SPM2	Skin Pass Mill #1 Skin Pass Mill #2	PM/ $PM_{10}/PM_{2.5}$ – 0.004 gr/dscf	Updated
CGL1 CGL2	Galvanizing Line #1 Galvanizing Line #2	PM/ $PM_{10}/PM_{2.5}$ – 0.004 gr/dscf	Updated
NCT1 CCT4 NCT5 CCT6 LCT7 NCT8 ASPCT	Cooling Tower #1 through 7	Drift Loss of 0.0005%	No change
EMGEN1 through 26	Emergency Engine #1 through #26	NSPS JJJJ and RICE MACT	No change (Note the number and size of the emergency engines have been updated but there is no change to the previous BACT analysis)
TCM	Tandem Cold Mill	PM/ $PM_{10}/PM_{2.5}$ – 0.0066 gr/dscf	Updated
STM	Standalone Temper Mill	PM/ $PM_{10}/PM_{2.5}$ – 0.002 gr/dscf	Updated
HM	Hot Mill	PM/PM_{10} - 0.0010 lb/ton $PM_{2.5}$ – 0.00037 lb/ton	Updated
SCRAP-CUT	Scrap Cutting - cutting operations	$PM/PM_{10}/PM_{2.5}$ – 0.001 gr/dscf	No change (Note EU ID update only)

Emission Unit ID	Emission Unit	Selected $PM/PM_{10}/PM_{2.5}$ BACT	BACT Analysis Status
LD1- 3 LPHTR1- 7 TD1 - 2 TPHTR1- 2 SENPHTR1- 3 GALVFN1- 2 BOXANN1-12 ASP SCRAP-CUT	Ladle Dryers (3 Units) Ladle Preheaters (7 Units) Tundish Dryers (2 Units) Tundish Preheaters (2 Units) Subentry Nozzle Preheaters (3 Units) Galvanizing Furnaces (2 Units) Box Annealing Furnaces (12 Units) Water Bath Vaporizer (1 Unit) Scrap Cutting – combustion emissions	PM – 1.86E-03 lb/MMBtu PM_{10} – 5.10E-04 lb/MMBtu $PM_{2.5}$ – 4.22E-04 lb/MMBtu	Revised emission factors for PM_{10} / $PM_{2.5}$
GALVBOILER1- 2 PLTCMBOILER1- 2	Galvanizing Line Boilers (2 units) Pickling Line Tandem Cold Mill Boilers (2 units)	PM – 1.86E-03 lb/MMBtu PM_{10} – 5.10E-04 lb/MMBtu $PM_{2.5}$ – 4.22E-04	Revised emission factors for PM_{10} / $PM_{2.5}$
AMU1- 18	Air Make-up Units (18 units)	PM – 1.86E-03 lb/MMBtu PM_{10} – 5.10E-04 lb/MMBtu $PM_{2.5}$ – 4.22E-04	New
SLGSKP1 through 14	Slag Stockpile #1 through 14	Combination of wet suppression and good housekeeping practices	No change (Note the BACT analysis is unchanged but the number of slag stockpiles and emission calculations have changed. See Attachment N for updated calculations.
SLAG-BULK1 through 8, 10, 13 through 29, 41 through 42, 45 through 52 HSCRAP-BULK8 through 9, 11 through 12, 30 through 40, 43 through 44	Slag and Home Scrap Handling	Combination of wet suppression and good housekeeping practices	No change (Note the BACT analysis is unchanged but the EUs/EU IDs have changed and NSWV has updated the emission factors. See Attachment N for updated calculations.
SCRAP-RECEIVING 1-3	Scrap Unloading Operations	PM – 0.0003 lb/ton PM_{10} – 0.00015 lb/ton $PM_{2.5}$ – 0.000043 lb/ton	No change (Note: EU ID changes but there is no change to the BACT analysis that was noted in the previous application for the unloading operations)
SCRAP-PILE1-3	Scrap Yard Stockpiles	PM – 1.47 lb/acre-day PM_{10} – 0.74 lb/acre-day $PM_{2.5}$ – 0.11 lb/acre-day	Updated

Emission Unit ID	Emission Unit	Selected $PM/PM_{10}/PM_{2.5}$ BACT	BACT Analysis Status
SCRAP-HANDLING1-3	Scrap Handling Operations	PM – 9.13E-04 lb/ton PM_{10} – 4.32E-04 lb/ton $PM_{2.5}$ – 6.54E-05 lb/ton	No change (Note: EU ID changes but there is no change to the BACT analysis that was noted in the previous application for the unloading operations)
RAW-FEED1 through 8 SUBS-FEED1 through 7 EAF-FEED1 through 25 LMF-FEED1 through 51	Raw Material Unloading Scrap Substitute Handling EAF Raw Material Handling LMF Raw Material Handling	Bin Vent Control: PM/PM_{10}– 0.001 gr/dscf $PM_{2.5}$ – 0.0005 gr/dscf EAF Baghouses Control (pickups routed from Internal/External Baghouse/Canopy Hood): PM – 0.0018 gr/dscf $PM_{10}/PM_{2.5}$ – 0.0052 gr/dscf	Updated
BRCKCRSH	Refractory Brick Recycling Operations	Combination of wet suppression and good housekeeping practices	New
CSP1 CSP2	Caster Spray Vents	PM – 1.17E-02 gr/dscf PM_{10} – 3.97E-03 gr/dscf $PM_{2.5}$ – 2.33E-03 gr/dscf	New
PLSTEO CGLEO1 CGLEO2 RCLEO STMSTEO	Electrostatic Oilers	Application method and good process operation	New
FUG-PAVED-01P-12P	Paved Roadways	Combination of wet suppression and good process operation	No change

Only the sources that have a new or updated BACT Analysis Status are addressed in this section. For sources with no change to their BACT Analysis Status, the BACT Top-Down Approach that has already been established for these sources is not addressed in this application.

4.6.1 Step 1 – Identify All Control Options

NSWV identified and reviewed the following $PM/PM_{10}/PM_{2.5}$ control options which are summarized in Table 4-26 and are evaluated for each $PM/PM_{10}/PM_{2.5}$ source in this analysis.

Table 4-26. Potential PM/PM_{10}/$PM_{2.5}$ Control Technologies

Control Option	Description
Baghouse / Fabric Filter	Process exhaust gas passes through a tightly woven or felted fabric arranged in sheets, cartridges, or bags that collect PM via sieving and other mechanisms. The dust cake that accumulates on the filters increases collection efficiency. Various cleaning techniques include pulse-jet, reverse-air, and shaker technologies.
Electrostatic Precipitator (ESP)	Electrodes stimulate the waste gas and induce an electrical charge in the entrained particles. The resulting electrical field forces the charged particles to the collector walls from which the material may be mechanically dislodged and collected in dry systems or washed with a water deluge in wet systems.
Incinerator	The combustion of auxiliary fuel heats a combustion chamber to promote the thermal oxidation of partially combusted particulate hydrocarbons in the exhaust stream. Recuperative incinerators utilize heat exchangers to recover heat from the outlet gas which is used to pre-heat the incoming waste stream.
Wet Scrubber/Mist Eliminator	A scrubbing liquid introduced into the gas stream captures and collects entrained particles. In the case of a venturi scrubber, the turbulent airflow atomizes the scrubbing liquid to increase droplet-particle interaction. The droplets containing particles are typically separated from the exhaust gas in a downstream cyclonic separator and/or mist eliminator.
Cyclone	Centrifugal forces drive particles in the gas stream toward the cyclone walls as the waste gas flows through the conical unit. The captured particles are collected in a material hopper below the unit.
Dry Cooling Towers *(Only applicable to cooling towers)*	Heat transfer tubes or fins separate the cooling water from the ambient air, effectively eliminating drift losses.
Drift Eliminator *(Only applicable to cooling towers)*	An array of baffles in the cooling tower removes as many droplets as practical from the air stream before exiting the tower.
Full / Partial Enclosures *(Only applicable to stockpiles and material handling)*	Walls, buildings, ductwork, and other structures limit the escape of fugitive particulate material.
Watering / Material Moisture Content *(Only applicable to stockpiles and material handling)*	The inherent moisture content of certain materials may limit the generation and dispersion of fugitive dust. For dry materials, spray bars or spray nozzles may be utilized to apply water as necessary throughout the process.
Good Combustion Practices	Operate and maintain the equipment in accordance with good air pollution control practices.
Good Process Operation *(non-combustion sources)*	Operate and maintain the equipment in accordance with good air pollution control practices, as well as implement work practices to minimize particulate emissions.
Material Selection (*Only Applicable to electrostatic oilers)*	Use alternate materials and/or materials that limit PM air emissions
Application Method *(Only Applicable to electrostatic oilers)*	Utilize the application method that limits overspray and maximizes transfer efficiency

4.6.2 Tunnel Furnace (EU ID TF1)

$PM/PM_{10}/PM_{2.5}$ emissions are generated from the natural gas fired tunnel furnace as a product of combustion. The following section provides the $PM/PM_{10}/PM_{2.5}$ BACT for this source.

4.6.2.1 Step 2 – Eliminate Technically Infeasible Options

The $PM/PM_{10}/PM_{2.5}$ concentrations in the exhaust of the tunnel furnace will be below the levels typically controlled by fabric filter baghouses, ESPs, incinerators, wet scrubbers, or cyclones. Therefore, these control options would not be effective in removing any additional $PM/PM_{10}/PM_{2.5}$ emissions from the tunnel furnace, and they are considered technically infeasible.

4.6.2.2 Step 3 – Rank Remaining Options

Table 4-27 shows the rankings of the options for controlling $PM/PM_{10}/PM_{2.5}$ emissions from the tunnel furnace.

Table 4-27. Rank of Remaining Control Technologies for $PM/PM_{10}/PM_{2.5}$ from Tunnel Furnace

Control Technology	Efficiency	Rank
Good Combustion Practices / Firing Pipeline Quality Natural Gas	Varies	1

4.6.2.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.6.2.4 Step 5 – Select BACT

The lowest $PM/PM_{10}/PM_{2.5}$ emission limit identified in the RBLC database for tunnel furnaces at steel mills is 0.53 lb/MMscf, which is from Permit No. 2305-AOP-R0 dated September 18, 2013 for Big River Steel LLC facility in Arkansas. Based on the permit application, the emission limit was based on a "recent EPA study" where "EPA believes the current AP-42 factors for condensable emissions are 10 to 20 times too high." All other steel mills included in the RBLC database utilize the $PM/PM_{10}/PM_{2.5}$ emission factors based on the current AP-42 Chapter 1.4.

NSWV proposes emission rates of 5.10E-04 lb PM_{10}/MMBtu and 4.22E-04 lb $PM_{2.5}$ /MMBtu as BACT for the tunnel furnace, with no change to the PM BACT previously proposed (1.86E-03 lb FPM/MMBtu). Similar to the Big River Steel application, the updated PM10 and PM2.5 factors are based on an EPA Region V study using preliminary test data for natural gas-fired industrial boilers (all types) and industrial processes. The factors listed were in units of lb/MMscf and were converted to lb/MMBtu using the natural gas heating value of 1020 Btu/scf. PM_{10} and $PM_{2.5}$ emission factors are filterable and condensable PM combined. The PM emission factor was not updated since the Region V study did not provide a filterable value for PM emissions. Compliance will be demonstrated via the combustion of pipeline quality natural gas and use of good combustion practices.

4.6.3 Skin Pass Mills (EU ID SPM1 and SPM2)

$PM/PM_{10}/PM_{2.5}$ emissions are generated from the skin pass mills. The following section provides the $PM/PM_{10}/PM_{2.5}$ BACT for this source.

4.6.3.1 Step 2 – Eliminate Technically Infeasible Options

All control options are considered potentially technically feasible and are evaluated in the next step.

4.6.3.2 Step 3 – Rank Remaining Option

Table 4-28 shows the rankings of the options for controlling $PM/PM_{10}/PM_{2.5}$ emissions from the skin pass mills.

Table 4-28. Rank of Remaining Control Technologies for $PM/PM_{10}/PM_{2.5}$ from Skin Pass Mills

Control Technology	Efficiency	Rank
Baghouse / Fabric Filter	99 - 99.9%	1
Electrostatic Precipitator (ESP)	99 - 99.9%	1
Wet Scrubber/Mist Eliminator	70 - 99%	2
Cyclone	70 - 99%	2
Good Process Operation	Varies	3

4.6.3.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.6.3.4 Step 5 – Select BACT

Most of the RBLC database search results are for skin pass mills controlled via mist eliminator. RBLC database search results for skin pass mills controlled via mist eliminator range from 0.0013 gr/dscf to 0.0066 gr/dscf.

A mist eliminator is a common control technology used for skin pass mills (wet exhaust can cause operational issues with baghouses and dry electrostatic precipitators) and can achieve a control efficiency that is effectively equivalent to the control efficiency identified for the baghouse and electrostatic precipitator controls as well as being achievable over the life of the equipment. Therefore, NSWV proposes to utilize a mist eliminator and emission rates of 0.004 gr PM/dscf, 0.004 gr PM_{10}/dscf, and 0.004 gr $PM_{2.5}$/dscf as BACT for the skin pass mills based on control device vendor estimates..

4.6.4 Galvanizing Line (EU ID CGL1 and CGL2)

$PM/PM_{10}/PM_{2.5}$ emissions are generated from the cleaning section of the galvanizing lines. The following section provides the $PM/PM_{10}/PM_{2.5}$ BACT for this source.

4.6.4.1 Step 2 – Eliminate Technically Infeasible Options

The exhaust of the galvanizing lines has the potential to contain acid gases, which if present, would be expected to corrode fabric filters, ESPs, and cyclones. Therefore, these control options are considered technically infeasible. However, a mist eliminator will be installed for HCl control as provided below.

4.6.4.2 Step 3 – Rank Remaining Options

Table 4-29 shows the rankings of the options for controlling $PM/PM_{10}/PM_{2.5}$ emissions from the cleaning section of the galvanizing lines.

Table 4-29. Rank of Remaining Control Technologies for PM/PM_{10}/$PM_{2.5}$ from Galvanizing Lines

Control Technology	Efficiency	Rank
Mist Eliminator	70 - 99%	1
Good Process Operation	Varies	2

4.6.4.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.6.4.4 Step 5 – Select BACT

Permits for Nucor Steel Gallatin, Nucor Steel Berkeley, Nucor Steel Crawfordsville, Nucor Steel Arkansas, and Big River Steel (now US Steel) contain BACT emission limits of 0.003 gr/dscf for the cleaning section of galvanizing lines, citing the use of mist eliminators. However, these BACT limits remain unverified. For the cleaning section of the galvanizing line, NSWV proposes BACT to be a mist eliminator with an outlet particulate load of no more than 0.004 gr PM/dscf, 0.004 gr PM_{10}/dscf, and 0.004 gr $PM_{2.5}$/dscf, which is based on vendor estimates.

4.6.5 Tandem Cold Mill (EU ID TCM)

PM/PM_{10}/$PM_{2.5}$ emissions are generated from the tandem cold mill. The following section provides the PM/PM_{10}/$PM_{2.5}$ BACT for this source.

4.6.5.1 Step 2 – Eliminate Technically Infeasible Options

The tandem cold mill will be located downstream of pickling operations. Hydrogen chloride (HCl) used in the picking operations would be expected to corrode fabric filters, ESPs, incinerators, and cyclones. Therefore, these control options are considered technically infeasible.

4.6.5.2 Step 3 – Rank Remaining Options

Table 4-30 shows the rankings of the options for controlling PM/PM_{10}/$PM_{2.5}$ emissions from the cold mill.

Table 4-30. Rank of Remaining Control Technologies for PM/PM_{10}/$PM_{2.5}$ from Tandem Cold Mill

Control Technology	Efficiency	Rank
Mist Eliminator	70 - 99%	1
Good Process Operation	Varies	2

4.6.5.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.6.5.4 Step 5 – Select BACT

The RBLC database search results in limited set of emission limits with only a few entries for tandem cold mills. The controlled emissions rate ranges from cold mill monovents are excluded from this analysis since those emission rates would include fugitives from multiple sources in a dilute air stream.

Recently issued permits for Nucor Berkeley (2018) and Steel Dynamics Texas (2020) contain BACT emission limits of 0.01 gr/dscf for the cold mills controlled via a mist eliminator.

NSWV proposes as BACT for the tandem cold mill to utilize a mist eliminator and emission rates of 0.0066 gr PM/dscf, 0.0066 gr PM_{10} /dscf, 0.0066 gr $PM_{2.5}$ /dscf based on control device vendor estimates with a safety factor to account for operational variability.

4.6.6 Standalone Temper Mill (EU ID STM)

$PM/PM_{10}/PM_{2.5}$ emissions are generated from the temper mill. The following section provides the $PM/PM_{10}/PM_{2.5}$ BACT for this source.

4.6.6.1 Step 2 – Eliminate Technically Infeasible Options

The temper mill will be located downstream of pickling operations. Hydrogen chloride (HCl) used in the picking operations would be expected to corrode fabric filters, ESPs, incinerators, and cyclones. Therefore, these control options are considered technically infeasible.

4.6.6.2 Step 3 – Rank Remaining Options

Table 4-31 shows the rankings of the options for controlling $PM/PM_{10}/PM_{2.5}$ emissions from the temper mill.

Table 4-31. Rank of Remaining Control Technologies for $PM/PM_{10}/PM_{2.5}$ from Standalone Temper Mill

Control Technology	Efficiency	Rank
Mist Eliminator	70 - 99%	1
Good Process Operation	Varies	2

4.6.6.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.6.6.4 Step 5 – Select BACT

The RBLC database search only yields results for temper mills combined with other rolling/reducing operations. There were no results for standalone temper mills, which is the process being installed at NSWV. Higher PM emissions are anticipated from rolling processes where greater reductions in thickness are achieved. The purpose of a temper mill is to improve strength and surface quality, with the thickness being minimally reduced. Therefore, PM emissions from the standalone temper mill are expected to be very low compared to emissions from all temper mill operations found in the RBLC database.

Mist eliminators are typically used for PM control in cold reducing operations; however, due to the low inlet loading for the standalone temper mill (<0.1 gr/dscf), the mist eliminator would be ineffective. Therefore, NSWV proposes BACT as good process operation for the standalone temper mill. Nevertheless, NSWV plans to install a mist eliminator to manage occupational safety considerations at the mill and achieve emission rates of 0.002 gr PM /dscf, 0.002 gr PM_{10} /dscf, 0.002 gr $PM_{2.5}$ /dscf based on vendor estimates.

4.6.7 Hot Mill (EU ID HM)

$PM/PM_{10}/PM_{2.5}$ emissions are generated from the hot mill. The following section provides the $PM/PM_{10}/PM_{2.5}$ BACT for this source.

4.6.7.1 Step 2 – Eliminate Technically Infeasible Options

The hot rolling mill equipment will encompass a substantial area across which fugitive PM emissions are generated and vented into the Hot Mill building. Add-on controls are technically infeasible, as the installation of external control devices on each of the building vents is infeasible in terms of capturing emissions from the hot mill and the low concentration of PM emissions coming out of the building.

4.6.7.2 Step 3 – Rank Remaining Options

Table 4-32 shows the rankings of the options for controlling $PM/PM_{10}/PM_{2.5}$ emissions from the rolling mill.

Table 4-32. Rank of Remaining Control Technologies for $PM/PM_{10}/PM_{2.5}$ from Hot Mill

Control Technology	Efficiency	Rank
Good Process Operation	Varies	1

4.6.7.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.6.7.4 Step 5 – Select BACT

NSWV noted that similar steel mills are relying on good process operations to control PM emissions from hot mills based on RBLC records.

NSWV proposes to utilize good process operation and emission rates of 0.0010 lb PM/ton, 0.0010 lb PM_{10}/ton, and 0.00037 lb $PM_{2.5}$/ton as BACT for the hot mill, which is based on emissions testing conducted by NSWV at similar mill operations.

4.6.8 Miscellaneous Natural Gas Combustion Units (EU ID LD1 through 3, LPHTR1 through 7, TD1 and 2, TPHTR1 and 2, SENPHTR1 through 3, GALVFN1 and 2, BOXANN1 through 12, ASP, SCRAP-CUT, GALVBOILER1 and 2, PLTCMBOILER1 and 2, AMU1 through 18)

The mill will utilize several small natural gas-fired heaters, dryers, and furnaces throughout the melt shop, hot mill, and cold mill. Natural gas-fired galvanizing line boilers, pickling line tandem cold mill boilers, and air make-units are also being included in this section. The following section provides the $PM/PM_{10}/PM_{2.5}$ BACT for these miscellaneous natural gas combustion units. Table 4-5 above has identified the natural gas combustion units covered in this section.

4.6.8.1 Step 2 – Eliminate Technically Infeasible Options

The $PM/PM_{10}/PM_{2.5}$ concentrations in the exhaust of the miscellaneous natural gas combustion units will be below the levels typically controlled by fabric filter baghouses, ESPs, incinerators, wet scrubbers, or cyclones. Therefore, these control options would not be effective in removing any additional $PM/PM_{10}/PM_{2.5}$

emissions from the natural gas combustion units included in this section, and they are considered technically infeasible.

4.6.8.2 Step 3 – Rank Remaining Options

Table 4-33 shows the rankings of the options for controlling PM/PM_{10}/$PM_{2.5}$ emissions from the miscellaneous natural gas combustion units listed in this section.

Table 4-33. Rank of Remaining Control Technologies for PM/PM_{10}/$PM_{2.5}$from Miscellaneous Natural Gas Combustion Units

Control Technology	Efficiency	Rank
Good Combustion Practices / Firing Pipeline Quality Natural Gas	Varies	1

4.6.8.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.6.8.4 Step 5 – Select BACT

The lowest PM/PM_{10}/$PM_{2.5}$ emission limit identified in the RBLC database for small natural gas combustion devices at steel mills is 0.53 lb/MMscf, which is from Permit No. 2305-AOP-R0 dated September 18, 2013 for Big River Steel LLC facility in Arkansas. Based on the permit application, the emission limit was based on a "recent EPA study" where "EPA believes the current AP-42 factors for condensable emissions are 10 to 20 times too high." All other steel mills included in the RBLC database utilize the PM/PM_{10}/$PM_{2.5}$ emission factors based on the current AP-42 Chapter 1.4 for small natural gas combustion devices.

NSWV proposes to utilize good combustion practices and emission rates of 5.10E-04 lb PM_{10}/MMBtu and 4.22E-04 lb $PM_{2.5}$ /MMBtu as BACT for the miscellaneous natural gas combustion units with no change to the PM BACT previously proposed for the miscellaneous natural gas combustion sources (1.86E-03 lb FPM/MMBtu). Similar to the Big River Steel application, the updated PM10 and PM2.5 factors are based on an EPA Region V study using preliminary test data for natural gas-fired industrial boilers (all types) and industrial processes. The factors listed were in units of lb/MMscf and were converted to lb/MMBtu using the natural gas heating value of 1020 Btu/scf. PM_{10} and $PM_{2.5}$ emission factors are filterable and condensable PM combined. The PM emission factor was not updated since the Region V study did not provide a filterable value for PM emissions. Compliance will be demonstrated via the combustion of pipeline quality natural gas and use of good combustion practices.

4.6.9 Scrap Yard Stockpiles (EU SCRAP-PILE1 through 3)

PM/PM_{10}/$PM_{2.5}$ emissions are generated from the scrap yard stockpiles due to wind erosion. The following section provides the PM/PM_{10}/$PM_{2.5}$ BACT for these sources.

4.6.9.1 Step 2 – Eliminate Technically Infeasible Options

Due to the need to access the barges and railcars with a crane during unloading with transfer to trucks, the use of enclosures and capture/control systems may not be feasibly utilized. As a result, the control options of fabric filter, cyclone, or full/partial enclosure are considered technically infeasible for the stockpiles.

4.6.9.2 Step 3 – Rank Remaining Options

Table 4-34 shows the rankings of the options for controlling PM/PM_{10}/$PM_{2.5}$ emissions from the stockpiles.

Table 4-34. Rank of Remaining Control Technologies for PM/PM_{10}/$PM_{2.5}$ from Scrap Yard Stockpiles

Control Technology	Efficiency	Rank
Good Process Operation	Base Case	1

4.6.9.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.6.9.4 Step 5 – Select BACT

NSWV proposes to utilize good process operation and emission rates of 1.47 PM lb/acre-day, 0.74 PM_{10} lb/acre-day, and 0.11 $PM_{2.5}$ lb/acre-day as BACT for the scrap yard stockpiles based on the calculation methodology outlined in U.S. EPA document *Control of Open Fugitive Dust Sources*, EPA-450/3-88-008, September 1988.

4.6.10 Material Handling Operations (EU RAW-FEED1 through 8, SUBS-FEED1 through 7, EAF-FEED1 through 25, LMF-FEED1 through 51)

PM/PM_{10}/$PM_{2.5}$ emissions are generated from the material handling transfer operations, which include transfer of materials utilizing conveyors and hoppers.

4.6.10.1 Step 2 – Eliminate Technically Infeasible Options

Water sprays and wet suppression are not suitable for control of the material handling operations because the systems for material handling, transfer, and storage are designed for dry materials. Wet materials may clog equipment and create additional wear and cannot be introduced into the EAF. Water sprays and wet suppression are technically infeasible and will not be considered further.

4.6.10.2 Step 3 – Rank Remaining Options

Table 4-35 shows the rankings of the options for controlling PM/PM_{10}/$PM_{2.5}$ emissions from material handling operations.

Table 4-35. Rank of Remaining Control Technologies for PM/PM_{10}/$PM_{2.5}$ from Material Handling Operations

Control Technology	Efficiency	Rank
Fabric Filter (Baghouse or Bin Vent Filter)	Up to 99.9%	1
Enclosed (or partially enclosed) conveyors and transfer stations	Varies	2
Good Housekeeping Practices	Base Case	3

4.6.10.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.6.10.4 Step 5 – Select BACT

RBLC search results for $PM/PM_{10}/PM_{2.5}$ BACT emission limits for material loading and unloading at silos (as at steel mills indicate that the typical BACT PM emission rate for material handling operations that utilize baghouses or bin vent filters anywhere from 0.001 gr/dscf to 0.005 gr/dscf.

Recently issued permit for Nucor Brandenburg KY (2020) contains BACT emission limits of 0.005 gr/dscf for material handling systems.

NSWV is proposing to utilize a combination of bin vent filters, baghouses, as well enclosures (or partial enclosures) for conveyors and transfer stations, along with good housekeeping practices including maintenance of the bin vents and baghouses according to manufacturer requirements with the following emission rates:

Bin Vent Control: PM/PM_{10}– 0.001 gr/dscf, $PM_{2.5}$ – 0.005 gr/dscf

EAF Baghouse Control (note that the Exterior Baghouse, Interior Baghouse, and Canopy Hood will capture emissions from material handling operations and route through the EAF Baghouses for additional emissions control): PM – 0.0018 gr/dscf, $PM_{10}/PM_{2.5}$ – 0.0052 gr/dscf.

4.6.11 Refractory Brick Recycling (EU BRCKCRSH)

$PM/PM_{10}/PM_{2.5}$ emissions are generated from the refractory brick recycling operations. The following section provides the $PM/PM_{10}/PM_{2.5}$ BACT for this source.

4.6.11.1 Step 2 – Eliminate Technically Infeasible Options

Emissions from material handling activities associated with the refractory brick recycling operations are fugitive in nature; therefore, enclosures and capture/control systems may not be feasibly utilized. As a result, the control options of fabric filter, cyclone, or full/partial enclosure are considered technically infeasible for material handling activities.

4.6.11.2 Step 3 – Rank Remaining Options

Table 4-36 shows the rankings of the options for controlling $PM/PM_{10}/PM_{2.5}$ emissions from the proposed refractory brick recycling operations.

Table 4-36. Rank of Remaining Control Technologies for $PM/PM_{10}/PM_{2.5}$ from Refractory Brick Recycling System

Control Technology	Efficiency	Rank
Watering / Material Moisture Content	70%	1
Good Process Operation	Varies	2

4.6.11.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.6.11.4 Step 5 – Select BACT

NSWV is proposing to utilize a combination of wet suppression for loading and unloading, conveying, crushing, and screening; and good process operation as BACT for controlling PM/PM_{10}/$PM_{2.5}$ emissions from the refractory brick recycling system. The controlled emission factors from AP-42 Section 11.19.2-1 will be used as BACT emission limits.

4.6.12 Caster Spray Vents (EU CSP1 and CSP2)

Caster spray vents emit PM/PM_{10}/$PM_{2.5}$ emissions released from the steam produced by contact between the hot steel and cooling water. The following section provides the PM/PM_{10}/$PM_{2.5}$ BACT for these sources.

4.6.12.1 Step 2 – Eliminate Technically Infeasible Options

Based on testing conducted at other Nucor facilities on caster spray vents, uncontrolled concentrations of PM/PM10/$PM_{2.5}$ are expected to be well below controlled rates that a vendor would be able to guarantee for add on-controls. Further, baghouse controls are not designed to handle wet media. Therefore, add-on controls are technically infeasible for these sources.

4.6.12.2 Step 3 – Rank Remaining Options

Table 4-37 shows the rankings of the options for controlling PM/PM_{10}/$PM_{2.5}$ emissions from the caster spray vents.

Table 4-37. Rank of Remaining Control Technologies for PM/PM_{10}/$PM_{2.5}$ from Caster Spray Vents

Control Technology	Efficiency	Rank
Good Process Operation	Varies	1

4.6.12.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.6.12.4 Step 5 – Select BACT

NSWV is proposing to utilize good process operation and emissions rates of 1.17E-02 PM gr/dscf, 3.97E-03 PM_{10} gr/dscf, and 2.33E-03 $PM_{2.5}$ gr/dscf as BACT for the caster spray vents. These rates are based on engineering testing conducted on the caster spray vent exhaust at other similar Nucor operations.

4.6.13 Electrostatic Oilers (EU ID PLSTEO, STMSTEO, CGLEO1, CGLEO2, RCLEO)

Electrostatic oilers will be utilized at the mill for oil coating operations, which will release PM emissions. The following section provides the PM BACT for these sources.

4.6.13.1 Step 2 – Eliminate Technically Infeasible Options

None of the add-on control options are appropriate to utilize as control of electrostatic oilers due to the fugitive nature of the source and the low concentrations of PM. Therefore, all add-on control options are considered technically infeasible for the proposed sources included in this section.

The type and amount of oil use are defined by the steel properties that must be achieved. A thin film of oil is applied to create a barrier to moisture in the air so that steel that undergoes pickling will not oxidize when exposed to atmospheric conditions of moderately high humidity. An oil film or similar water-proof coating must be used for acid-pickling. A water-based coating is not technically feasible for water-proof coating substitution, and there are no identified material substitutions with low-VOC and low-solid material at this time. Therefore, a material substitution is not technically feasible for these sources.

4.6.13.2 Step 3 – Rank Remaining Options

Table 4-38 shows the rankings of the options for controlling PM emissions from the electrostatic oilers.

Table 4-38. Rank of Remaining Control Technologies for PM from Electrostatic Oilers

Control Technology	Efficiency	Rank
Application Method	Up to 60%	1
Good Process Operation	Varies	1

4.6.13.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.6.13.4 Step 5 – Select BACT

Material application methods include contact systems, electrostatic systems, and spraying systems. When feasible, electrostatic application can significantly reduce material use by enhancing transfer efficiency. In this process, a fluid mist is negatively charged, while the target metal remains at ground potential. As the mist enters a strong electric field, electrostatic pressure causes the droplets to break into smaller, charged particles that repel each other, forming a finely atomized mist. The negatively charged droplets are then attracted to the metal due to the charge difference, ensuring even adhesion across the surface.

Compared to contact and spraying systems, electrostatic application provides a more uniform coating with a higher deposition rate, reducing material usage and emissions. Contact systems, which rely on brushes, rollers, or pads, create uneven film thickness due to surface irregularities. Spraying systems tend to overapply coatings, leading to increased material consumption and higher emissions. In contrast, electrostatic application uses 60% less coating material than contact or spraying methods, further minimizing emissions.

Good process operation, such as conducting proper maintenance of the equipment will maximize material capture and transfer efficiencies. Therefore, in addition to the use of electrostatic oilers for efficient oil application/transfer, NSWV proposes to utilize good process operation as discussed above as BACT and the emission rates identified in Table 4-39 below.

Table 4-39. Electrostatic Oiler PM/PM_{10}/$PM_{2.5}$ Emission Rates

Emission Unit ID	Description	PM (tons/yr)	PM_{10} (tons/yr)	$PM_{2.5}$ (tons/yr)
PLSTEO	Pickle Line Electrostatic Oiler	0.19	0.19	0.09
STMSTEO	Temper Mill Electrostatic Oiler	0.40	0.40	0.20
CGLEO1	Galvanizing Line 1 Electrostatic Oiler	0.17	0.17	0.08
CGLEO2	Galvanizing Line 2 Electrostatic Oiler	0.17	0.17	0.08
RCLEO	Recoiler Electrostatic Oiler	0.20	0.20	0.10

4.7 Lead and Fluoride BACT Analysis

Lead and Fluoride will be present in the PM emissions generated from EAFs as a result of steel charging and melting and from the addition of fluoride containing agents used in the processing of slag in the LMF area. There will also be Fluoride emissions released from the caster spray vents likely due to the concentration of fluorides in the cooling water. Table 4-40 provides a summary of the selected Lead and Fluoride BACT for each applicable emission source of Lead and Fluoride.

Table 4-40. Summary of Selected BACT for Lead and Fluoride Emitting Sources

Emission Unit ID	Emission Unit	Selected Lead BACT	Selected Fluoride BACT	BACT Analysis Status
EAF1 EAF2	EAF1 EAF2	0.00045 lb/ton	0.0035 lb/ton	No change
CSP1 CSP2	Caster Spray Vents	Not applicable	6.2E-04 lb/ton	New

Only the sources that have a new or updated BACT Analysis Status are addressed in this section. For sources with no change to their BACT Analysis Status, the BACT Top-Down Approach that has already been established for these sources is not addressed in this application.

4.7.1 Step 1 – Identify All Control Options

NSWV identified and reviewed the following control options which are summarized in Table 4-41 and are evaluated for each Lead and Fluoride source in this analysis.

Table 4-41. Potential Lead and Fluoride Control Technologies

Control Option	Description
Baghouse / Fabric Filter	Process exhaust gas passes through a tightly woven or felted fabric arranged in sheets, cartridges, or bags that collect PM via sieving and other mechanisms. The dust cake that accumulates on the filters increases collection efficiency. Various cleaning techniques include pulse-jet, reverse-air, and shaker technologies.
Electrostatic Precipitator (ESP)	Electrodes stimulate the waste gas and induce an electrical charge in the entrained particles. The resulting electrical field forces the charged particles to the collector walls from which the material may be mechanically dislodged and collected in dry systems or washed with a water deluge in wet systems.

Control Option	Description
Incinerator	The combustion of auxiliary fuel heats a combustion chamber to promote the thermal oxidation of partially combusted particulate hydrocarbons in the exhaust stream. Recuperative incinerators utilize heat exchangers to recover heat from the outlet gas which is used to pre-heat the incoming waste stream.
Wet Scrubber (Mist Eliminator)	A scrubbing liquid introduced into the gas stream captures and collects entrained particles. In the case of a venturi scrubber, the turbulent airflow atomizes the scrubbing liquid to increase droplet-particle interaction. The droplets containing particles are typically separated from the exhaust gas in a downstream cyclonic separator and/or mist eliminator.
Cyclone	Centrifugal forces drive particles in the gas stream toward the cyclone walls as the waste gas flows through the conical unit. The captured particles are collected in a material hopper below the unit.
Good Combustion Practices	Operate and maintain the equipment in accordance with good air pollution control practices.
Good Process Operation *(non-combustion sources)*	Operate and maintain the equipment in accordance with good air pollution control practices, as well as implement work practices to minimize emissions.

4.7.2 Caster Spray Vents (EU CSP1 and CSP2)

Caster spray vents emit Fluoride emissions released from the steam produced by contact between the hot steel and cooling water. The following section provides the Fluoride BACT for these sources.

4.7.2.1 Step 2 – Eliminate Technically Infeasible Options

Based on testing conducted at other Nucor facilities on caster spray vents, uncontrolled concentrations of Fluoride are expected to be well below controlled rates that a vendor would be able to guarantee for add on-controls. There were no examples of add-on controls applied to caster spray vents in the RBLC. Therefore, add-on controls are technically infeasible for these sources.

4.7.2.2 Step 3 – Rank Remaining Options

Table 4-42 shows the rankings of the options for controlling Fluoride emissions from the caster spray vents.

Table 4-42. Rank of Remaining Control Technologies for Fluoride from Caster Spray Vents

Control Technology	Efficiency	Rank
Good Process Operation	Varies	1

4.7.2.3 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.7.2.4 Step 5 – Select BACT

NSWV is proposing to utilize good process operation and an emission rate of 6.2E-04 lb/ton as BACT for each caster spray vent. This rate is based on an emission factor developed from emission studies conducted at a similar Nucor steel mill and has been used as the basis for BACT for other Nucor mills.

4.8 GHG BACT Analysis

The plant will generate GHG emissions as a product of the combustion occurring at various units such as EAFs, natural gas combustion devices, and emergency engines. Since the plant will have a GHG PTE greater than 75,000 tpy, a PSD review for GHGs is required. To identify potential GHG control technologies for EAFs, NSWV reviewed EPA's RBLC database (past 10 years) along with various EPA guidance documents to review and evaluate applicable BACT emission limits for GHG.

4.8.1 Step 1 – Identify All Control Options

A search of the RBLC database yielded no results for specific control of GHG emissions from steel mills. All measures identified in Table 4-43 are aiming at enhancing energy efficiency of the equipment, thus either (1) reducing the fuel consumption of the equipment (reduction of direct GHG emissions), or (2) reducing the electricity usage of the equipment (reduction of indirect GHG emissions). Table 4-43 below summarizes identified GHG control measures that are potentially feasible for the Iron and Steel industries.

Table 4-43. Potential GHG Control Measures for Iron/Steel Industries

Unit/ Process	Control Option	Description
Site-wide	Preventive Maintenance	Training programs and good housekeeping programs help to decrease energy consumption throughout the plant.
Site-wide	Energy Monitoring & Management System	Energy monitoring and management systems help provide for optimal energy recovery and distribution between processes at the plant.
Site-wide	High-Efficiency Motors	Look for energy efficiency opportunities for all motor systems (e.g., motors, drives, pumps, fans, compressors, controls).
EAF	Improved Process Control (Neural Network)	Process control can optimize operations and significantly reduce electricity consumption. Control and monitoring systems for EAF are moving towards integration of real-time monitoring of process variables, such as steel bath temperature, carbon levels, and distance to scrap, along with real-time control systems for graphite injection and lance oxygen practice. By monitoring the furnace exhaust gas flow rate and composition, the use of chemical energy in the furnace can be enhanced.
EAF	Adjustable Speed Drives	As flue gas flow varies over time, adjustable speed drives offer opportunities to operate dust collection fans in a more energy efficient manner energy can.
EAF	Transformer Efficiency - Ultra-High-Power Transformers	Ultra-high–power (UHP) transformers help to reduce energy loss and increase productivity. The UHP furnaces are those with a transformer capacity of more than 700 kilovolt amps (kVA)/tonne heat size. The UHP operation may lead to heat fluxes and increased refractory wear, making cooling of the furnace panels necessary. This results in heat losses that partially offset the power savings.
EAF	Foamy Slag Practice	Foamy slag covers the arc and melt surface to reduce radiation heat losses. Foamy slag can be obtained by injecting carbon (granular coal) and oxygen or by lancing of oxygen only.

Unit/ Process	Control Option	Description
EAF	Oxy-Fuel Burners	Oxy-fuel burners are used on most EAF in the U.S. These burners increase the effective capacity of the furnace by increasing the speed of the melt and reducing the consumption of electricity and electrode material, which reduces GHG emissions. The use of oxy-fuels burners has several other beneficial effects: it increases heat transfer, reduces heat losses, reduces electrode consumption and, and reduces tap-to-tap time. Moreover, the injection of oxygen helps to remove different elements from the steel bath.
EAF	Post-combustion of Flue Gases / Scrap Preheating	Post-combustion is a process for utilizing the chemical energy in the CO and hydrogen evolving from the steel bath to heat the steel in the EAF ladle or to preheat scrap to 570 to 1,470°F. It reduces electrical energy requirements and increases the productivity of the EAF. Post-combustion helps to optimize the benefits of oxygen and fuel injection. This technology is commonly used in the U.S. and is considered to be the best control technology for CO emissions.
EAF	Engineered Refractories	Refractories in EAFs have to withstand extreme conditions such as temperatures over 2,900°F, oxidation, thermal shock, erosion, and corrosion, generally leading to an undesired wear of refractories. Refractories can be provided by a controlled microstructure: alumina particles and mullite microballoons coated uniformly with carbon and carbides. The refractories can reduce ladle leakages and the formation of slag in transfer operations.
EAF	Airtight Operation	A large amount of air enters the EAF, with nitrogen and non-reactive oxygen heated in the furnace, and exits with the fumes at high temperature, resulting in significant thermal losses. Based on the results of pilot scale trials with a 7 ton EAF at Arcelor Research, the potential benefit for a 450 kWh/ton electric consumption furnace with an airtight process including a post-combustion practice and an efficient fume exhaust control is about 100 kWh/ton. Approximately, 20 percent of the savings are accounted for by reduced thermal losses due to a reduced tap-to-tap time.
EAF	Contiarc Furnace	The Contiarc furnace is fed continuously with material in a ring between the central shaft and the outer furnace vessel, where the charged material is continuously preheated by the rising process gas in a counter-current flow, while the material continuously moves down. Located below the central shaft is a "free-melting volume" in the form of a cavern. Contiarc furnace can reduce energy losses, volumes of waste gas and dust, and electrode consumption.
EAF	Eccentric Bottom Tapping	In eccentric bottom tapping, the tap hole is located at the bottom of the shell, near the nose of the hearth. This leads to slag-free tapping, shorter tap-to-tap times, reduced refractory and electrode consumption, and improved ladle life.
EAF	Twin-Shell Furnace	A twin-shell furnace includes two EAF vessels with a common arc and power supply system. The system increases productivity by decreasing tap-to-tap time and reduces energy consumption by reducing heat losses.
Casting	Efficient Caster Ladle/Tundish Heating	The ladle of the caster is preheated with gas burners. Heat losses can occur through lack of lids and through radiation. The losses can be reduced by installing temperature controls, installing hoods, by efficient ladle management (reducing the need for preheating), using recuperative burners, and using oxy-fuel burners.

Unit/ Process	Control Option	Description
		Tundishes are heated to reduce the heat loss of the molten steel, to avoid bubbles in the first slab at the beginning of the casting sequence, and to avoid degeneration of the refractory due to thermal shocks. Energy savings can also be attained by refraining from heating the tundish.
Casting	Near Net Shape Casting - Thin Slab	Near net shape casting is a process of casting metal to a form close to that required for the finished product. This means less machining is required to finish the part. Near net shape casting integrates the casting and hot rolling of steel into one process step, thereby reducing the need to reheat the steel before rolling it. Thin slab casting and strip casting are both forms of continuous casting.
Hot Rolling	Proper Reheating Temperature	In choosing the heating temperature for semi-finished products prior to rolling, an attempt should be made to obtain a fine-grained structure in the metal along with the requisite mechanical properties in the rolled product. The heating operation should also ensure dissolution of the inclusions in the metal in the absence of excessive grain growth.
Hot Rolling	Avoiding Overload of Reheat Furnaces	The burners of an overloaded furnace operate at higher than normal firing rates, which increases combustion gas volumes. The higher gas flow rates and shorter time that the gas remains in the furnace causes poor heat transfer, resulting in higher temperatures of the flue gases. The increased volumes of higher temperature flue gases lead to sharply increased heat losses. Overly ambitious production goals might be met, but at the cost of excessive fuel consumption. The overload problem may be corrected by improving heat transfer or not operating in this mode to achieve ambitious production goals.
Hot Rolling	Energy Efficient Drives	High efficiency AC motors can save 1 or 2% of the electricity consumption of conventional AC drives.
Hot Rolling	Process Control	Controlling oxygen levels and using variable speed drives (VSDs) on the combustion air fans help to control the oxygen level, and hence optimize the combustion in the furnace, especially as the load of the furnace may vary over time.
Hot Rolling	Recuperative Burners	A recuperator is a gas-to-gas heat exchanger placed on the stack of the furnace. There are numerous designs, but all rely on tubes or plates to transfer heat from the outgoing exhaust gas to the incoming combustion air, while keeping the two streams from mixing. Recuperative burners use the heat from the exhaust gas to preheat the combustion air.
Hot Rolling	Flameless Burners	Flameless air-fuel combustion uses air as oxidizer, while flameless oxy-fuel uses commercial oxygen as an oxidant. This technology carries out combustion under diluted oxygen conditions using internal flue gas recirculation and the flame becomes invisible. Flameless oxy-fuel gives high thermal efficiency, higher levels of heat flux, and reduced fuel consumption compared to conventional oxy-fuel.
Hot Rolling	Insulation of Furnaces	Replacing conventional insulating materials with ceramic low-thermal–mass insulation materials can reduce the heat losses through furnace walls.

Unit/ Process	Control Option	Description
Hot Rolling	Walking Beam Furnace	A walking beam furnace represents the state-of-the-art of efficient reheating furnaces. In a walking beam furnace, the stock is placed on stationary ridges and a revolving beam walks the product along through the furnace until the exit where the beam returns to the furnace entrance. This results in reductions in electricity usage and overall fuel consumption.
Hot Rolling	Heat Recovery to the Product	In cases where it is not possible to hot-charge the slabs directly from the caster, energy can be recovered by bringing exhaust gases that leave the high temperature portion of the process into contact with the relatively cool slabs. This will preheat the slab charge, raising charging temperatures, and reducing overall energy input to the process.
Hot Rolling	Waste Heat Recovery from Cooling Water	Waste heat can be recovered from the hot strip mill cooling water to produce low pressure steam. Fuel savings are potentially offset by higher electricity consumption and increased operation and maintenance costs.
Boilers /Heaters	Operating & Maintenance (O&M) Practices	Deterioration results in higher heat rate, CO2 emissions, and operating costs; in lower reliability; and in some cases, reduced output. Rehabilitation may focus on life extension and reliability improvement of the plant or may include additional measures that improve plant efficiency, occasionally above the original design efficiency. The efficiency can be improved by retrofitting combustion control technologies such as heat recovery systems, control technology, and upgraded burners.
Boilers/Heaters	Efficient Burner Design	New efficient burner designs for all types of boilers/heaters and fuels are commercially available to help minimize fuel combustion and GHG emissions. Further, the burner size and turndown capability (i.e., ability to operate and/or efficiency of operation at less than full load) are also key aspects of burner design as they will impact the losses associated with inefficient low load and on/off cycling duty. A higher turndown ratio reduces burner startups, provides better load control, saves wear-and-tear on the burner, and reduces purge-air requirements, all resulting in better overall efficiency.
Boilers	Improved Combustion Measures: Combustion Tuning	Tuning of the combustion system requires a visual check by an experienced boiler engineer to ensure that everything is in good working condition and set according to the manufacturer's recommendations or the optimum settings developed for the particular boiler. Simple parametric testing may be required, which may involve changes in the key control variables of the combustion system and observation of key parameters such as CO emissions, steam outlet conditions, flue gas outlet (stack) temperature, and NOx emissions.
Boilers	Improved Combustion Measures: Optimization	Optimization can be accomplished through parametric testing, analysis of the results, parameter estimation, periodic testing, and/or manual tuning. Software-based optimization systems may be cost effective for large boilers.
Boilers	Improved Combustion Measures: Digital Control Systems	Digital control systems are generally necessary to achieve the greatest improvement in performance through tuning and optimization. Temperature sensors, oxygen monitors, oxygen trim controls, and other instrumentation may be required to maximize boiler efficiency.
Boilers	Air Preheater	Energy efficiency can be increased by using waste heat gas recovery systems to capture and utilize heat in the flue gas.

Unit/ Process	Control Option	Description
		There are two general types of air preheaters: recuperators and regenerators. Recuperators are gas-to-gas heat exchangers usually placed on the boiler stack. Internal tubes or plates transfer heat from the outgoing exhaust to the incoming combustion air. Regenerators include two or more separate heat storage sections. The hot flue gas heats the heating plates which in turn heat the incoming combustion air. Common methods are preheating combustion air and water heating via economizer.
Boilers	Economizer	Energy efficiency can be increased by using waste heat gas recovery systems to capture and utilize heat in the flue gas. Common methods are preheating combustion air and water heating via economizer. In an economizer, tubular heat transfer surfaces preheat the boiler feedwater before it enters the steam drum or furnace surfaces. Economizers also reduce the potential of thermal shock and strong water temperature fluctuations as the feedwater enters the drum or waterwalls. Economizers are typically installed on larger units.
Boilers	Turbulators for Firetube Boilers	Turbulators create turbulence within the firetubes to improve heat transfer characteristics. An array of baffles, blades, or coiled wires disturb the laminar boundary layer within the firetubes, resulting in increased convective heat transfer. Turbulators are often considered a more economical alternative to economizers or air preheaters.
Boilers	Boiler Insulation	Proper insulation is used to minimize heat losses through the boiler shell. The refractory material lining inside the boiler is the primary insulating material, but properly applied insulation on the outer boiler surface can also reduce heat losses. Insulation material is categorized as either mass or reflective type, depending on whether it is aimed to reduce conductive or radiative heat transmission, respectively. The Thermal Insulation Manufacturers' Association provides guidance for determining the optimum insulation thickness for various applications.
Boilers	Minimization of Air Infiltration	Air infiltration occurs as a result of the large temperature difference between the hot combustion gases and the ambient air; the resulting pressure differential draws ambient air into the system through leaks such as warped doors or cracked casings/ductwork.
Boilers	Boiler Blowdown Heat Exchanger	Waste heat from the boiler blowdown stream can be recovered with a heat exchanger, a flash tank, or combined. Cooling the blowdown has additional advantage of reducing the liquid temperature released into the sewer system. High blowdown rates and boiler pressures are ideal conditions for blowdown recovery. Any boiler with continuous blowdown exceeding 5% of the steam rate exhibits significant potential for blowdown waste heat recovery.
Boilers	Condensate Return System	Hot condensate that is not returned to the boiler represents a corresponding loss of energy. Energy savings originate from the fact that most condensate is returned at relatively high temperatures (typically 130 to 225 °F) compared to the cold makeup water (50 to 60 °F) that must be heated. Operation of the return condensate system depends on the specific boiler and water/condensate quality. A further improvement on recovering the available energy of the condensate may be to use a heat exchanger (vent condenser) where the flashing steam is typically vented.

Unit/ Process	Control Option	Description
Boilers	Minimization of Gas-Side Heat Transfer Surface Deposits	To minimize deposition on boiler heat transfer surfaces, the boiler must be operated within its design parameters. Boilers firing ash-laden fuels may be equipped with soot blowers to periodically remove the unavoidable deposition on the boiler walls and tubes and may utilize fuel treatment to mitigate the deposition propensity of the ash and combustion products. The relationship between deposits and heat transfer deterioration varies with the type of fuel and ash characteristics. Efficiency is reduced by approximately 1% for every 40 °F increase in stack temperature.
Boilers	Steam Line Maintenance	Leaky valves/traps can represent measurable losses. Leaking traps should account for less than 5% of the trap population at plants with regular inspection and maintenance programs for steam traps. Energy audits and maintenance procedures should highlight common maintenance items such as uninsulated steam distribution and condensate return lines and other fittings. Ensuring that all steam/condensate lines are properly insulated will yield measurable efficiency gains. Common practice suggests that surfaces over 120 °F (steam and condensate return piping, fittings) should be insulated.
Boilers	Alternative Fuels - Biomass	The potential on-site reduction in CO2 emissions may be realized by switching from a traditional fossil fuel to a biomass fuel is based on the specific emission factor for the fuel as related to its caloric value. Pure biomass fuels include animal meal, waste wood products and sawdust, and sewage sludge. It may also be possible to use biomass materials that are specifically cultivated for fuel use, such as wood, grasses, green algae, and other quick growing species.
Boilers	Co-firing	Gas co-firing involves modification of the combustion system to accommodate the introduction of natural gas or biomass-derived gas. The co-fired fuel is injected directly into the combustion zone. Co-firing of natural gas or biofuels does not present any technical issues which cannot be addressed through appropriate design. In most cases, the issues associated with these fuels relate to economic attractiveness, availability of biofuels, and availability of natural gas at the plant site.
Boilers	Fuel Switching	Fuel switching refers to a change in the plant hardware to accommodate complete replacement of one fuel with another fuel. Coal could be switched to oil, natural gas, or coal-derived gas; and oil could be switched to natural gas or coal-derived gas to achieve emissions reductions.
Boilers	Combined Heat and Power	Combined heat and power (cogeneration) involves the production of heat and electricity from a single facility. Boilers operating at high annual operating factors and maintaining a steady thermal load may be equipped with steam turbines or heat recovery steam generators (HRSGs) to generate power for use on-site or for sale to the power market. Use of CHP systems have been installed in integrated steel mills to take advantage of waste gases from blast furnaces, coke ovens, and other processes.
Heaters	Fuel gas / Air Pre-heater	Preheating the fuel gas and air decreases the heating load while enhancing the thermal efficiency of the combustion unit. An air pre-heater captures heat from the heater's exhaust gas to warm the combustion air. This process lowers the heater's heating load, improves thermal efficiency, and reduces GHG emissions

4.8.2 Step 2 – Eliminate Technically Infeasible Options

For the EAFs, Adjustable Speed Drives are considered technically infeasible since dust collection efficiency may be reduced by 2 - 3%, which could affect compliance with BACT emission limits for particulate matter. Airtight Operations as a control measure is considered technically infeasible as the technology has not been demonstrated at full production levels. Contiarc process is designed for the production of cast iron not carbon steel; therefore, Contiarc Furnace is considered technically infeasible. Increased transformer efficiency using Ultra-High-Power Transformers is associated with AC furnaces. NSWV will utilize DC furnaces. Therefore, this technology is technically infeasible.

According to EPA in its document *Available and Emerging Technologies for Reducing Greenhouse Gas Emissions from the Iron and Steel Industry, (EPA, Office of Air and Radiation, September 2012)*, the casting operations at NSWV do meet the definition of "Near Net Shape Casting" since it integrates the casting and hot rolling of the steel into one process. However, they don't meet the requirements to be considered a "Thin Slab Caster" or a "Strip Caster" as listed in the definition. Therefore, Near Net Shape Casting is considered technically infeasible.

For the hot rolling operations, the use of supplied oxygen for oxy-fuel burners would impose various safety concerns (such as oxygen embrittlement) and maintaining the required temperature regimes in the furnace would be inconsistent and problematic. As a result, use of a Flameless Burner is considered technically infeasible. Walking Beam Furnace is not a feasible control option due to material length and flow and the manufacturing process of the intended product. Heat Recovery to the Product is not a feasible control option since slabs are not reheated. For Waste Heat Recovery from Cooling Water control measure, since waste heat is used to maintain furnace temperature at the plant instead of generating low pressure steam, this control measure is not technically feasible.

For the boilers, Optimization and Digital Control Systems are typically applied to large coal-fired or biomass-fired boilers instead of smaller natural gas-fired boilers due to the variability in fuel quality of coal and biomass. Therefore, they are considered technically infeasible. Air Preheater control measures are considered technically infeasible since the resulting increases in combustion temperature contribute to elevated emissions of NOx. Economizer control measure is not considered technically feasible due to the technology typically being applied to large boilers. Turbulators are typically installed on older firetube boilers operating with fewer tube passes; therefore, the turbulators for firetube boilers control measure is considered technically infeasible. Boiler Blowdown Heat Exchanger control measure is not considered technically feasible as the low-pressure steam generated by the exchanger is not utilized at the plant. Natural gas-fired boilers do not typically employ soot blowing systems given the reduced ash content of gaseous fuels; therefore, Minimization of Gas-Side Heat Transfer Surface Deposits control measure is not technically feasible. Co-firing is not considered technically feasible since the boilers are designed to combust natural gas and will not be capable of co-firing solid or liquid fuels. Fuel Switching does not apply to natural gas combustion devices. Furthermore, alternative biomass fuel is not technically feasible since the availability of gaseous biomass fuels is limited such that a consistent supply of fuel cannot be assured, and the combustion of biomass fuels may affect compliance with BACT emission limits for criteria pollutants. Lastly, combined heat and power (CHP) systems are designed to collect waste energy in the form of low-pressure steam, which is not used at the facility; therefore, CHP control measure is considered technically infeasible.

For the heaters, the preheating of fuel gas and air is technically infeasible. In addition to possibly increasing NOx emissions, per EPA in its document *Available and Emerging Technologies for Reducing Greenhouse Gas Emissions from the Petroleum Refining Industry, (EPA, Office of Air and Radiation, October 2010)*, preheating is infeasible for heaters rated at less than 50 MMBtu/hour.

4.8.3 Step 3 – Rank Remaining Options

In NSWV's original PSD application dated January 21, 2022, NSWV proposed to utilize the various control options listed in Table 4-60 of the application. With this application update, the remaining, feasible control measures are ranked in Table 4-44.

Table 4-44. Rank of Remaining Control Measures for GHGs

Unit/Process	Control Technology	Efficiency	Rank
Site-wide	Preventive Maintenance	2% of total energy use	1
Site-wide	High-Efficiency Motors	12% of energy use on motors	1
Site-wide	Energy Monitoring & Management System	0.5% of energy use	2
EAF	Post-combustion of Flue Gases	4 to 50 kWh/ton	1
EAF	Oxy-Fuel Burners	18 - 36 kWh/ton	2
EAF	Improved Process Control (Neural Network)	34.5 kWh/ton	3
EAF	Eccentric Bottom Tapping	13.6 kWh/ton	4
EAF	Engineered Refractories	10 kWh/ton	5
EAF	Foamy Slag Practice	5 - 7 kWh/ton	6
Casting	Efficient Caster Ladle/Tundish Heating	0.017 MMBtu/ton	1
Hot Rolling	Proper Reheating Temperature – Tunnel Furnaces	9 - 10%	2
Hot Rolling	Process Control in Hot Strip Mill	9%	3
Hot Rolling	Insulation of Furnaces	2% - 5%	4
Hot Rolling	Energy Efficient Drives	1 - 2%	5
Boiler	Boiler Insulation	Up to 7%	1
Boiler/Heaters	Efficient Burner Design	Up to 6%	2
Boiler	Minimization of Air Infiltration	Up to 4%	3
Boiler	Improved Combustion Measures: Combustion Tuning	Up to 3%	4
Boiler/Heater	Operating & Maintenance (O&M) Practices	Varies	5
Boiler	Steam Line Maintenance	Varies	5
Boiler	Condensate Return System	Varies	5

4.8.4 Step 4 – Evaluation of Most Effective Control Option

None of the control options are eliminated based on an evaluation of collateral impacts or cost analysis.

4.8.5 Step 5 – Select BACT

A search of the RBLC database yielded no results for specific control of GHG emissions from steel mills. NSWV evaluated energy efficiency measures, including variable frequency drive motors, oxy-fuel burners on

the electric arc furnaces (EAFs), and energy-efficient equipment such as motors, drives, pumps, and compressors, during the design phase, and will continue to evaluate feasibility during implementation. The use of EAF technology, which primarily relies on electricity to melt scrap metal, on average has a combined Scope 1, 2, and 3 emissions rates that are less than half the global average and only one-third of those from traditional Blast Furnace-Basic Oxygen Furnace (BF-BOF) steel producers. The energy efficiency projections are estimates based on performance and design specifications; there are no baselines to confirm these estimates against. Based on these measures, NSWV proposes a site-wide CO_2e limit of 1,092,049 tons per year.

To further NSWV's commitment to GHG mitigation, the facility will implement various strategies to enhance energy efficiency and reduce GHG emissions. These strategies include developing training and housekeeping programs, establishing energy monitoring systems, and using energy-efficient devices throughout operations.

APPENDIX A. WVDAQ APPLICATION FORM FOR NSR PERMIT

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

601 57th Street, SE
Charleston, WV 25304
(304) 926-0475
www.dep.wv.gov/daq

APPLICATION FOR NSR PERMIT AND TITLE V PERMIT REVISION (OPTIONAL)

PLEASE CHECK ALL THAT APPLY TO **NSR (45CSR13)** (IF KNOWN):

☐ **CONSTRUCTION** ☒ **MODIFICATION** ☐ **RELOCATION**
☐ **CLASS I ADMINISTRATIVE UPDATE** ☐ **TEMPORARY**
☐ **CLASS II ADMINISTRATIVE UPDATE** ☐ **AFTER-THE-FACT**

PLEASE CHECK TYPE OF **45CSR30 (TITLE V)** REVISION (IF ANY):

☐ **ADMINISTRATIVE AMENDMENT** ☐ **MINOR MODIFICATION**
☐ **SIGNIFICANT MODIFICATION**

IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS **ATTACHMENT S** TO THIS APPLICATION

FOR TITLE V FACILITIES ONLY: Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.

Section I. General

1. Name of applicant *(as registered with the WV Secretary of State's Office):*
Nucor Steel West Virginia LLC

2. Federal Employer ID No. ***(FEIN):***
13-1860817

3. Name of facility *(if different from above):*
Nucor Steel West Virginia

4. The applicant is the:
☐ **OWNER** ☐ **OPERATOR** ☒ **BOTH**

5A. Applicant's mailing address:
29618 Huntington Road
Apple Grove, WV 25502

5B. Facility's present physical address:
29618 Huntington Road
Apple Grove, WV 25502

6. **West Virginia Business Registration.** Is the applicant a resident of the State of West Virginia? ☐ **YES** ☒ **NO**

– If **YES,** provide a copy of the **Certificate of Incorporation/Organization/Limited Partnership** (one page) including any name change amendments or other Business Registration Certificate as **Attachment A.**

– If **NO,** provide a copy of the **Certificate of Authority/Authority of L.L.C./Registration** (one page) including any name change amendments or other Business Certificate as **Attachment A.**

7. If applicant is a subsidiary corporation, please provide the name of parent corporation: Nucor Corporation

8. Does the applicant own, lease, have an option to buy or otherwise have control of the *proposed site?* ☒ **YES** ☐ **NO**

– If **YES,** please explain: Nucor Steel West Virginia owns the parcels of land for the site.

– If **NO,** you are not eligible for a permit for this source.

9. Type of plant or facility (stationary source) to be **constructed, modified, relocated, administratively updated** or **temporarily permitted** (e.g., coal preparation plant, primary crusher, etc.): Steel Mill

10. North American Industry Classification System **(NAICS)** code for the facility:
331110

11A. DAQ Plant ID No. (for existing facilities only):
053-00085

11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only):
Permit R14-0039 (effective May 5, 2022) and Modification R14-0039A (effective January 14, 2025).

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

12A.

– For **Modifications, Administrative Updates** or **Temporary permits** at an existing facility, please provide directions to the *present location* of the facility from the nearest state road;
– For **Construction** or **Relocation permits,** please provide directions to the *proposed new site location* from the nearest state road. Include a **MAP** as **Attachment B**.

The site is located on the west side of State Route 2 (Huntington Road), approximately 1 kilometer south of the United States Post Office (27799 Huntington Rd, Apple Grove, WV 25502). The site is located at 29618 Huntington Road.

12.B. New site address (if applicable):	12C. Nearest city or town:	12D. County:
29618 Huntington Road	Apple Grove	Mason
12.E. UTM Northing (KM): 4278.86930	12F. UTM Easting (KM): 398.20479	12G. UTM Zone: 17

13. Briefly describe the proposed change(s) at the facility:
See application cover letter for detail on proposed facility changes.

14A. Provide the date of anticipated installation or change: 5/16/2022 – If this is an **After-The-Fact** permit application, provide the date upon which the proposed change did happen: / /	14B. Date of anticipated Start-Up if a permit is granted: 10/1/2025

14C. Provide a **Schedule** of the planned **Installation** of/**Change** to and **Start-Up** of each of the units proposed in this permit application as **Attachment C** (if more than one unit is involved).

15. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application:
Hours Per Day 24 Days Per Week 7 Weeks Per Year 52

16. Is demolition or physical renovation at an existing facility involved? ☐ **YES** ☒ **NO**

17**. Risk Management Plans.** If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see www.epa.gov/ceppo), submit your **Risk Management Plan (RMP)** to U. S. EPA Region III.

18**. Regulatory Discussion.** List all Federal and State air pollution control regulations that you believe are applicable to the proposed process *(if known).* A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance *(if known).* Provide this information as **Attachment D.**

Section II. Additional attachments and supporting documents.

19. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13).

20. Include a **Table of Contents** as the first page of your application package.

21. Provide a **Plot Plan,** e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as **Attachment E** (Refer to ***Plot Plan Guidance***) **.**
– Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).

22. Provide a **Detailed Process Flow Diagram(s)** showing each proposed or modified emissions unit, emission point and control device as **Attachment F.**

23. Provide a **Process Description** as **Attachment G.**
– Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

24. Provide **Material Safety Data Sheets (MSDS)** for all materials processed, used or produced as **Attachment H.**
– For chemical processes, provide a MSDS for each compound emitted to the air.

25. Fill out the **Emission Units Table** and provide it as **Attachment I.**

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J.**

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K.**

28. Check all applicable **Emissions Unit Data Sheets** listed below:

☐ Bulk Liquid Transfer Operations	☒ Haul Road Emissions	☐ Quarry
☐ Chemical Processes	☐ Hot Mix Asphalt Plant	☐ Solid Materials Sizing, Handling and Storage Facilities
☐ Concrete Batch Plant	☐ Incinerator	☒ Storage Tanks
☐ Grey Iron and Steel Foundry	☐ Indirect Heat Exchanger	

☒ General Emission Unit, specify: Heaters/EAF/LMF, Pickling/Galvanizing Operations, Milling Operations, Material Handling, Emergency Generators, Cooling Towers, Parts Washers

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L.**

29. Check all applicable **Air Pollution Control Device Sheets** listed below:

☐ Absorption Systems	☒ Baghouse	☒ Flare
☐ Adsorption Systems	☐ Condenser	☐ Mechanical Collector
☐ Afterburner	☐ Electrostatic Precipitator	☐ Wet Collecting System

☒ Other Collectors, specify: Scrubber/Mist Eliminator

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M.**

30. Provide all **Supporting Emissions Calculations** as **Attachment N,** or attach the calculations directly to the forms listed in Items 28 through 31.

31. **Monitoring, Recordkeeping, Reporting and Testing Plans.** Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as **Attachment O.**

- Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.

32. **Public Notice.** At the time that the application is submitted, place a **Class I Legal Advertisement** in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and ***Example Legal Advertisement*** for details). Please submit the **Affidavit of Publication** as **Attachment P** immediately upon receipt.

33. **Business Confidentiality Claims.** Does this application include confidential information (per 45CSR31)?

☐ **YES** ☒ **NO**

- If **YES,** identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's ***"Precautionary Notice – Claims of Confidentiality"*** guidance found in the ***General Instructions*** as **Attachment Q.**

Section III. Certification of Information

34. **Authority/Delegation of Authority.** Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

☐ Authority of Corporation or Other Business Entity	☐ Authority of Partnership
☐ Authority of Governmental Agency	☐ Authority of Limited Partnership

Submit completed and signed **Authority Form** as **Attachment R.**

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

Certification of Truth, Accuracy, and Completeness

I, the undersigned ☒ **Responsible Official** / ☐ **Authorized Representative,** hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

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.

SIGNATURE Johny E. Jacobs DATE: 6-11-2025

(Please use blue ink) *(Please use blue ink)*

35B. Printed name of signee: Johnny E. Jacobs		35C. Title: Vice President & General Manager
35D. E-mail: johnny.jacobs@nucor.com	36E. Phone: (304) 973-1110	36F. FAX: (304) 973-1110
36A. Printed name of contact person (if different from above):		36B. Title:
36C. E-mail:	36D. Phone:	36E. FAX:

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

- ☒ **Attachment A: Business Certificate**
- ☒ **Attachment B: Map(s)**
- ☒ **Attachment C: Installation and Start Up Schedule**
- ☒ **Attachment D: Regulatory Discussion**
- ☒ **Attachment E: Plot Plan**
- ☒ **Attachment F: Detailed Process Flow Diagram(s)**
- ☒ **Attachment G: Process Description**
- ☒ **Attachment H: Material Safety Data Sheets (MSDS)**
- ☒ **Attachment I: Emission Units Table**
- ☒ **Attachment J: Emission Points Data Summary Sheet**
- ☒ **Attachment K: Fugitive Emissions Data Summary Sheet**
- ☒ **Attachment L: Emissions Unit Data Sheet(s)**
- ☒ **Attachment M: Air Pollution Control Device Sheet(s)**
- ☒ **Attachment N: Supporting Emissions Calculations**
- ☒ **Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans**
- ☒ **Attachment P: Public Notice**
- ☐ **Attachment Q: Business Confidential Claims**
- ☐ **Attachment R: Authority Forms**
- ☐ **Attachment S: Title V Permit Revision Information**
- ☒ **Application Fee**

Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.

FOR AGENCY USE ONLY – IF THIS IS A TITLE V SOURCE:

- ☐ ***Forward 1 copy of the application to the Title V Permitting Group and:***
- ☐ ***For Title V Administrative Amendments:***
  - ☐ ***NSR permit writer should notify Title V permit writer of draft permit,***
- ☐ ***For Title V Minor Modifications:***
  - ☐ ***Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,***
  - ☐ ***NSR permit writer should notify Title V permit writer of draft permit.***
- ☐ ***For Title V Significant Modifications processed in parallel with NSR Permit revision:***
  - ☐ ***NSR permit writer should notify a Title V permit writer of draft permit,***
  - ☐ ***Public notice should reference both 45CSR13 and Title V permits,***
  - ☐ ***EPA has 45 day review period of a draft permit.***

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

APPENDIX B. WEST VIRGINIA PERMIT APPLICATION ATTACHMENTS

Attachment A: West Virginia Business Certificate
Attachment B: Site Map
Attachment C: Installation and Start-up Schedule
Attachment D: Regulatory Discussion
Attachment E: Plot Plan
Attachment F: Detailed Process Flow Diagrams
Attachment G: Process Description
Attachment H: Material Safety Data Sheets (MSDS)
Attachment I: Emission Units Table
Attachment J: Emission Points Data Summary Sheet
Attachment K: Fugitive Emissions Data Summary Sheet
Attachment L: Emission Unit Data Sheets
Attachment M: Air Pollution Control Device Sheets
Attachment N: Supporting Emission Calculations
Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans
Attachment P: Public Notice
Attachment Q: Business Confidential Claims (Not Applicable)
Attachment R: Authority Forms (Not Applicable)
Attachment S: Title V Permit Revision Information (Not Applicable)

Attachment A – West Virginia Business Certificate

State of West Virginia

Certificate

I, Mac Warner, Secretary of State,
of the State of West Virginia, hereby certify that

NUCOR STEEL WEST VIRGINIA LLC

has filed the appropriate registration documents in my office according to the provisions of the West Virginia Code and hereby declare the organization listed above as duly registered with the Secretary of State's Office.

Given under my hand and
the Great Seal of West Virginia
on this day of
February 01, 2022

Mac Warner

Secretary of State

Attachment B – Site Map

Figures B-1 and B-2 provide general maps of the facility location, showing roads and general boundaries of towns and other nearby municipalities, and proximity to major geographical features such as the Ohio River. Since the prior application, there are no updates to the location of NSWV.

Figure B-1. Area Map Showing NSWV Location

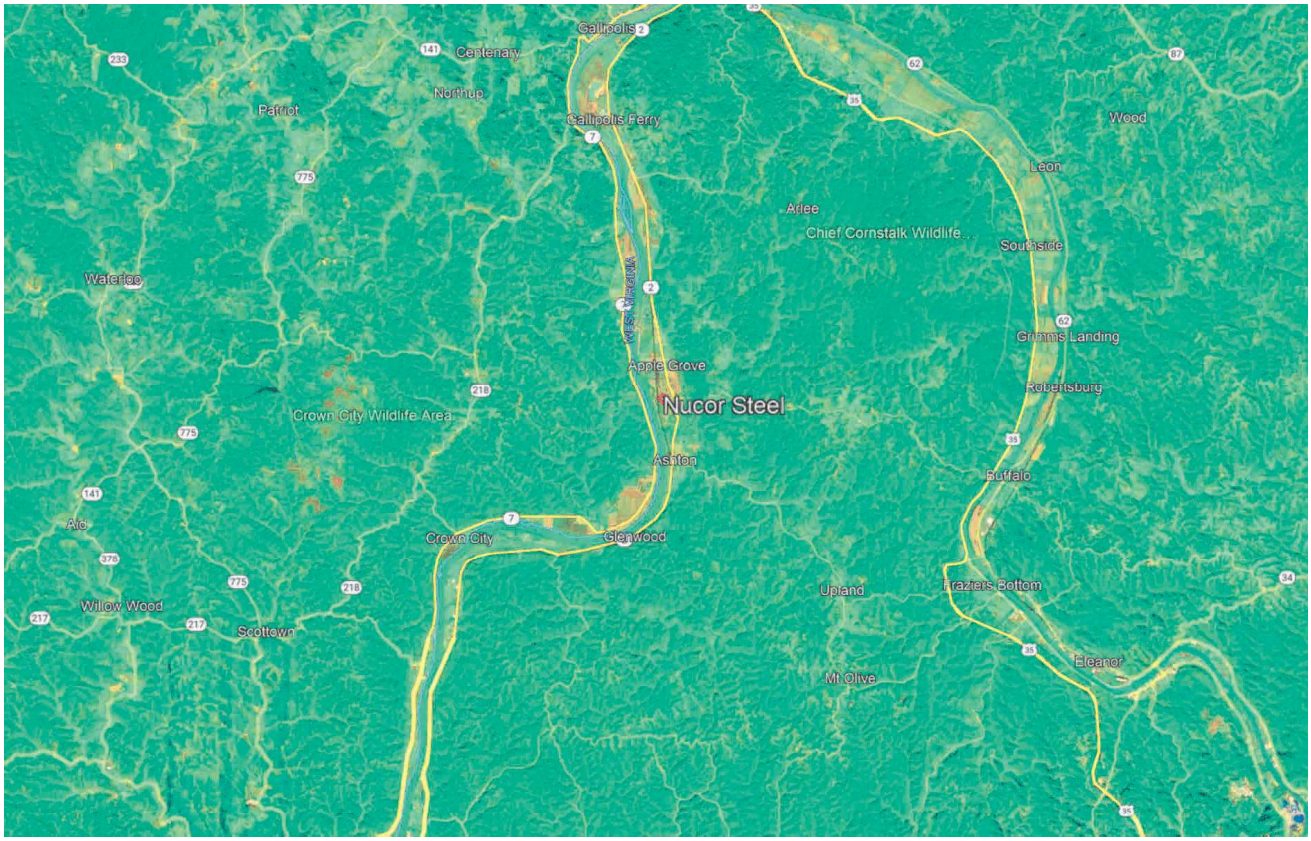


Figure B-2. Site Map Showing NSWV Location



Attachment C – Installation and Start Up Schedule

Section 2 of the application narrative provides an updated installation and startup schedule for NSWV.

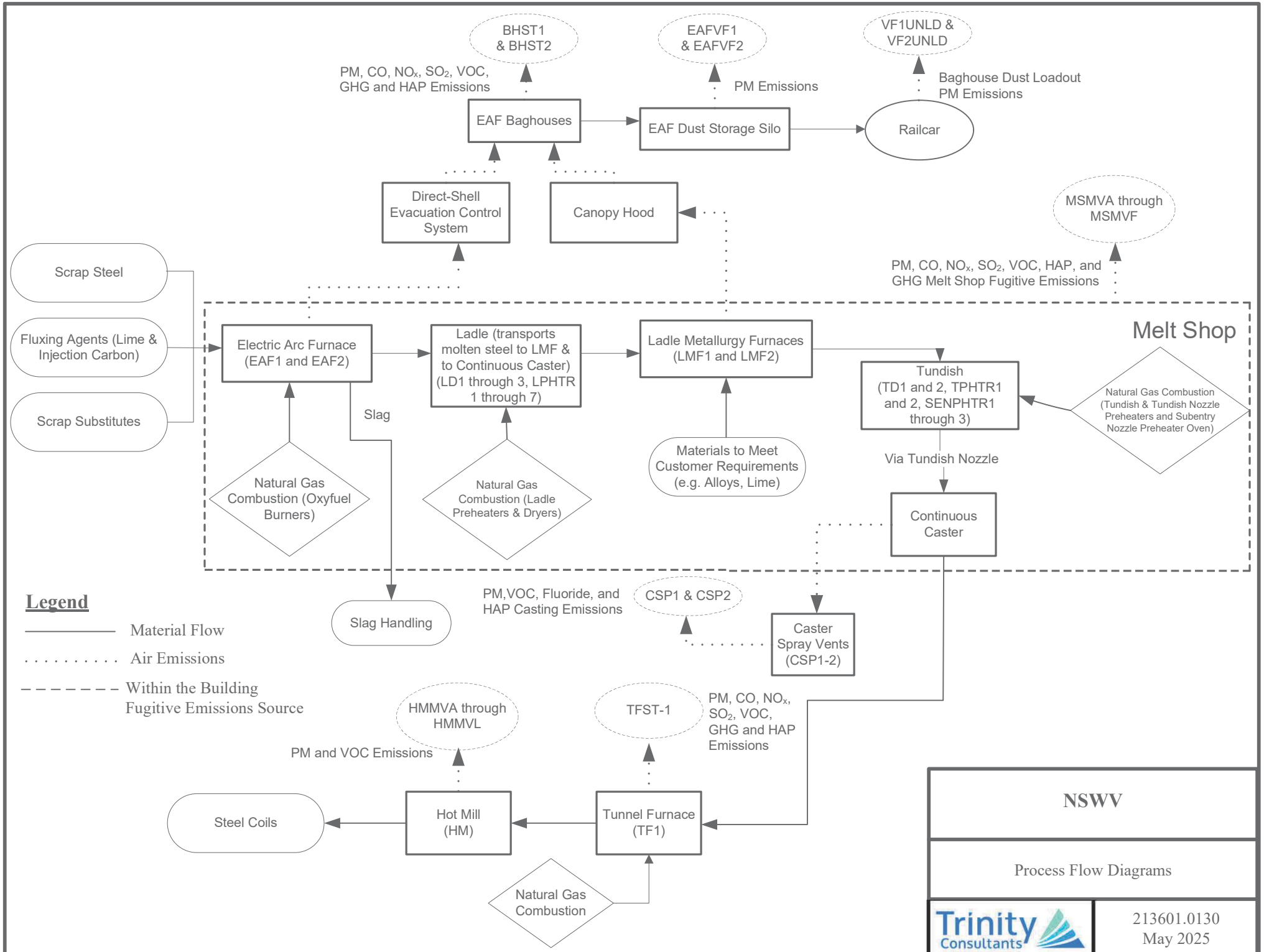
Attachment D – Regulatory Discussion

Section 3 of the application narrative provides an updated state and federal regulatory applicability analysis and summary of regulatory requirements that apply to NSWV.

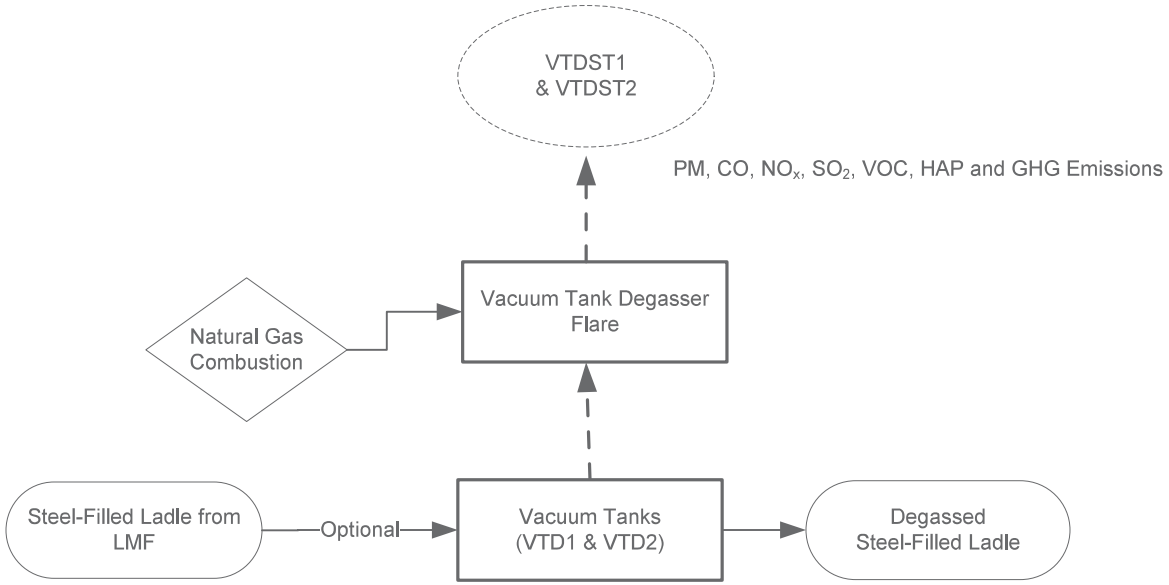
Attachment E – Plot Plan

NSWV will submit updated facility plot plans within the air dispersion modeling report as required by the Prevention of Significant Deterioration (PSD) program.

Attachment F – Detailed Process Flow Diagrams


BHST1 & BHST2
EAFVF1 & EAFVF2
VF1UNLD & VF2UNLD
PM, CO, NOx, SO2, VOC, GHG and HAP Emissions
PM Emissions
Baghouse Dust Loadout PM Emissions
EAF Baghouses
EAF Dust Storage Silo
Railcar
Direct-Shell Evacuation Control System
Canopy Hood
MSMVA through MSMVF
PM, CO, NOx, SO2, VOC, HAP, and GHG Melt Shop Fugitive Emissions
Scrap Steel
Fluxing Agents (Lime & Injection Carbon)
Scrap Substitutes
Melt Shop
Electric Arc Furnace (EAF1 and EAF2)
Ladle (transports molten steel to LMF & to Continuous Caster) (LD1 through 3, LPHTR 1 through 7)
Ladle Metallurgy Furnaces (LMF1 and LMF2)
Tundish (TD1 and 2, TPHTR1 and 2, SENPHTR1 through 3)
Natural Gas Combustion (Tundish & Tundish Nozzle Preheaters and Subentry Nozzle Preheater Oven)
Slag
Natural Gas Combustion (Oxyfuel Burners)
Natural Gas Combustion (Ladle Preheaters & Dryers)
Materials to Meet Customer Requirements (e.g. Alloys, Lime)
Via Tundish Nozzle
Continuous Caster
Legend
Material Flow
Air Emissions
Within the Building Fugitive Emissions Source
Slag Handling
PM,VOC, Fluoride, and HAP Casting Emissions
CSP1 & CSP2
Caster Spray Vents (CSP1-2)
HMMVA through HMMVL
TFST-1
PM, CO, NOx, SO2, VOC, GHG and HAP Emissions
PM and VOC Emissions
Steel Coils
Hot Mill (HM)
Tunnel Furnace (TF1)
Natural Gas Combustion
NSWV
Process Flow Diagrams
Trinity Consultants
213601.0130
May 2025

Ladle Vacuum Tank Degassers (VTD1 and 2) (Melt Shop)



Legend

Material Flow

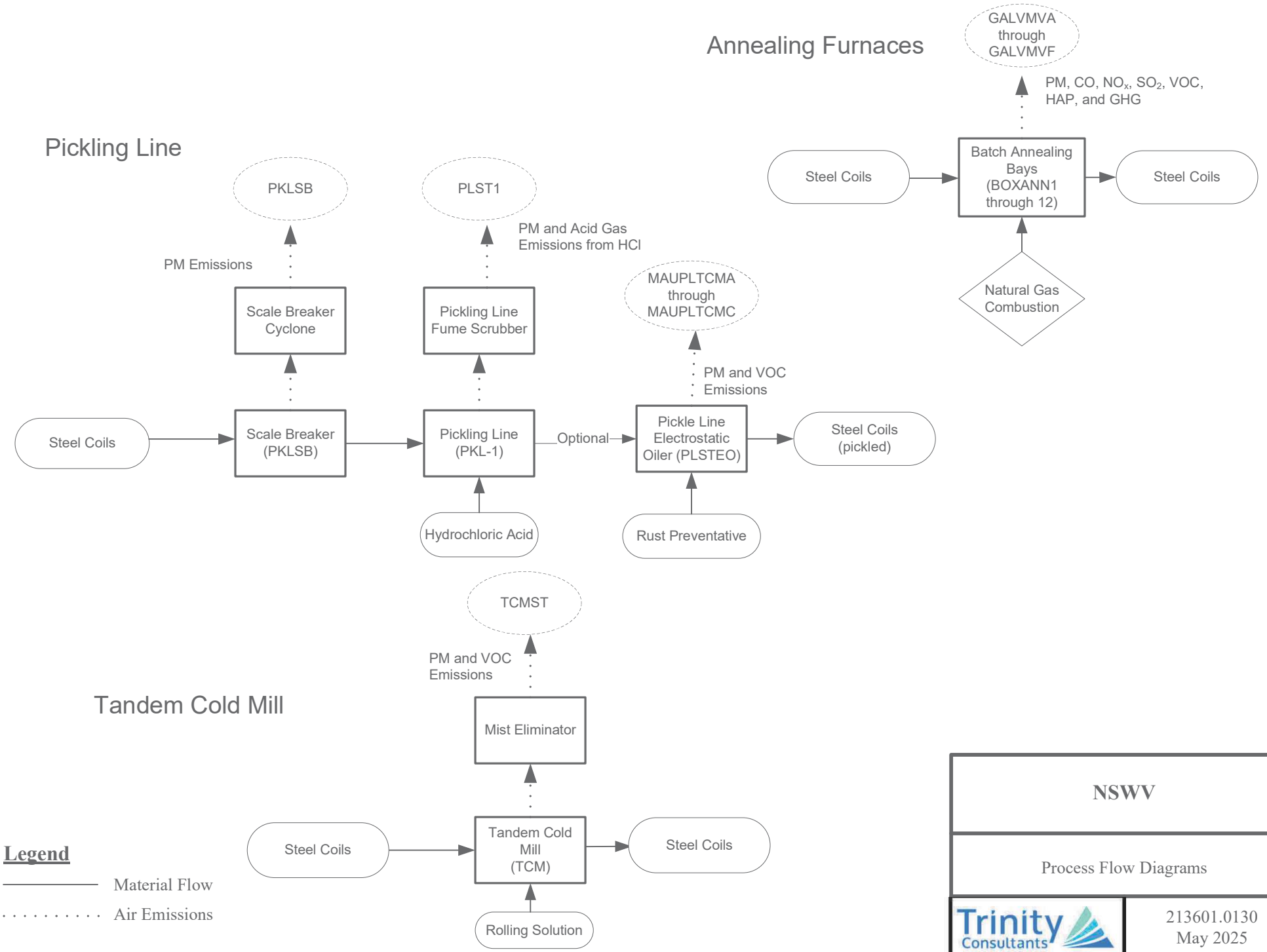
Air Emissions

NSWV

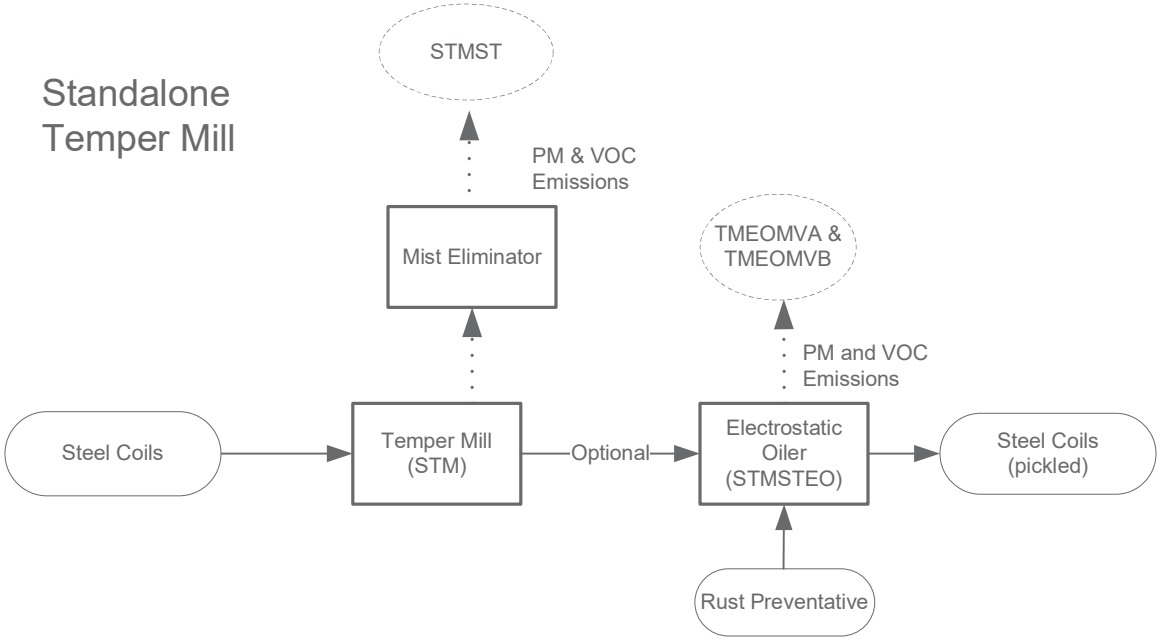
Process Flow Diagrams

Trinity Consultants

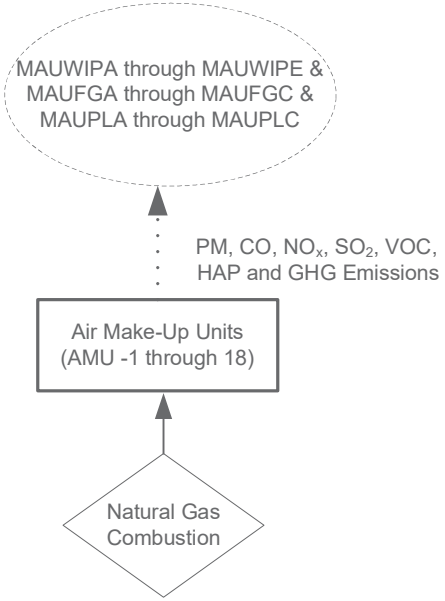
213601.0130
May 2025

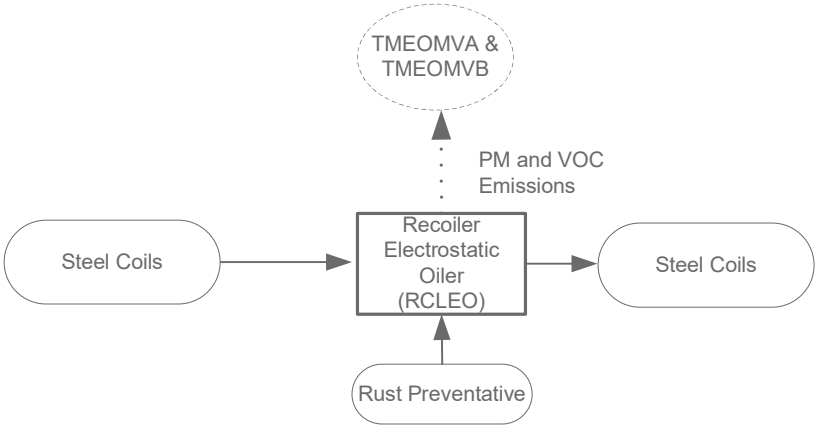

Annealing Furnaces
GALVMVA through GALVMVF
PM, CO, NOx, SO2, VOC, HAP, and GHG
Steel Coils
Batch Annealing Bays (BOXANN1 through 12)
Steel Coils
Natural Gas Combustion
Pickling Line
PKLSB
PLST1
PM and Acid Gas Emissions from HCl
PM Emissions
Scale Breaker Cyclone
Pickling Line Fume Scrubber
MAUPLTCMA through MAUPLTCMC
PM and VOC Emissions
Steel Coils
Scale Breaker (PKLSB)
Pickling Line (PKL-1)
Optional
Pickle Line Electrostatic Oiler (PLSTEO)
Steel Coils (pickled)
Hydrochloric Acid
Rust Preventative
TCMST
PM and VOC Emissions
Tandem Cold Mill
Mist Eliminator
Steel Coils
Tandem Cold Mill (TCM)
Steel Coils
Rolling Solution
Legend
Material Flow
Air Emissions
NSWV
Process Flow Diagrams
Trinity Consultants
213601.0130
May 2025

Standalone Temper Mill



Air Make-Up Units





Legend

Material Flow

Air Emissions

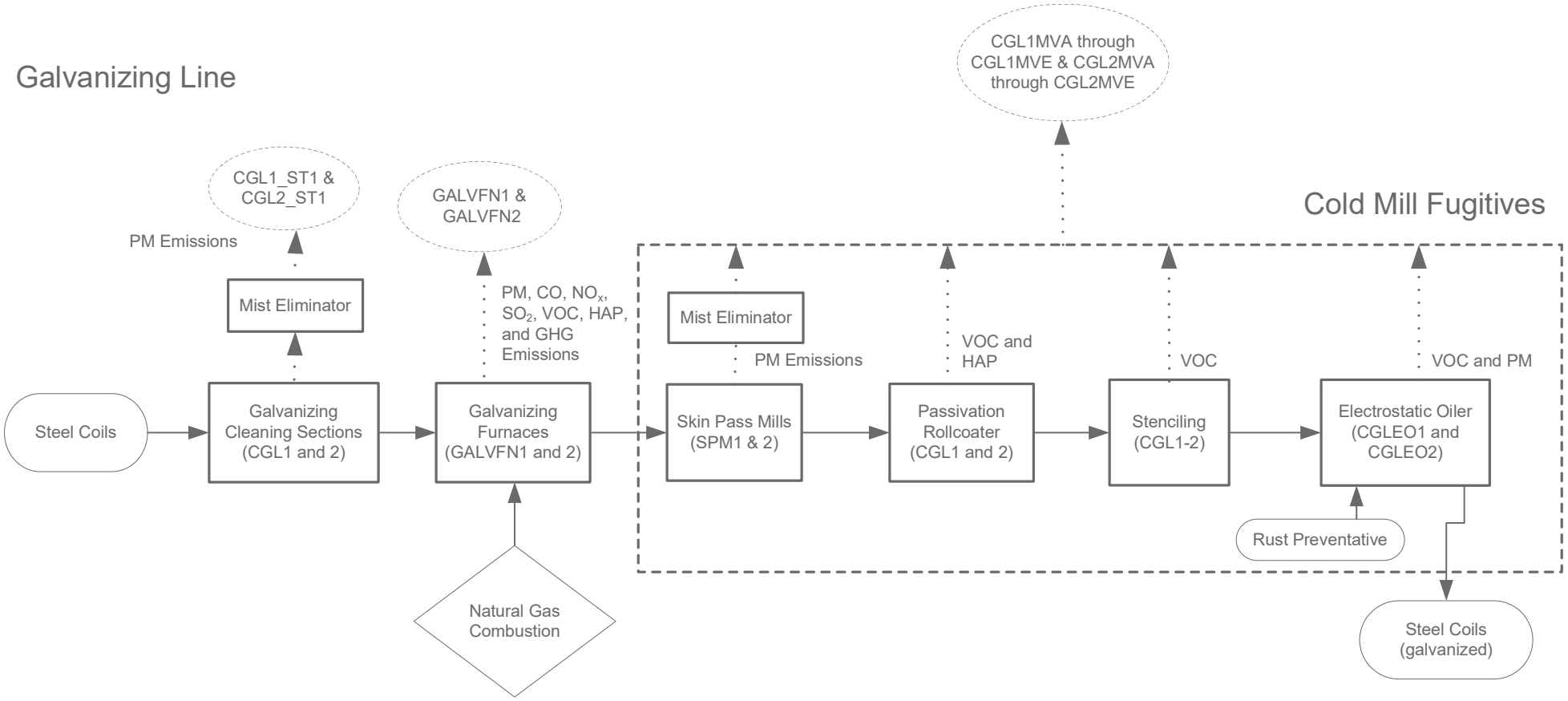
NSWV

Process Flow Diagrams

Trinity Consultants

213601.0130
May 2025

Galvanizing Line



Legend

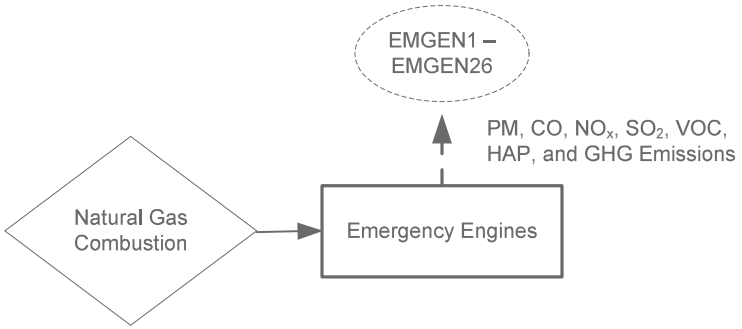
——— Material Flow

. . . . . Air Emissions

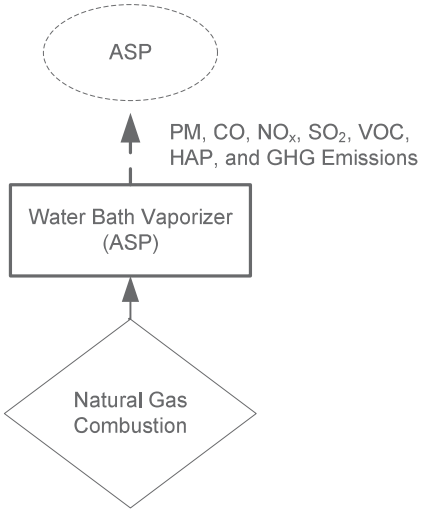
– – – – – – – Within the Building Fugitive Emissions Source

NSWV	
Process Flow Diagrams	
Trinity Consultants	213601.0130 May 2025

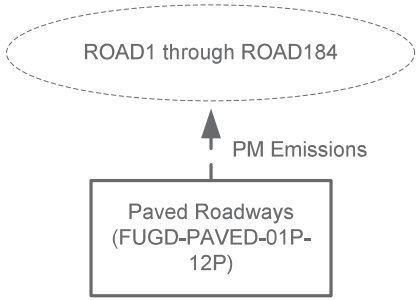
Emergency Engines



Air Separation Plant



Paved Roadways



Legend

Material Flow

Air Emissions

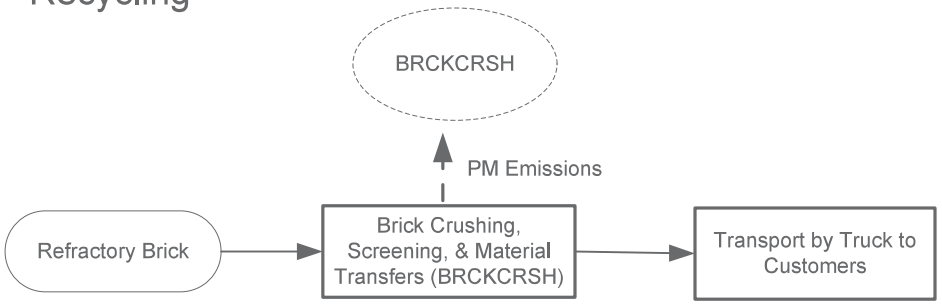
NSWV

Process Flow Diagrams

Trinity Consultants

213601.0130
May 2025

Refractory Brick Recycling



Legend

——— Material Flow

– – – – – Air Emissions

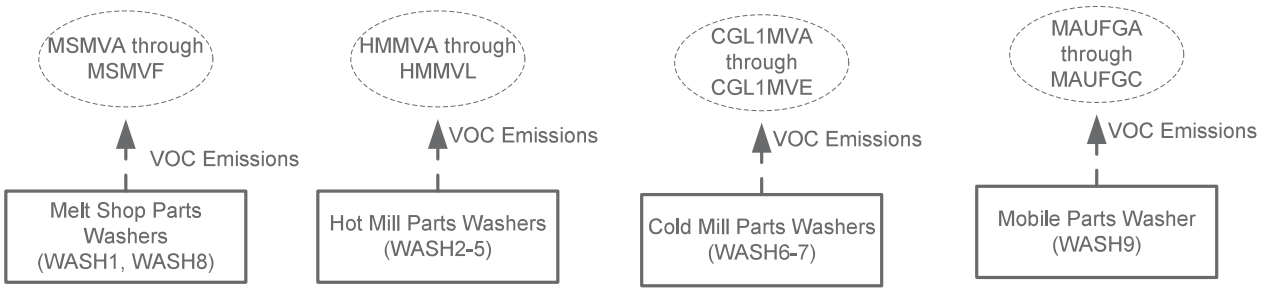
NSWV

Process Flow Diagrams

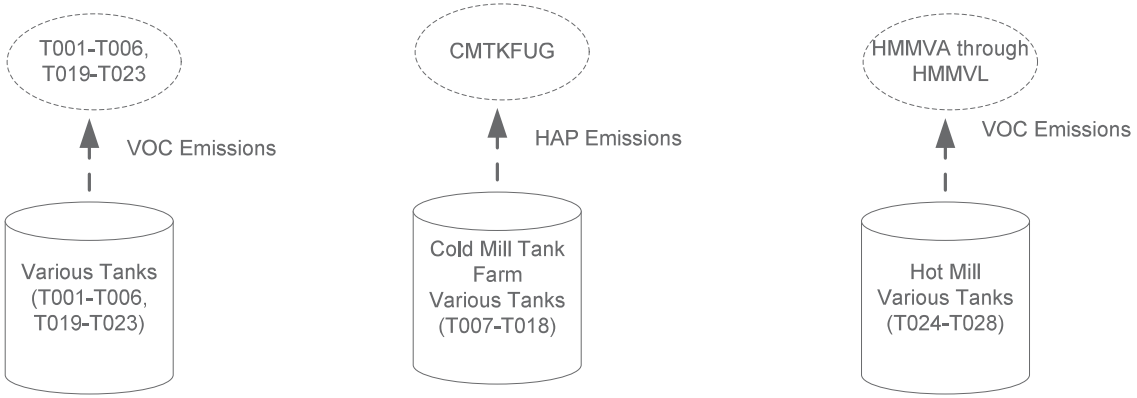
Trinity Consultants

213601.0130
May 2025

Parts Washers



Ancillary Tanks



Legend

Material Flow

Air Emissions

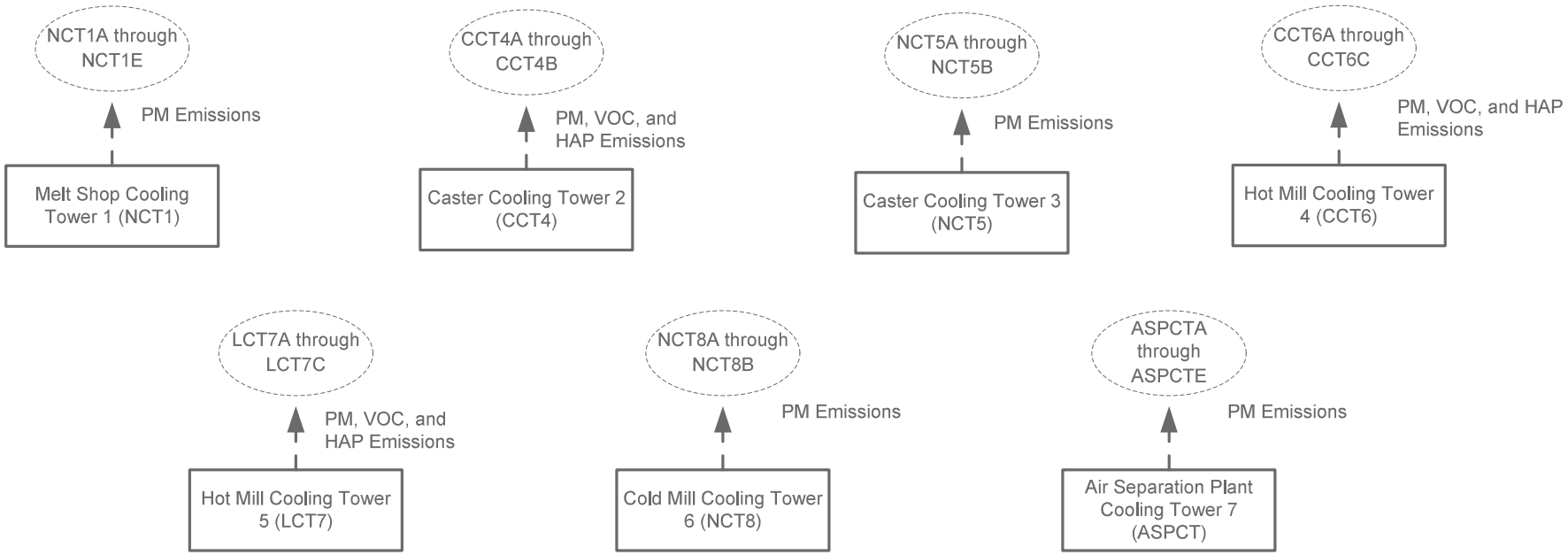
NSWV

Process Flow Diagrams

Trinity Consultants

213601.0130
May 2025

Cooling Towers



Legend

Material Flow

Air Emissions

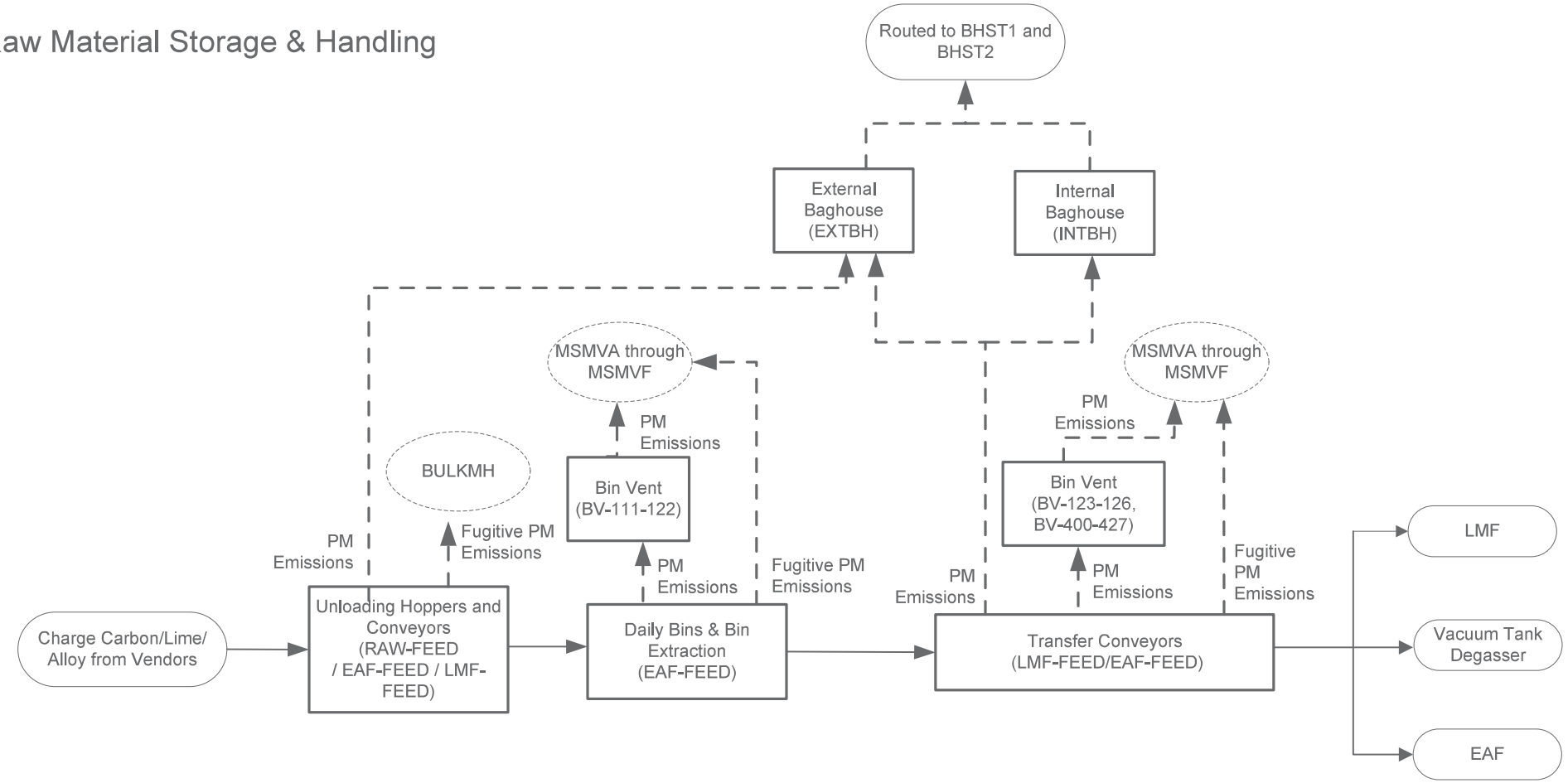
NSWV

Process Flow Diagrams

Trinity Consultants

213601.0130
May 2025

Raw Material Storage & Handling



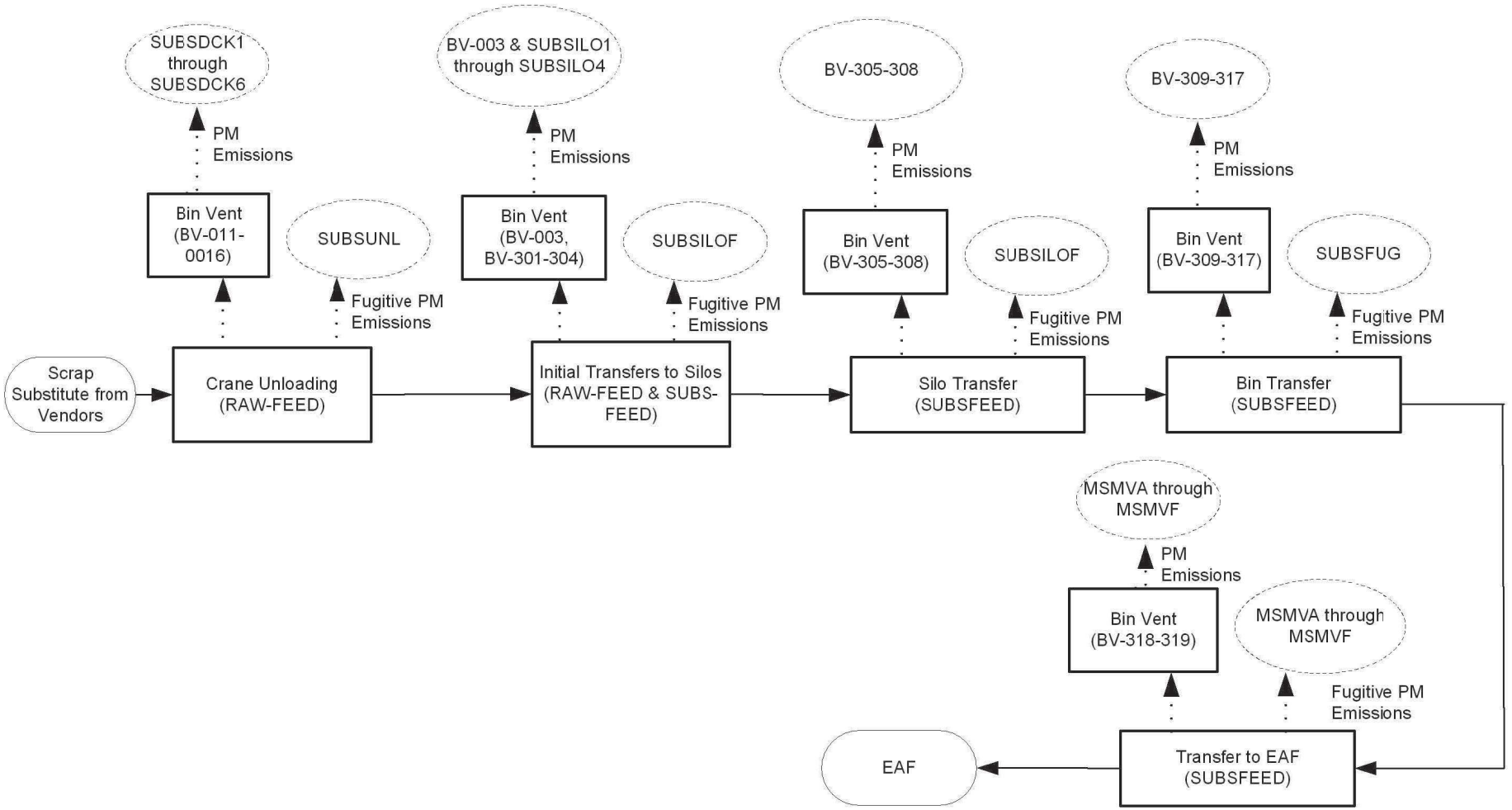
Legend

Material Flow

Air Emissions

NSWV
Process Flow Diagrams
Trinity Consultants — 213601.0130 May 2025

Scrap Substitute Storage & Handling



Legend

——— Material Flow

. . . . . Air Emissions

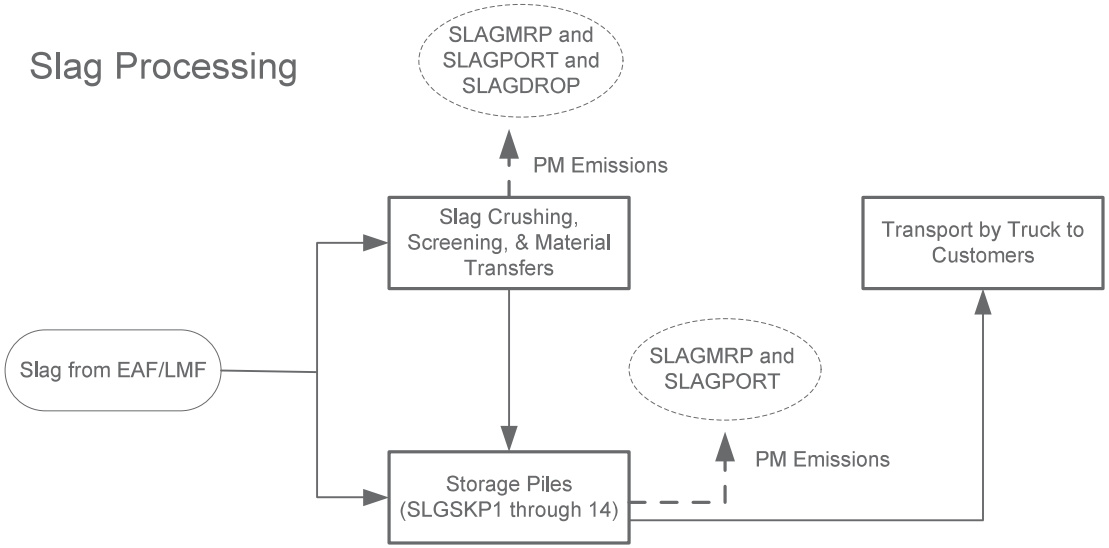
NSWV

Process Flow Diagrams

Trinity Consultants

213601.0130
June 2025

Slag Processing



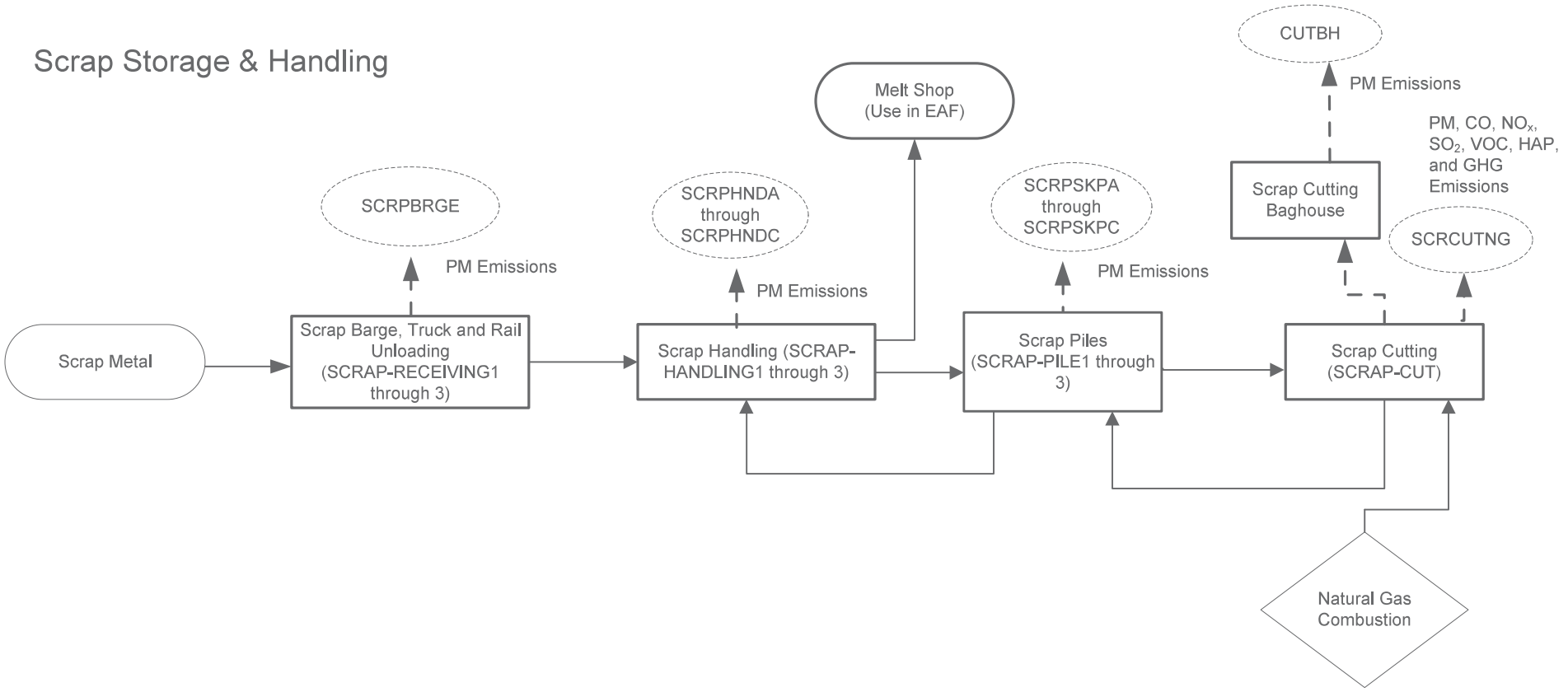
Legend

Material Flow

Air Emissions

NSWV	
Process Flow Diagrams	
Trinity Consultants	213601.0130 May 2025

Scrap Storage & Handling



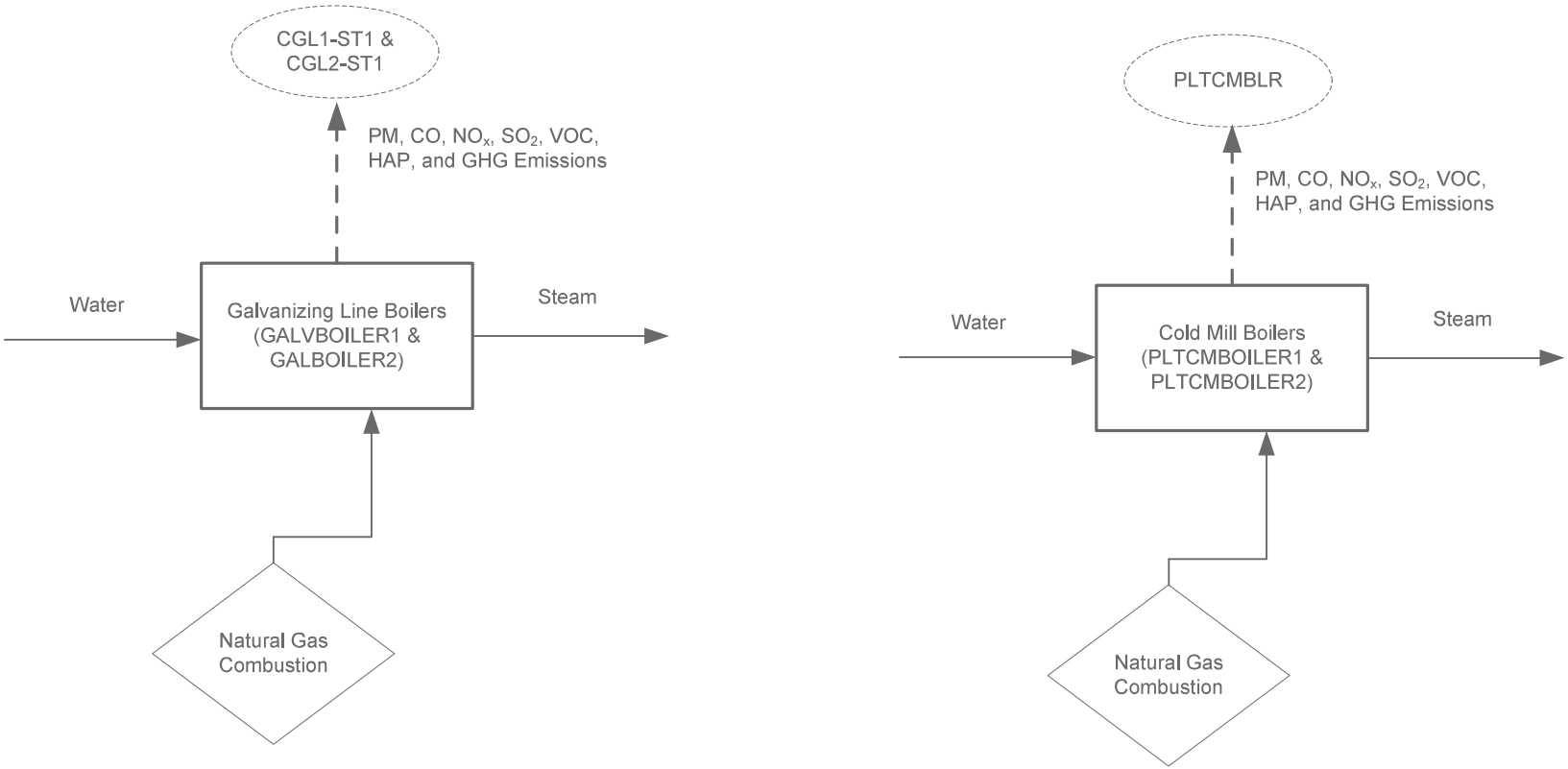
Legend

Material Flow

Air Emissions

NSWV
Process Flow Diagrams
Trinity Consultants — 213601.0130 May 2025

Boilers



Legend

Material Flow

Air Emissions

NSWV

Process Flow Diagrams

Trinity Consultants

213601.0130
May 2025

Attachment G – Process Description

Section 2 of the application narrative provides a detailed process description for each of the NSWV emission units.

Attachment H – Material Safety Data Sheets (MSDS)

Attachment N: Supporting Emission Calculations provides the updated specifications for materials that will be located at NSWV.

Attachment I – Emission Units Table

NSWV
Attachment I - Emission Units Table

Emission Unit ID[1]	Emission Point ID[2]	Emission Unit Description	Year Installed	Design Capacity	Type[3] and Date of Change	Control Device[4]
EAF1	BHST1	Electric Arc Furnace 1	N/A	280 ton steel/hr	New	EAF1-BH
LMF1	BHST1	Ladle Metallurgical Furnace 1	N/A	280 ton steel/hr	New	EAF1-BH
CAST1	BHST1	Caster 1	N/A	560 ton steel/hr	New	EAF1-BH, EAF2-BH
EAF2	BHST2	Electric Arc Furnace 2	N/A	280 ton steel/hr	New	EAF2-BH
LMF2	BHST2	Ladle Metallurgical Furnace 2	N/A	280 ton steel/hr	New	EAF2-BH
MSFUG	MSMVA through MSMVF	Uncaptured Electric Arc Furnace Fugitives	N/A	560 ton steel/hr	New	N/A
CASTFUG	MSMVA through MSMVF	Uncaptured Casting Fugitives	N/A	560 ton steel/hr	New	N/A
EAFVF1	VF1UNLD	EAF Baghouse 1 Dust Silo Baghouse Dust	N/A	Dust Loadout - 1.77 ton/hr	New	N/A
EAFVF2	VF2UNLD	EAF Baghouse 2 Dust Silo Baghouse Dust	N/A	Dust Loadout - 1.77 ton/hr	New	N/A
EAFVF1	EAFVF1	EAF Baghouse 1 Dust Silo	N/A	Dust Silo - 433 dscfm	New	N/A
EAFVF2	EAFVF2	EAF Baghouse 2 Dust Silo	N/A	Dust Silo - 433 dscfm	New	N/A
LD1	MSMVA through MSMVF	Ladle Dryer #1	N/A	15 MMBtu/hr	New	N/A
LD2	MSMVA through MSMVF	Ladle Dryer #2	N/A	15 MMBtu/hr	New	N/A
LD3	MSMVA through MSMVF	Ladle Dryer #3	N/A	15 MMBtu/hr	New	N/A
LPHTR1	MSMVA through MSMVF	Horizontal Ladle Preheater 1	N/A	15 MMBtu/hr	New	N/A
LPHTR2	MSMVA through MSMVF	Horizontal Ladle Preheater 2	N/A	15 MMBtu/hr	New	N/A
LPHTR3	MSMVA through MSMVF	Horizontal Ladle Preheater 3	N/A	15 MMBtu/hr	New	N/A
LPHTR4	MSMVA through MSMVF	Horizontal Ladle Preheater 4	N/A	15 MMBtu/hr	New	N/A
LPHTR5	MSMVA through MSMVF	Horizontal Ladle Preheater 5	N/A	15 MMBtu/hr	New	N/A
LPHTR6	MSMVA through MSMVF	Vertical Ladle Preheater 6	N/A	10 MMBtu/hr	New	N/A
LPHTR7	MSMVA through MSMVF	Vertical Ladle Preheater 7	N/A	10 MMBtu/hr	New	N/A
TD1	MSMVA through MSMVF	Tundish Dryer 1	N/A	6 MMBtu/hr	New	N/A
TD2	MSMVA through MSMVF	Tundish Dryer 2	N/A	6 MMBtu/hr	New	N/A
TPHTR1	MSMVA through MSMVF	Tundish Preheater 1	N/A	9 MMBtu/hr	New	N/A
TPHTR2	MSMVA through MSMVF	Tundish Preheater 2	N/A	9 MMBtu/hr	New	N/A
SENPHTR1	MSMVA through MSMVF	Subentry Nozzle (SEN) Preheater 1	N/A	0.62 MMBtu/hr	New	N/A
SENPHTR2	MSMVA through MSMVF	Subentry Nozzle (SEN) Preheater 2	N/A	0.62 MMBtu/hr	New	N/A
SENPHTR3	MSMVA through MSMVF	Subentry Nozzle (SEN) Preheater Oven	N/A	0.68 MMBtu/hr	New	N/A
VTD1	VTDST1	Vacuum Tank 1	N/A	440 lb Degassed CO/hr	New	VTG1-Flare
VTD2	VTDST2	Vacuum Tank 2	N/A	440 lb Degassed CO/hr	New	VTG2-Flare
TF1	TFST-1	Hot Mill Tunnel Furnace 1	N/A	250 MMBtu/hr	New	N/A
HM	HMMVA through HMMVL	Hot Mill Matrix Vents	N/A	294,270 dscfm	New	N/A
PKL-1	PLST1	Pickling Line #1	N/A	Scrubber - 15,303 dscfm	New	PKL1-SCRB
PKLSB	PKLSB	Pickle Line Scale Breaker	N/A	Cyclone - 47,086 dscfm	New	PKLSB-CYCL
TCM	TCMST	Tandem Cold Mill	N/A	Mist Eliminator - 235,431 dscfm	New	TCM-ME
STM	STMST	Standalone Temper Mill	N/A	Mist Eliminator - 23,543 dscfm	New	STM-ME
SPM1	CGL1MVA through CGL1MVE	Skin Pass Mill #1	N/A	Mist Eliminator - 13,707 dscfm	New	SPM1-ME
SPM2	CGL2MVA through CGL2MVE	Skin Pass Mill #2	N/A	Mist Eliminator - 13,707 dscfm	New	SPM2-ME
CGL1	CGL1_ST1	CGL1 - Cleaning Section	N/A	Wet Scrubber - 6,123 dscfm	New	CGL1-ME
CGL2	CGL2_ST1	CGL2 - Cleaning Section	N/A	Wet Scrubber - 6,123 dscfm	New	CGL2-ME
GALVFN1	GALVFN1	Galvanizing Furnace #1	N/A	73 MMBtu/hr	New	N/A
GALVFN2	GALVFN2	Galvanizing Furnace #2	N/A	80 MMBtu/hr	New	SCR
BOXANN1	GALVMVA through GALVMVF	Box Annealing Furnace #1	N/A	5 MMBtu/hr	New	N/A
BOXANN2	GALVMVA through GALVMVF	Box Annealing Furnace #2	N/A	5 MMBtu/hr	New	N/A
BOXANN3	GALVMVA through GALVMVF	Box Annealing Furnace #3	N/A	5 MMBtu/hr	New	N/A
BOXANN4	GALVMVA through GALVMVF	Box Annealing Furnace #4	N/A	5 MMBtu/hr	New	N/A
BOXANN5	GALVMVA through GALVMVF	Box Annealing Furnace #5	N/A	5 MMBtu/hr	New	N/A
BOXANN6	GALVMVA through GALVMVF	Box Annealing Furnace #6	N/A	5 MMBtu/hr	New	N/A
BOXANN7	GALVMVA through GALVMVF	Box Annealing Furnace #7	N/A	5 MMBtu/hr	New	N/A
BOXANN8	GALVMVA through GALVMVF	Box Annealing Furnace #8	N/A	5 MMBtu/hr	New	N/A
BOXANN9	GALVMVA through GALVMVF	Box Annealing Furnace #9	N/A	5 MMBtu/hr	New	N/A
BOXANN10	GALVMVA through GALVMVF	Box Annealing Furnace #10	N/A	5 MMBtu/hr	New	N/A
BOXANN11	GALVMVA through GALVMVF	Box Annealing Furnace #11	N/A	5 MMBtu/hr	New	N/A
BOXANN12	GALVMVA through GALVMVF	Box Annealing Furnace #12	N/A	5 MMBtu/hr	New	N/A

NSWV

Attachment I - Emission Units Table

Emission Unit ID[1]	Emission Point ID[2]	Emission Unit Description	Year Installed	Design Capacity	Type[3] and Date of Change	Control Device[4]
AMU-1	MAUWIPA through MAUWIPE	NG-Fired Makeup Air Unit, WIP Coil Storage Building	N/A	4 MMBtu/hr	New	N/A
AMU-2	MAUWIPA through MAUWIPE	NG-Fired Makeup Air Unit, WIP Coil Storage Building	N/A	4 MMBtu/hr	New	N/A
AMU-3	MAUWIPA through MAUWIPE	NG-Fired Makeup Air Unit, WIP Coil Storage Building	N/A	4 MMBtu/hr	New	N/A
AMU-4	MAUWIPA through MAUWIPE	NG-Fired Makeup Air Unit, WIP Coil Storage Building	N/A	4 MMBtu/hr	New	N/A
AMU-5	MAUWIPA through MAUWIPE	NG-Fired Makeup Air Unit, WIP Coil Storage Building	N/A	4 MMBtu/hr	New	N/A
AMU-6	MAUWIPA through MAUWIPE	NG-Fired Makeup Air Unit, WIP Coil Storage Building	N/A	4 MMBtu/hr	New	N/A
AMU-7	MAUWIPA through MAUWIPE	NG-Fired Makeup Air Unit, WIP Coil Storage Building	N/A	4 MMBtu/hr	New	N/A
AMU-8	MAUWIPA through MAUWIPE	NG-Fired Makeup Air Unit, WIP Coil Storage Building	N/A	4 MMBtu/hr	New	N/A
AMU-9	MAUFGA through MAUFGC	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	N/A	4 MMBtu/hr	New	N/A
AMU-10	MAUFGA through MAUFGC	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	N/A	4 MMBtu/hr	New	N/A
AMU-11	MAUFGA through MAUFGC	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	N/A	4 MMBtu/hr	New	N/A
AMU-12	MAUFGA through MAUFGC	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	N/A	4 MMBtu/hr	New	N/A
AMU-13	MAUFGA through MAUFGC	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	N/A	4 MMBtu/hr	New	N/A
AMU-14	MAUFGA through MAUFGC	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	N/A	4 MMBtu/hr	New	N/A
AMU-15	MAUFGA through MAUFGC	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	N/A	4 MMBtu/hr	New	N/A
AMU-16	MAUFGA through MAUFGC	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	N/A	4 MMBtu/hr	New	N/A
AMU-17	MAUPLA through MAUPLC	NG-Fired Makeup Air Unit, PLTCM Bay	N/A	4 MMBtu/hr	New	N/A
AMU-18	MAUPLA through MAUPLC	NG-Fired Makeup Air Unit, PLTCM Bay	N/A	4 MMBtu/hr	New	N/A
GALVBOILER1	CGL1-ST1	Galv Line Boiler #1	N/A	6.7 MMBtu/hr	New	N/A
GALVBOILER2	CGL2-ST1	Galv Line Boiler #2	N/A	6.7 MMBtu/hr	New	N/A
PLTCMBOILER1	PLTCMBLR	PLTCM Boiler #1	N/A	74.0 MMBtu/hr	New	N/A
PLTCMBOILER2	PLTCMBLR	PLTCM Boiler #2	N/A	71.6 MMBtu/hr	New	N/A
RAW-FEED1	SUBSUNL	Crane Unloading to Dock Scrap Substitute Bin	N/A	455 ton/hr	New	BV-0011-0016
RAW-FEED2	SUBSILOF	Dock Scrap Substitute Bin to NBC01 normal belt conveyor	N/A	455 ton/hr	New	BV-003
RAW-FEED3	BULKMH	Unnamed feed into UDH01 unloading hopper	N/A	240 ton/hr	New	EXT Baghouse
RAW-FEED4	BULKMH	Unnamed feed into UDH02 unloading hopper	N/A		New	EXT Baghouse
RAW-FEED5	BULKMH	Unnamed feed into UDH03 unloading hopper	N/A		New	EXT Baghouse
RAW-FEED6	BULKMH	Unnamed feed into UDH04 unloading hopper	N/A	240 ton/hr	New	EXT Baghouse
RAW-FEED7	BULKMH	Unnamed feed into UDH05 unloading hopper	N/A		New	EXT Baghouse
RAW-FEED8	BULKMH	Unnamed feed into UDH06 unloading hopper	N/A		New	EXT Baghouse
EAF-FEED1	BULKMH	UDH01 unloading hopper to RBC10 reversible belt conveyor	N/A	240 ton/hr	New	EXT Baghouse
EAF-FEED2	BULKMH	UDH02 unloading hopper to RBC10 reversible belt conveyor	N/A		New	EXT Baghouse
EAF-FEED3	BULKMH	UDH03 unloading hopper to RBC10 reversible belt conveyor	N/A		New	EXT Baghouse
EAF-FEED4	BULKMH	RBC10 reversible belt conveyor to EBC11 elevating belt conveyor	N/A	240 ton/hr	New	EXT Baghouse
EAF-FEED5	BULKMH	EBC11 elevating belt conveyor to WBC11 weighing belt conveyor	N/A	240 ton/hr	New	EXT Baghouse
EAF-FEED6	BULKMH	WBC11 weighing belt conveyor to RSC11 reversible shuttle belt conveyor	N/A	240 ton/hr	New	EXT Baghouse
EAF-FEED7	MSMVA through MSMVF	RSC11 reversible shuttle belt conveyor to SBN11-SBN22 daily bins	N/A	240 ton/hr	New	BV-111-122
EAF-FEED8	MSMVA through MSMVF	SBN11 daily bin to DBC11 dosing and weighing belt conveyor	N/A	27 ton/hr	New	INT Baghouse
EAF-FEED9	MSMVA through MSMVF	SBN12 daily bin to DBC12 dosing and weighing belt conveyor	N/A	27 ton/hr	New	INT Baghouse
EAF-FEED10	MSMVA through MSMVF	SBN13 daily bin to DBC13 dosing and weighing belt conveyor	N/A	27 ton/hr	New	INT Baghouse
EAF-FEED11	MSMVA through MSMVF	SBN14 daily bin to DBC14 dosing and weighing belt conveyor	N/A	27 ton/hr	New	INT Baghouse
EAF-FEED12	MSMVA through MSMVF	DBC11-DBC14 dosing and weighing belt conveyor to RBC11 reversible belt conveyor	N/A	27 ton/hr	New	INT Baghouse
EAF-FEED13	MSMVA through MSMVF	SBN15-SBN16 daily bins to FWH11 fixed weighing hopper	N/A	5 ton/hr	New	INT Baghouse
EAF-FEED14	MSMVA through MSMVF	FWH11 fixed weighing hopper to RBC11 reversible belt conveyor	N/A	5 ton/hr	New	INT Baghouse
EAF-FEED15	MSMVA through MSMVF	SBN17 daily bin to DBC15 dosing and weighing belt conveyor	N/A	27 ton/hr	New	INT Baghouse
EAF-FEED16	MSMVA through MSMVF	SBN18 daily bin to DBC16 dosing and weighing belt conveyor	N/A	27 ton/hr	New	INT Baghouse
EAF-FEED17	MSMVA through MSMVF	SBN19 daily bin to DBC17 dosing and weighing belt conveyor	N/A	27 ton/hr	New	INT Baghouse
EAF-FEED18	MSMVA through MSMVF	SBN20 daily bin to DBC18 dosing and weighing belt conveyor	N/A	27 ton/hr	New	INT Baghouse
EAF-FEED19	MSMVA through MSMVF	DBC15-DBC18 dosing and weighing belt conveyor to RBC12 reversible belt conveyor	N/A	27 ton/hr	New	INT Baghouse
EAF-FEED20	MSMVA through MSMVF	SBN21-SBN22 daily bins to FWH12 fixed weighing hopper	N/A	5 ton/hr	New	INT Baghouse
EAF-FEED21	MSMVA through MSMVF	FWH12 fixed weighing hopper to RBC12 reversible belt conveyor	N/A	5 ton/hr	New	INT Baghouse
EAF-FEED22	MSMVA through MSMVF	RBC11 reversible belt conveyor to EBC12 elevating belt conveyor	N/A	33 ton/hr	New	INT Baghouse
EAF-FEED23	MSMVA through MSMVF	RBC12 reversible belt conveyor to EBC13 elevating belt conveyor	N/A	33 ton/hr	New	INT Baghouse
EAF-FEED24	MSMVA through MSMVF	EBC12 elevating belt conveyor to NBC12 normal belt conveyor	N/A	33 ton/hr	New	BV-123-BV-124
EAF-FEED25	MSMVA through MSMVF	EBC13 elevating belt conveyor to NBC13 normal belt conveyor	N/A	33 ton/hr	New	BV-125-BV-126
SUBS-FEED1	SUBSILOF	NBC01 normal belt conveyor to SBM01-SBM04 silos	N/A	455 ton/hr	New	BV-301-BV-304
SUBS-FEED2	SUBSILOF	SBM01-SBM04 silos to NBC02 normal belt conveyor	N/A	455 ton/hr	New	BV-305-BV-308
SUBS-FEED3	SUBSFUG	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment	N/A	283 ton/hr	New	BV-309-BV-313
SUBS-FEED4	SUBSFUG	SBN01-SBN02 bin extraction equipment to WBC02 weighing belt conveyor	N/A	283 ton/hr	New	BV-314-BV-315
SUBS-FEED5	SUBSFUG	SBN03-SBN04 bin extraction equipment to WBC01 weighing belt conveyor	N/A	283 ton/hr	New	BV-316-BV-317
SUBS-FEED6	MSMVA through MSMVF	WBC02 weighing belt conveyor to NBC13 for EAF #2 Feed	N/A	283 ton/hr	New	BV-318
SUBS-FEED7	MSMVA through MSMVF	WBC01 weighing belt conveyor to NBC12 for EAF #1 Feed	N/A	283 ton/hr	New	BV-319

NSWV
Attachment I - Emission Units Table

Emission Unit ID[1]	Emission Point ID[2]	Emission Unit Description	Year Installed	Design Capacity	Type[3] and Date of Change	Control Device[4]
LMF-FEED1	BULKMH	UDH04 unloading hopper to RBC20 reversible belt conveyor	N/A	9 ton/hr	New	EXT Baghouse
LMF-FEED2	BULKMH	UDH05 unloading hopper to RBC20 reversible belt conveyor	N/A	0 ton/hr	New	EXT Baghouse
LMF-FEED3	BULKMH	UDH06 unloading hopper to RBC20 reversible belt conveyor	N/A	0 ton/hr	New	EXT Baghouse
LMF-FEED4	BULKMH	RBC20 reversible belt conveyor to EBC21 elevating belt conveyor	N/A	3 ton/hr	New	EXT Baghouse
LMF-FEED5	BULKMH	EBC21 elevating belt conveyor to WBC21 weighing belt conveyor	N/A	3 ton/hr	New	EXT Baghouse
LMF-FEED6	MSMVA through MSMVF	WBC21 weighing belt conveyor to RSC21 reversible shuttle belt conveyor	N/A	3 ton/hr	New	INT Baghouse
LMF-FEED7	MSMVA through MSMVF	RSC21 reversible shuttle belt conveyor to SBN31-58 bin extraction equipment	N/A	3 ton/hr	New	BV-400-BV-427
LMF-FEED8	MSMVA through MSMVF	SBN31-SBN36 bin extraction equipment to FWH21 fixed weighing hopper	N/A	3 ton/hr	New	INT Baghouse
LMF-FEED9	MSMVA through MSMVF	SBN37-SBN40 bin extraction equipment to FWH22 fixed weighing hopper	N/A	3 ton/hr	New	INT Baghouse
LMF-FEED10	MSMVA through MSMVF	SBN41-SBN44 bin extraction equipment to FWH23 fixed weighing hopper	N/A	3 ton/hr	New	INT Baghouse
LMF-FEED11	MSMVA through MSMVF	SBN45-SBN50 bin extraction equipment to FWH24 fixed weighing hopper	N/A	3 ton/hr	New	INT Baghouse
LMF-FEED12	MSMVA through MSMVF	SBN51-SBN54 bin extraction equipment to FWH25 fixed weighing hopper	N/A	3 ton/hr	New	INT Baghouse
LMF-FEED13	MSMVA through MSMVF	SBN55-SBN58 bin extraction equipment to FWH26 fixed weighing hopper	N/A	3 ton/hr	New	INT Baghouse
LMF-FEED14	MSMVA through MSMVF	FWH21-FWH23 fixed weighing hopper to RBC21 reversible belt conveyor	N/A	3 ton/hr	New	INT Baghouse
LMF-FEED15	MSMVA through MSMVF	FWH24-FWH26 fixed weighing hopper to RBC22 reversible belt conveyor	N/A	3 ton/hr	New	INT Baghouse
LMF-FEED16	MSMVA through MSMVF	RBC21 reversible belt conveyor to EBC22 elevating belt conveyor	N/A	3 ton/hr	New	INT Baghouse
LMF-FEED17	MSMVA through MSMVF	EBC22 elevating belt conveyor to NBC22 normal belt conveyor	N/A	3 ton/hr	New	INT Baghouse
LMF-FEED18	MSMVA through MSMVF	NBC22 normal belt conveyor to RBC23 reversible belt conveyor	N/A	3 ton/hr	New	INT Baghouse
LMF-FEED19	MSMVA through MSMVF	RBC23 reversible belt conveyor to NBC24 normal belt conveyor	N/A	3 ton/hr	New	INT Baghouse
LMF-FEED20	MSMVA through MSMVF	NBC24 normal belt conveyor to SHP21-SHP23 surge hopper	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED21	MSMVA through MSMVF	SHP21-SHP23 surge hopper to LF #1.1 ladle furnace	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED22	MSMVA through MSMVF	NBC22 normal belt conveyor to NBC25 normal belt conveyor	N/A	3 ton/hr	New	INT Baghouse
LMF-FEED23	MSMVA through MSMVF	NBC25 normal belt conveyor to SHP24-SHP26 surge hopper	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED24	MSMVA through MSMVF	SHP24-SHP26 surge hopper to LF #1.2 ladle furnace	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED25	MSMVA through MSMVF	RBC23 reversible belt conveyor to SHP27-SHP28 surge hopper	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED26	MSMVA through MSMVF	SHP27-SHP28 surge hopper to VCG21 vibrating channel	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED27	MSMVA through MSMVF	VCG21 vibrating channel to VD #1 vacuum degasser	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED28	MSMVA through MSMVF	From main crane to SBN59-SBN62 bin extraction equipment	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED29	MSMVA through MSMVF	From main crane to SBN63-SBN66 bin extraction equipment	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED30	MSMVA through MSMVF	SBN59-SBN62 bin extraction equipment to TWH21 traveling weighing hopper	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED31	MSMVA through MSMVF	SBN63-SBN66 bin extraction equipment to TWH22 traveling weighing hopper	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED32	MSMVA through MSMVF	TWH21 traveling weighing hopper to LF #1.1 ladle furnace	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED33	MSMVA through MSMVF	TWH22 traveling weighing hopper to LF #1.2 ladle furnace	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED34	MSMVA through MSMVF	RBC22 reversible belt conveyor to EBC23 elevating belt conveyor	N/A	3 ton/hr	New	INT Baghouse
LMF-FEED35	MSMVA through MSMVF	EBC23 elevating belt conveyor to NBC23 normal belt conveyor	N/A	3 ton/hr	New	INT Baghouse
LMF-FEED36	MSMVA through MSMVF	NBC23 normal belt conveyor to NBC27 normal belt conveyor	N/A	3 ton/hr	New	INT Baghouse
LMF-FEED37	MSMVA through MSMVF	NBC27 normal belt conveyor to SHP32-SHP34 surge hopper	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED38	MSMVA through MSMVF	SHP32-SHP34 surge hopper to LF #2.2 ladle furnace	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED39	MSMVA through MSMVF	NBC23 normal belt conveyor to RBC24 reversible belt conveyor	N/A	3 ton/hr	New	INT Baghouse
LMF-FEED40	MSMVA through MSMVF	RBC24 reversible belt conveyor to SHP35-SHP36 surge hopper	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED41	MSMVA through MSMVF	SHP35-SHP36 surge hopper to VCG21 vibrating channel	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED42	MSMVA through MSMVF	VCG21 vibrating channel to VD #1 vacuum degasser	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED43	MSMVA through MSMVF	RBC24 reversible belt conveyor to NBC26 normal belt conveyor	N/A	3 ton/hr	New	INT Baghouse
LMF-FEED44	MSMVA through MSMVF	NBC26 normal belt conveyor to SHP29-SHP31 surge hopper	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED45	MSMVA through MSMVF	SHP29-SHP31 surger hopper to LF #2.1 ladle furnace	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED46	MSMVA through MSMVF	From main crane to SBN67-SBN70 bin extraction equipment	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED47	MSMVA through MSMVF	From main crane to SBN71-SBN74 bin extraction equipment	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED48	MSMVA through MSMVF	SBN67-SBN70 bin extraction equipment to TWH23 traveling weighing hopper	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED49	MSMVA through MSMVF	SBN71-SBN74 bin extraction equipment to TWH24 traveling weighing hopper	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED50	MSMVA through MSMVF	TWH23 traveling weighing hopper to LF #2.1 ladle furnace	N/A	3 ton/hr	New	Canopy Hood
LMF-FEED51	MSMVA through MSMVF	TWH24 traveling weighing hopper to LF #2.2 ladle furnace	N/A	3 ton/hr	New	Canopy Hood
EXBHUNLD	EXBHUNLD	Raw Material Handling External Baghouse Dust	N/A	0.005 ton/hr	New	N/A
INBHUNLD	MSMVA through MSMVF	Raw Material Handling Internal Baghouse Dust	N/A	0.005 ton/hr	New	N/A
BV-0011-0016	SUBSDCK1-6	Crane Unloading Transfers to Dock Scrap Substitute Bin	N/A	280 dscfm	New	N/A
BV-003	BV-003	Dock Scrap Substitute Bin to NBC01 normal belt conveyor	N/A	1,000 dscfm	New	N/A
BV-111-122	MSMVA through MSMVF	RSC11 reversible shuttle belt conveyor to SBN11-SBN22 daily bins	N/A	1,000 dscfm	New	N/A
BV-123-BV-124	MSMVA through MSMVF	EBC12 elevating belt conveyor to NBC12 normal belt conveyor	N/A	1,000 dscfm	New	N/A
BV-125-BV-126	MSMVA through MSMVF	EBC13 elevating belt conveyor to NBC13 normal belt conveyor	N/A	1,000 dscfm	New	N/A
BV-301-BV-304	SUBSILO1-4	SBM01-04 silos bin vent	N/A	1,000 dscfm	New	N/A
BV-305-BV-308	BV-305-BV-308	SBM01-04 silos to NBC02 normal belt conveyor	N/A	1,000 dscfm	New	N/A
BV-309-BV-313	BV-309-BV-313	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment	N/A	1,000 dscfm	New	N/A
BV-314-BV-315	BV-314-BV-315	SBN01-SBN02 bin extraction equipment to WBC02 weighing belt conveyor	N/A	1,000 dscfm	New	N/A
BV-316-BV-317	BV-316-BV-317	SBN03-SBN04 bin extraction equipment to WBC01 weighing belt conveyor	N/A	1,000 dscfm	New	N/A
BV-318	MSMVA through MSMVF	WBC02 weighing belt conveyor to NBC13 for EAF #2 Feed	N/A	1,000 dscfm	New	N/A
BV-319	MSMVA through MSMVF	WBC01 weighing belt conveyor to NBC12 for EAF #1 Feed	N/A	1,000 dscfm	New	N/A
BV-400-BV-427	MSMVA through MSMVF	RSC21 reversible shuttle belt conveyor to SBN31-58 bin extraction equipment	N/A	280 dscfm	New	N/A

NSWV

Attachment I - Emission Units Table

Emission Unit ID[1]	Emission Point ID[2]	Emission Unit Description	Year Installed	Design Capacity	Type[3] and Date of Change	Control Device[4]
SLAG-BULK1	SLAGPORT	Tractor to SP-JP-H1 Hopper	N/A	500 ton/hr	New	WS
SLAG-BULK2	SLAGPORT	SP-JP-H1 Hopper to SP-JP-VGF1 Vibrating Grizzly Feeder	N/A	500 ton/hr	New	WS
SLAG-BULK3	SLAGPORT	SP-JP-VGF1 Vibrating Grizzly Feeder to SP-JP-CR1 Crusher	N/A	158 ton/hr	New	WS
SLAG-BULK4	SLAGPORT	SP-JP-CR1 Crusher to SP-JP-PF1 Vibrating Pan Feeder	N/A	158 ton/hr	New	WS
SLAG-BULK5	SLAGPORT	SP-JP-PF1 Vibrating Pan Feeder to SP-JP-CV1 Conveyor	N/A	158 ton/hr	New	WS
SLAG-BULK6	SLAGPORT	SP-JP-VGF1 Vibrating Grizzly Feeder to SP-JP-CV1 Conveyor	N/A	342 ton/hr	New	WS
SLAG-BULK7	SLAGPORT	SP-JP-CV1 Conveyor to SP-CV2 Portable Transfer Conveyor	N/A	500 ton/hr	New	WS
SLAG-BULK8	SLAGPORT	SP-CV2 Portable Transfer Conveyor to SP-OBM1 Magnet	N/A	567 ton/hr	New	WS
HSCRAP-BULK9	SLAGPORT	SP-OBM1 Magnet to Stockpile	N/A	9 ton/hr	New	WS
SLAG-BULK10	SLAGPORT	SP-CV2 Portable Transfer Conveyor to SP-CV3 Portable Transfer Conveyor	N/A	558 ton/hr	New	WS
SLAG-BULK11	SLAGPORT	SP-CV3 Portable Transfer Conveyor to MAG HP	N/A	558 ton/hr	New	WS
HSCRAP-BULK12	SLAGPORT	MAG HP to Stockpile	N/A	3 ton/hr	New	WS
SLAG-BULK13	SLAGPORT	SP-CV3 Portable Transfer Conveyor to SP-DB-SCR1 Screener	N/A	555 ton/hr	New	WS
SLAG-BULK14	SLAGPORT	Sp-DB-SCR1 Screener to SP-DB-CV5 Reversing Conveyor	N/A	210 ton/hr	New	WS
SLAG-BULK15	SLAGPORT	SP-DB-CV5 Conveyor to SP-RS2 Radial Stacker	N/A	210 ton/hr	New	WS
SLAG-BULK16	SLAGPORT	SP-RS2 Radial Stacker to Durabase	N/A	210 ton/hr	New	WS
SLAG-BULK17	SLAGPORT	SP-DB-SCR1 Screener to SP-DB-CV4 Conveyor	N/A	279 ton/hr	New	WS
SLAG-BULK18	SLAGPORT	SP-DB-CV4 Conveyor to SP-RS1 Radial Stacker	N/A	279 ton/hr	New	WS
SLAG-BULK19	SLAGPORT	SP-RS1 Radial Stacker to Duraberm	N/A	279 ton/hr	New	WS
SLAG-BULK20	SLAGPORT	SP-CP-SCR1 Screener to SP-CP-CV6 Conveyor	N/A	67 ton/hr	New	WS
SLAG-BULK21	SLAGPORT	SP-CP-CV6 Conveyor to SP-CP-CV7 Conveyor	N/A	67 ton/hr	New	WS
SLAG-BULK22	SLAGPORT	SP-CP-CV7 Conveyor to SP-CP-CR2 Cone Crusher	N/A	67 ton/hr	New	WS
SLAG-BULK23	SLAGPORT	SP-CP-CR2 Cone Crusher to SP-CP-CV8 Conveyor	N/A	67 ton/hr	New	WS
SLAG-BULK24	SLAGPORT	SP-CP-CV8 Conveyor to SP-CP-CV2 Conveyor	N/A	67 ton/hr	New	WS
SLAG-BULK25	SLAGMRP	Front-End Loader to GFH-MA1 Hopper	N/A	500 ton/hr	New	WS
SLAG-BULK26	SLAGMRP	GFH-MA1 Hopper to Stockpile	N/A	10 ton/hr	New	WS
SLAG-BULK27	SLAGMRP	GFH-MA1 Hopper to PF-MA1 Pan Feeder	N/A	490 ton/hr	New	WS
SLAG-BULK28	SLAGMRP	PF-MA1 Pan Feeder to CV-MA1 Conveyor	N/A	490 ton/hr	New	WS
SLAG-BULK29	SLAGMRP	CV-MA1 Conveyor to MD1 Mag Drum	N/A	490 ton/hr	New	WS
HSCRAP-BULK30	SLAGMRP	MD1 Mag Drum to FD-MA1 Feeder	N/A	301 ton/hr	New	WS
HSCRAP-BULK31	SLAGMRP	FD-MA1 Feeder to CV-MA2 Conveyor	N/A	301 ton/hr	New	WS
HSCRAP-BULK32	SLAGMRP	CV-MA2 Conveyor to SC-MA1 Screener	N/A	301 ton/hr	New	WS
HSCRAP-BULK33	SLAGMRP	SC-MA1 Screener to FD-MA3 Syntron Feeder	N/A	20 ton/hr	New	WS
HSCRAP-BULK34	SLAGMRP	FD-MA3 Syntron Feeder to CV-MA6 Conveyor	N/A	20 ton/hr	New	WS
HSCRAP-BULK35	SLAGMRP	CV-MA6 Conveyor to FE Pallet	N/A	20 ton/hr	New	WS
HSCRAP-BULK36	SLAGMRP	SC-MA1 Screener to CV-MA5 Conveyor	N/A	281 ton/hr	New	WS
HSCRAP-BULK37	SLAGMRP	CV-MA5 Conveyor to OBM-MA2 Magnet	N/A	1 ton/hr	New	WS
HSCRAP-BULK38	SLAGMRP	OBM-MA2 Magnet to FE Dump Bin	N/A	1 ton/hr	New	WS
HSCRAP-BULK39	SLAGMRP	CV-MA5 Conveyor to CV-MA-RS2 Radial Stacker	N/A	280 ton/hr	New	WS
HSCRAP-BULK40	SLAGMRP	CV-MA-RS2 Radial Stacker to Stockpile	N/A	280 ton/hr	New	WS
SLAG-BULK41	SLAGMRP	MD1 Mag Drum to FD-MA2 Feeder	N/A	189 ton/hr	New	WS
SLAG-BULK42	SLAGMRP	FD-MA2 Feeder to CV-MA3 Conveyor	N/A	189 ton/hr	New	WS
HSCRAP-BULK43	SLAGMRP	CV-MA3 Conveyor to OBM-MA1 Magnet	N/A	4 ton/hr	New	WS
HSCRAP-BULK44	SLAGMRP	OBM-MA1 Magnet to Stockpile	N/A	4 ton/hr	New	WS
SLAG-BULK45	SLAGMRP	CV-MA3 Conveyor to CV-MA4 Conveyor	N/A	185 ton/hr	New	WS
SLAG-BULK46	SLAGMRP	CV-MA4 Conveyor to CV-MA-RS1 Radial Stacker	N/A	185 ton/hr	New	WS
SLAG-BULK47	SLAGMRP	CV-MA-RS1 Radial Stacker to Stockpile	N/A	185 ton/hr	New	WS
SLAG-BULK48	SLAGDROP	Slag loading from Stockpiles	N/A	2 ton/hr	New	WS
SLAG-BULK49	SLAGDROP	Crane unload oversize product to drop ball	N/A	2 ton/hr	New	WS
SLAG-BULK50	SLAGDROP	Drop ball crushing	N/A	2 ton/hr	New	WS
SLAG-BULK51	SLAGDROP	Crane/Front End Loader to Trucks	N/A	2 ton/hr	New	WS
SLAG-BULK52	SLAGDROP	Transfer of resized material to storage pile	N/A	2 ton/hr	New	WS
SCRAP-RECEIVING1	SCRPBRGE	Scrap Handling	N/A	952 ton/hr	New	N/A
SCRAP-RECEIVING2	SCRPBRGE	Scrap Handling	N/A	952 ton/hr	New	N/A
SCRAP-RECEIVING3	SCRPBRGE	Scrap Handling	N/A	952 ton/hr	New	N/A
SCRAP-HANDLING1	SCRPHNDA through SCRPHNDC	Scrap Handling	N/A	3,309,000 ton/hr	New	N/A
SCRAP-HANDLING2	SCRPHNDA through SCRPHNDC	Scrap Handling	N/A	3,309,000 ton/hr	New	N/A
SCRAP-HANDLING3	SCRPHNDA through SCRPHNDC	Scrap Handling	N/A	3,309,000 ton/hr	New	N/A

NSWV

Attachment I - Emission Units Table

Emission Unit ID[1]	Emission Point ID[2]	Emission Unit Description	Year Installed	Design Capacity	Type[3] and Date of Change	Control Device[4]
SCRAP-PILE1	SCRPSKPA	Scrap Yard Stockpiles	N/A	10.00 acres	New	N/A
SCRAP-PILE2	SCRPSKPB	Scrap Yard Stockpiles	N/A	10.00 acres	New	N/A
SCRAP-PILE3	SCRPSKPC	Scrap Yard Stockpiles	N/A	10.00 acres	New	N/A
SLGSKP1	SLAGMRP	GFH-MA Hopper Pile	N/A	0.03 acres	New	N/A
SLGSKP2	SLAGMRP	CV-MA-RS2 Radial Stacker Pile	N/A	0.57 acres	New	N/A
SLGSKP3	SLAGMRP	OBM-MA1 Magnet Pile	N/A	0.01 acres	New	N/A
SLGSKP4	SLAGMRP	CV-MA-RS1 Radial Stacker Pile	N/A	0.57 acres	New	N/A
SLGSKP5	SLAGPORT	SP-OBM1 Magnet Pile	N/A	0.01 acres	New	N/A
SLGSKP6	SLAGPORT	MAG HP Magnet Pile	N/A	0.00 acres	New	N/A
SLGSKP7	SLAGPORT	SP-RS1 Radial Stacker Pile Duraberm	N/A	0.36 acres	New	N/A
SLGSKP8	SLAGPORT	SP-RS2 Radial Stacker Pile Durabase	N/A	0.36 acres	New	N/A
SLGSKP9	SLAGPORT	SP-RS1 Radial Stacker Pile 5 Small Chips	N/A	0.36 acres	New	N/A
SLGSKP10	SLAGPORT	SP-RS2 Radial Stacker Pile 6 Big Chips	N/A	0.36 acres	New	N/A
SLGSKP11	SLAGPORT	Long-Term Radial Stacker Pile Duraberm	N/A	0.72 acres	New	N/A
SLGSKP12	SLAGPORT	Long-Term Radial Stacker Pile Durabase	N/A	0.72 acres	New	N/A
SLGSKP13	SLAGPORT	Long-Term Radial Stacker Pile Small Chips	N/A	0.72 acres	New	N/A
SLGSKP14	SLAGPORT	Long-Term Radial Stacker Pile Big Chips	N/A	0.72 acres	New	N/A
CGL1	CGL1MVA through CGL1MVE	Galvanizing Line 1 Passivation Roll Coater	N/A	14,235 gal/yr	New	N/A
CGL2	CGL2MVA through CGL2MVE	Galvanizing Line 2 Passivation Roll Coater	N/A	14,235 gal/yr	New	N/A
CGL1	CGL1MVA through CGL1MVE	Galvanizing Line 1 Stenciling	N/A	820 gal/yr	New	N/A
CGL2	CGL2MVA through CGL2MVE	Galvanizing Line 2 Stenciling	N/A	820 gal/yr	New	N/A
CSP1	CSP1	Caster Spray Vents	N/A	606 ton/hr	New	N/A
CSP2	CSP2	Caster Spray Vents	N/A		New	N/A
SCRAP-CUT	SCRCUTNG	Scrap Cutting in Scrap Processing Area	N/A	7.2 MMBtu/hr	New	N/A
SCRAP-CUT	CUTBHUNL	Scrap and Coil Cutting Baghouse Dust	N/A	0.02 ton/hr	New	N/A
SCRAP-CUT	CUTBH	Scrap and Coil Cutting Baghouse	N/A	Baghouse - 100,000 dscfm	New	CUTBH
ASP	ASP	Water Bath Vaporizer	N/A	46.5 MMBtu/hr	New	N/A
NCT1	NCT1A through NCT1E	Melt Shop Cooling Tower 1	N/A	112,000 gpm	New	DE
CCT4	CCT4A through CCT4B	Caster Cooling Tower 2	N/A	15,500 gpm	New	DE
NCT5	NCT5A through NCT5B	Caster Cooling Tower 3	N/A	37,200 gpm	New	DE
CCT6	CCT6A through CCT6C	Hot Mill Cooling Tower 4	N/A	71,000 gpm	New	DE
LCT7	LCT7A through LCT7C	Hot Mill Cooling Tower 5	N/A	56,710 gpm	New	DE
NCT8	NCT8A through NCT8B	Cold Mill Cooling Tower 6	N/A	28,000 gpm	New	DE
ASPCT	ASPCTA through ASPCTE	Air Separation Plant Cooling Tower 7	N/A	350 gpm	New	DE
BRCKCRSH	BRCKCRSH	Brick Crushing	N/A	60 ton/hr	New	WS
EMGEN1	EMGEN1	Emergency Generator 1	N/A	777 hp	New	N/A
EMGEN2	EMGEN2	Emergency Generator 2	N/A	777 hp	New	N/A
EMGEN3	EMGEN3	Emergency Generator 3	N/A	777 hp	New	N/A
EMGEN4	EMGEN4	Emergency Generator 4	N/A	777 hp	New	N/A
EMGEN5	EMGEN5	Emergency Generator 5	N/A	777 hp	New	N/A
EMGEN6	EMGEN6	Emergency Generator 6	N/A	777 hp	New	N/A
EMGEN7	EMGEN7	Emergency Generator 7	N/A	777 hp	New	N/A
EMGEN8	EMGEN8	Emergency Generator 8	N/A	777 hp	New	N/A
EMGEN9	EMGEN9	Emergency Generator 9	N/A	777 hp	New	N/A
EMGEN10	EMGEN10	Emergency Generator 10	N/A	777 hp	New	N/A
EMGEN11	EMGEN11	Emergency Generator 11	N/A	777 hp	New	N/A
EMGEN12	EMGEN12	Emergency Generator 12	N/A	777 hp	New	N/A
EMGEN13	EMGEN13	Emergency Generator 13	N/A	777 hp	New	N/A
EMGEN14	EMGEN14	Emergency Generator 14	N/A	777 hp	New	N/A
EMGEN15	EMGEN15	Emergency Generator 15	N/A	777 hp	New	N/A
EMGEN16	EMGEN16	Emergency Generator 16	N/A	777 hp	New	N/A
EMGEN17	EMGEN17	Emergency Generator 17	N/A	777 hp	New	N/A
EMGEN18	EMGEN18	Emergency Generator 18	N/A	777 hp	New	N/A
EMGEN19	EMGEN19	Emergency Generator 19	N/A	777 hp	New	N/A
EMGEN20	EMGEN20	Emergency Generator 20	N/A	777 hp	New	N/A
EMGEN21	EMGEN21	Emergency Generator 21	N/A	777 hp	New	N/A
EMGEN22	EMGEN22	Emergency Generator 22	N/A	777 hp	New	N/A
EMGEN23	EMGEN23	Emergency Generator 23	N/A	777 hp	New	N/A
EMGEN24	EMGEN24	Emergency Generator 24	N/A	777 hp	New	N/A
EMGEN25	EMGEN25	Emergency Generator 25	N/A	777 hp	New	N/A
EMGEN26	EMGEN26	Emergency Generator 26	N/A	777 hp	New	N/A

NSWV
Attachment I - Emission Units Table

Emission Unit ID[1]	Emission Point ID[2]	Emission Unit Description	Year Installed	Design Capacity	Type[3] and Date of Change	Control Device[4]
FUGD-PAVED-01P	ROAD1 through ROAD184	North Entry to P&O	N/A	23.3 VMT/day	New	WS
FUGD-PAVED-02P	ROAD1 through ROAD184	North Entry to FG	N/A	51.9 VMT/day	New	WS
FUGD-PAVED-03P	ROAD1 through ROAD184	North Entry to HB Yard	N/A	36.7 VMT/day	New	WS
FUGD-PAVED-04P	ROAD1 through ROAD184	North Entry to Scrap Yard	N/A	54.4 VMT/day	New	WS
FUGD-PAVED-05P	ROAD1 through ROAD184	North Entry to Alloy Storage	N/A	69.7 VMT/day	New	WS
FUGD-PAVED-06P	ROAD1 through ROAD184	North Entry to EAF Bay	N/A	27.8 VMT/day	New	WS
FUGD-PAVED-07P	ROAD1 through ROAD184	North Entry to Slag Bay	N/A	31.8 VMT/day	New	WS
FUGD-PAVED-08P	ROAD1 through ROAD184	Scrap Yard to EAF Bay	N/A	182.4 VMT/day	New	WS
FUGD-PAVED-09P	ROAD1 through ROAD184	South Port to Scrap Yard	N/A	154.9 VMT/day	New	WS
FUGD-PAVED-10P	ROAD1 through ROAD184	South Port to HB Yard	N/A	8.6 VMT/day	New	WS
FUGD-PAVED-11P	ROAD1 through ROAD184	South Port to FG	N/A	45.9 VMT/day	New	WS
FUGD-PAVED-12P	ROAD1 through ROAD184	South Port to P&O	N/A	31.3 VMT/day	New	WS
PLSTEO	MAUPLA through MAUPLC	Pickle Line Electrostatic Oiler	N/A	656 ft/min	New	N/A
STMSTEO	TMEOMVA and TMEOMVB	Temper Mill Electrostatic Oiler	N/A	1,400 ft/min	New	N/A
CGLEO1	CGL1MVA through CGL1MVE	Galvanizing Line 1 Electrostatic Oiler	N/A	750 ft/min	New	N/A
CGLEO2	CGL2MVA through CGL2MVE	Galvanizing Line 2 Electrostatic Oiler	N/A	750 ft/min	New	N/A
RCLEO	TMEOMVA and TMEOMVB	Recoiler Electrostatic Oiler	N/A	700 ft/min	New	N/A
WASH1	MSMVA through MSMVF	Melt Shop Parts Washer	N/A	80 gal	New	N/A
WASH2	HMMVA through HMMVL	Hot Mill Parts Washer 01	N/A	80 gal	New	N/A
WASH3	HMMVA through HMMVL	Hot Mill Parts Washer 02	N/A	80 gal	New	N/A
WASH4	HMMVA through HMMVL	Hot Mill Parts Washer 03	N/A	80 gal	New	N/A
WASH5	HMMVA through HMMVL	Hot Mill Parts Washer 04	N/A	80 gal	New	N/A
WASH6	CGL1MVA through CGL1MVE	Cold Mill Parts Washer 01	N/A	80 gal	New	N/A
WASH7	CGL1MVA through CGL1MVE	Cold Mill Parts Washer 02	N/A	80 gal	New	N/A
WASH8	MSMVA through MSMVF	Caster Parts Washer	N/A	80 gal	New	N/A
WASH9	MAUFGA through MAUFGC	Crane and Mobile Maintenance Parts Washer	N/A	80 gal	New	N/A
T001	T001	Diesel Tank	N/A	15,000 gal	New	N/A
T002	T002	Diesel Tank	N/A	1,000 gal	New	N/A
T003	T003	Diesel Tank	N/A	1,000 gal	New	N/A
T004	T004	Diesel Tank	N/A	1,000 gal	New	N/A
T005	T005	Diesel Tank	N/A	1,000 gal	New	N/A
T006	T006	Gasoline Tank	N/A	1,000 gal	New	N/A
T007	CMTKFUG	HCL Tank #1	N/A	40,414 gal	New	N/A
T008	CMTKFUG	HCL Tank #2	N/A	40,414 gal	New	N/A
T009	CMTKFUG	HCL Tank #3	N/A	40,414 gal	New	N/A
T010	CMTKFUG	HCL Tank #4	N/A	40,414 gal	New	N/A
T011	CMTKFUG	SPL Tank #1	N/A	40,414 gal	New	N/A
T012	CMTKFUG	SPL Tank #2	N/A	40,414 gal	New	N/A
T013	CMTKFUG	SPL Tank #3	N/A	40,414 gal	New	N/A
T014	CMTKFUG	SPL Tank #4	N/A	40,414 gal	New	N/A
T015	CMTKFUG	SPL Tank #5	N/A	40,414 gal	New	N/A
T016	CMTKFUG	SPL Tank #6	N/A	40,414 gal	New	N/A
T017	CMTKFUG	SPL Tank #7	N/A	40,414 gal	New	N/A
T018	CMTKFUG	SPL Tank #8	N/A	40,414 gal	New	N/A
T019	T019	WOT9.1	N/A	10,000 gal	New	N/A
T020	T020	COT6.3	N/A	8,225 gal	New	N/A
T021	T021	COT4.3	N/A	8,225 gal	New	N/A
T022	T022	COT6.1	N/A	1,750 gal	New	N/A
T023	T023	COT4.1	N/A	1,750 gal	New	N/A
T024	HMMVA through HMMVL	Hydraulic Bulk	N/A	6,000 gal	New	N/A
T025	HMMVA through HMMVL	Hydraulic (Morgoil) Bulk	N/A	8,000 gal	New	N/A
T026	HMMVA through HMMVL	Grease Bulk RM/FM	N/A	4,500 gal	New	N/A
T027	HMMVA through HMMVL	Grease Bulk Coilers	N/A	4,500 gal	New	N/A
T028	HMMVA through HMMVL	Grease Bulk RM/FM	N/A	1,700 gal	New	N/A
T029	HMMVA through HMMVL	Grease Bulk Coilers	N/A	1,700 gal	New	N/A
T030	HMMVA through HMMVL	Grease Bulk Roll Shop	N/A	1,700 gal	New	N/A

[1] For Emission Units (or Sources) use the following numbering system:1S, 2S, 3S,... or other appropriate designation.

[2] For Emission Points use the following numbering system:1E, 2E, 3E, ... or other appropriate designation.

[3] New, modification, removal.

[4] For Control Devices use the following numbering system: 1C, 2C, 3C,... or other appropriate designation.

Note: The following control methods do not have associated "Attachment M: Air Pollution Control Devices Sheets:"
WS = Water Spray / Wet Suppression
DE = Drift eliminator
SCR = Selective catalytic reduction

Note: The EXT Baghouse, INT Baghouse, and Canopy Hood are all routed to a common header where emissions are sent to both the EAF1-BH and EAF2-BH.

Attachment J – Emission Points Data Sheet

NSWV
Attachment J - Emission Points Data Summary Sheet

Emission Point ID	Emission Point Type[1]	Emission Units Vented Through this Point: Emission Unit ID	Emission Units Vented Through this Point: Emission Unit Description	Air Pollution Control Device: Control Device ID	Air Pollution Control Device: Control Device Type	Pollutant Chemical Name/CAS[3] (See Emission Calculations for Speciated HAP)	Maximum Controlled Emissions[5]: lb/hr	Maximum Controlled Emissions[5]: tpy	Emission Form or Phase (At Exit Conditions)	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^3)	Inner Diameter (ft)	Exit Gas Temp (°F)	Exit Gas Volumetric Flow[8] (ACFM)	Exit Gas Velocity (fps)	Elevation: Ground Level (ft)	Stack Height above Ground Level[9] (ft)	UTM Northing (km)	UTM Easting (km)
BHST1	Upward Vertical Stack	EAF1 LMF1 CAST1	Electric Arc Furnace 1 Ladle Metallurgical Furnace 1 Caster 1	EAF1-BH	Baghouse	NO_x	111.72	327.18	Gas	O (BACT)	14.20	23	224	2,100,000	84	582	213	4277.985	398.450
						CO	537.32	1,574	Gas	O (BACT)	68.31								
						SO_2	63.84	186.96	Gas	O (BACT)	8.12								
						VOC	26.07	76.34	Gas	O (BACT)	3.31								
						PM	25.01	109.53	Solid	O (BACT)	3.18								
						PM_{10}	72.24	316.42	Solid/Gas	O (BACT)	9.18								
						$PM_{2.5}$	72.24	316.42	Solid/Gas	O (BACT)	9.18								
						Lead	0.12	0.35	Solid	O (BACT)	1.5E-02								
						Total HAPs	0.23	0.69	Solid/Gas	EE	3.0E-02								
						CO_2	64,928	284,385	Gas	O (BACT)	8,254								
						CH_4	0.13	0.55	Gas	O (BACT)	1.6E-02								
						N_2O	1.3E-02	5.5E-02	Gas	O (BACT)	1.6E-03								
						CO_2e	64,935	284,415	Gas	O (BACT)	8,255								
BHST2	Upward Vertical Stack	EAF2 LMF2 CAST1	Electric Arc Furnace 2 Ladle Metallurgical Furnace 2 Caster 1	EAF2-BH	Baghouse	NO_x	111.72	327.18	Gas	O (BACT)	14.20	23	224	2,100,000	84	582	213	4277.954	398.374
						CO	537.32	1,574	Gas	O (BACT)	68.31								
						SO_2	63.84	186.96	Gas	O (BACT)	8.12								
						VOC	26.07	76.34	Gas	O (BACT)	3.31								
						PM	25.01	109.53	Solid	O (BACT)	3.18								
						PM_{10}	72.24	316.42	Solid/Gas	O (BACT)	9.18								
						$PM_{2.5}$	72.24	316.42	Solid/Gas	O (BACT)	9.18								
						Lead	0.12	0.35	Solid	O (BACT)	1.5E-02								
						Total HAPs	0.23	0.69	Solid/Gas	EE	3.0E-02								
						CO_2	64,928	284,385	Gas	O (BACT)	8,254								
						CH_4	0.13	0.55	Gas	O (BACT)	1.6E-02								
						N_2O	1.3E-02	5.5E-02	Gas	O (BACT)	1.6E-03								
						CO_2e	64,935	284,415	Gas	O (BACT)	8,255								
MSMVA through MSMVF	Upward Vertical Stack	MSFUG CASTFUG LD1-3 LPHTR1-7 TD1-2 TPHTR1-2 SENPHTR1-3 EAF-FEED7-25 SUBS-FEED6-7 LMF-FEED6-51 INBHUNLD BV-111-122 BV-123-BV-124 BV-125-BV-126 BV-318BV-319 BV-400-BV-427 WASH1&8	Uncaptured Electric Arc Furnace Fugitives Uncaptured Casting Fugitives Ladle Dryer #1-3 Ladle Preheater 1-7 Tundish Dryer 1-2 Tundish Preheater 1-2 SEN Preheater 1-3 Electric Arc Furnace Fugitives Ladle Metallurgy Fugitives Scrap Substitute Fugitives Raw Material Handling Internal Baghouse Bin Vents	BV-111-122 INT Baghouse BV-123-BV-124 BV-125-BV-126 BV-318 BV-319 BV-400-BV-427 Canopy Hood	Bin Vents Baghouse Canopy Hood	NO_x	28.95	109.74	Gas	O (BACT)	12.88	27.64	135	600,000	16.67	582.00	156.48	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	70.72	227.65	Gas	O (BACT)	31.47								
						SO_2	6.82	20.12	Gas	O (BACT)	3.04								
						VOC	4.76	12.80	Gas	O (BACT)	2.12								
						PM	6.69	20.45	Solid	O (BACT)	2.98								
						PM_{10}	3.61	11.05	Solid/Gas	O (BACT)	1.61								
						$PM_{2.5}$	2.11	6.45	Solid/Gas	O (BACT)	0.94								
						Lead	1.3E-02	3.7E-02	Solid	EE	5.6E-03								
						Total HAPs	0.34	1.47	Solid/Gas	EE	0.15								
						CO_2	26,945	118,021	Gas	O (BACT)	11,990								
						CH_4	0.39	1.72	Gas	O (BACT)	0.17								
						N_2O	3.9E-02	0.17	Gas	O (BACT)	1.7E-02								
						CO_2e	26,967	118,115	Gas	O (BACT)	11,999								
VF1UNLD	Volume	EAFVF1	EAF Baghouse 1 Dust Silo Baghouse Dust	N/A	N/A	NO_x	--	--	--	--	--	N/A	N/A	N/A	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	5.3E-03	2.3E-02	Solid	EE	N/A								
						PM_{10}	1.9E-03	8.5E-03	Solid/Gas	EE	N/A								
						$PM_{2.5}$	5.5E-04	2.4E-03	Solid/Gas	EE	N/A								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
VF2UNLD	Volume	EAFVF2	EAF Baghouse 2 Dust Silo Baghouse Dust	N/A	N/A	NO_x	--	--	--	--	--	N/A	N/A	N/A	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	5.3E-03	2.3E-02	Solid	EE	N/A								
						PM_{10}	1.9E-03	8.5E-03	Solid	EE	N/A								
						$PM_{2.5}$	5.5E-04	2.4E-03	Solid	EE	N/A								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								

NSWV
Attachment J - Emission Points Data Summary Sheet

Emission Point ID	Emission Point Type[1]	Emission Units Vented Through this Point		Air Pollution Control Device		Pollutant Chemical Name/CAS[3] (See Emission Calculations for Speciated HAP)	Maximum Controlled Emissions[5]		Emission Form or Phase (At Exit Conditions)	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^3)	Inner Diameter (ft)	Exit Gas Temp (°F)	Exit Gas Volumetric Flow[8] (ACFM)	Exit Gas Velocity (fps)	Elevation: Ground Level (ft)	Stack Height above Ground Level[9] (ft)	UTM Northing (km)	UTM Easting (km)
		Emission Unit ID	Emission Unit Description	Control Device ID	Control Device Type		lb/hr	tpy											
EAFVF1	Point	EAFVF1	EAF Baghouse 1 Dust Silo	BV	Bin Vent	NO_X	--	--	--	--	--	0.47	Ambient	500.00	48.00	582	87.50	4,278	398,427
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	3.7E-02	0.16	Solid	EE	19.81								
						PM_{10}	3.7E-02	0.16	Solid	EE	19.81								
						$PM_{2.5}$	3.7E-02	0.16	Solid	EE	19.81								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
EAFVF2	Point	EAFVF2	EAF Baghouse 2 Dust Silo	BV	Bin Vent	NO_X	--	--	--	--	--	0.47	Ambient	500.00	48.00	582	87.50	4,278	398,417
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	3.7E-02	0.16	Solid	EE	19.81								
						PM_{10}	3.7E-02	0.16	Solid	EE	19.81								
						$PM_{2.5}$	3.7E-02	0.16	Solid	EE	19.81								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
VTDST1	Upward Vertical Stack	VTD1	Vacuum Tank 1	VTG1-Flare	Flare	NO_X	0.84	3.68	Gas	EE	190.79	0.62	1,832	1,176	66	582	174	4278.223	398.363
						CO	9.82	19.39	Gas	O (BACT)	2,229								
						SO_2	7.3E-03	3.2E-02	Gas	EE	1.65								
						VOC	1.73	7.58	Gas	EE	392.80								
						PM	7.5E-02	0.33	Solid	O (BACT)	16.97								
						PM_{10}	7.5E-02	0.33	Solid	O (BACT)	16.97								
						$PM_{2.5}$	7.5E-02	0.33	Solid	O (BACT)	16.97								
						Lead	6.1E-06	2.7E-05	Solid	EE	1.4E-03								
						Total HAPs	2.3E-02	0.10	Solid/Gas	EE	5.19								
						CO_2	2,123	10,353	Gas	EE	482,022								
						CH_4	2.7E-02	0.12	Gas	EE	6.19								
						N_2O	2.7E-03	1.2E-02	Gas	EE	0.62								
						CO_2e	2,125	10,360	Gas	EE	482,359								
VTDST2	Upward Vertical Stack	VTD2	Vacuum Tank 2	VTG2-Flare	Flare	NO_X	0.84	3.68	Gas	EE	190.79	0.62	1,832	1,176	66	582	174	4278.185	398.271
						CO	9.82	19.39	Gas	O (BACT)	2,229								
						SO_2	7.3E-03	3.2E-02	Gas	EE	1.65								
						VOC	1.73	7.58	Gas	EE	392.80								
						PM	7.5E-02	0.33	Solid	O (BACT)	16.97								
						PM_{10}	7.5E-02	0.33	Solid	O (BACT)	16.97								
						$PM_{2.5}$	7.5E-02	0.33	Solid	O (BACT)	16.97								
						Lead	6.1E-06	2.7E-05	Solid	EE	1.4E-03								
						Total HAPs	2.3E-02	0.10	Solid/Gas	EE	5.19								
						CO_2	2,123	10,353	Gas	EE	482,022								
						CH_4	2.7E-02	0.12	Gas	EE	6.19								
						N_2O	2.7E-03	1.2E-02	Gas	EE	0.62								
						CO_2e	2,125	10,360	Gas	EE	482,359								
TFST-1	Upward Vertical Stack	TF1	Hot Mill Tunnel Furnace 1	N/A	N/A	NO_X	17.50	76.65	Gas	O (BACT)	31.11	8.17	1,076	150,195	47.79	582	196.83	4278.318	398.334
						CO	20.59	90.18	Gas	O (BACT)	36.60								
						SO_2	0.15	0.64	Gas	O (BACT)	0.26								
						VOC	1.35	5.90	Gas	O (BACT)	2.40								
						PM	0.47	2.04	Solid	O (BACT)	0.83								
						PM_{10}	0.13	0.56	Solid	O (BACT)	0.23								
						$PM_{2.5}$	0.11	0.46	Solid	O (BACT)	0.19								
						Lead	1.2E-04	5.4E-04	Solid	EE	2.2E-04								
						Total HAPs	0.46	2.03	Solid/Gas	EE	0.82								
						CO_2	29,244	128,090	Gas	O (BACT)	51,982								
						CH_4	0.55	2.41	Gas	O (BACT)	0.98								
						N_2O	5.5E-02	0.24	Gas	O (BACT)	0.10								
						CO_2e	29,274	128,222	Gas	O (BACT)	52,036								

NSWV
Attachment J - Emission Points Data Summary Sheet

Emission Point ID	Emission Point Type[1]	Emission Units Vented Through this Point: Emission Unit ID	Emission Units Vented Through this Point: Emission Unit Description	Air Pollution Control Device: Control Device ID	Air Pollution Control Device: Control Device Type	Pollutant Chemical Name/CAS[3] (See Emission Calculations for Speciated HAP)	Maximum Controlled Emissions[5]: lb/hr	Maximum Controlled Emissions[5]: tpy	Emission Form or Phase (At Exit Conditions)	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^3)	Inner Diameter (ft)	Exit Gas Temp (°F)	Exit Gas Volumetric Flow[8] (ACFM)	Exit Gas Velocity (fps)	Elevation: Ground Level (ft)	Stack Height above Ground Level[9] (ft)	UTM Northing (km)	UTM Easting (km)
HMMVA through HMMVL	Upward Vertical Stack	HM WASH2 WASH3 WASH4 WASH5 T024 T025 T026 T027 T028 T029 T030	Hot Mill Matrix Vents Hot Mill Parts Washer 01 Hot Mill Parts Washer 02 Hot Mill Parts Washer 03 Hot Mill Parts Washer 04 Hydraulic Bulk Hydraulic (Morgoil) Bulk Grease Bulk RM/FM Grease Bulk Coilers Grease Bulk RM/FM Grease Bulk Coilers Grease Bulk Roll Shop	N/A	N/A	NO_X	--	--	--	--	--	22.57	150	340,000	14	582	103	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	9.31	32.65	Gas	O (BACT)	7.31								
						PM	7.57	20.47	Solid	O (BACT)	5.94								
						PM_{10}	7.57	20.47	Solid/Gas	O (BACT)	5.94								
						$PM_{2.5}$	2.72	7.37	Solid/Gas	O (BACT)	2.14								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
PLST1	Upward Vertical Stack	PKL-1	Pickling Line #1	PKL1-SCRB	Scrubber	NO_X	--	--	--		--	2.70	343	24,983	72.54	582	147.64	4.279	398.201
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	1.43	6.28	Solid	O (BACT)	15.31								
						PM_{10}	1.43	6.28	Solid/Gas	O (BACT)	15.31								
						$PM_{2.5}$	1.43	6.28	Solid/Gas	O (BACT)	15.31								
						Lead	--	--	--	--	--								
						Total HAPs	0.53	2.32	Solid/Gas	EE	5.66								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
PKLSB	Upward Vertical Stack	PKLSB	Pickle Line Scale Breaker	PKLSB-CYCL	Cyclone	NO_X	--	--	--		--	4.60	Ambient	51,683	51.83	582	114.83	4.279	398.237
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	1.32	5.79	Solid	O (BACT)	6.83								
						PM_{10}	1.32	5.79	Solid/Gas	O (BACT)	6.83								
						$PM_{2.5}$	1.32	5.79	Solid/Gas	O (BACT)	6.83								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
TCMST	Upward Vertical Stack	TCM	Tandem Cold Mill	TCM-ME	Mist Eliminator	NO_X	--	--	--	--	--	8.20	115	275,175	86.80	582	213.25	4.279	398.148
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	8.82	38.63	Gas	O (BACT)	8.56								
						PM	13.23	57.94	Solid	O (BACT)	12.83								
						PM_{10}	13.23	57.94	Solid/Gas	O (BACT)	12.83								
						$PM_{2.5}$	13.23	57.94	Solid/Gas	O (BACT)	12.83								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								

NSWV
Attachment J - Emission Points Data Summary Sheet

Emission Point ID	Emission Point Type[1]	Emission Units Vented Through this Point: Emission Unit ID	Emission Units Vented Through this Point: Emission Unit Description	Air Pollution Control Device: Control Device ID	Air Pollution Control Device: Control Device Type	Pollutant Chemical Name/CAS[3] (See Emission Calculations for Speciated HAP)	Maximum Controlled Emissions[5]: lb/hr	Maximum Controlled Emissions[5]: tpy	Emission Form or Phase (At Exit Conditions)	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^3)	Inner Diameter (ft)	Exit Gas Temp (°F)	Exit Gas Volumetric Flow[8] (ACFM)	Exit Gas Velocity (fps)	Elevation: Ground Level (ft)	Stack Height above Ground Level[9] (ft)	UTM Northing (km)	UTM Easting (km)
STMST	Upward Vertical Stack	STM	Standalone Temper Mill	STM-ME	Mist Eliminator	NO_X	--	--	--	--	--	3.28	90	26,320	51.89	582	114.83	4,279	398,258
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	0.88	3.86	Gas	O (BACT)	8.94								
						PM	0.44	1.93	Solid	O (BACT)	4.47								
						PM_{10}	0.44	1.93	Solid/Gas	O (BACT)	4.47								
						$PM_{2.5}$	0.44	1.93	Solid/Gas	O (BACT)	4.47								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
CGL1MVA through CGL1MVE	Upward Vertical Stack	SPM1 CGL1 CGL1 CGLEO1 WASH6 WASH7	Skin Pass Mill #1 Galvanizing Line 1 Passivation Roll Coater Galvanizing Line 1 Stenciling Galvanizing Line 1 Electrostatic Oiler Cold Mill Parts Washer 01 Cold Mill Parts Washer 02	SPM1-ME	Mist Eliminator (Only for Skin Pass Mill #1)	NO_X	--	--	--		--	19.54	135	330,000	18.33	582	221.28	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	2.93	8.75	Gas	O (BACT)	2.37								
						PM	0.55	2.42	Solid	O (BACT)	0.45								
						PM_{10}	0.55	2.42	Solid/Gas	O (BACT)	0.45								
						$PM_{2.5}$	0.53	2.33	Solid/Gas	O (BACT)	0.43								
						Lead	--	--	--	--	--								
						Total HAPs	0.58	2.53	Solid/Gas	EE	0.47								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
CGL2MVA through CGL2MVE	Upward Vertical Stack	SPM2 CGL2 CGL2 CGLEO2	Skin Pass Mill #2 Galvanizing Line 2 Passivation Roll Coater Galvanizing Line 2 Stenciling Galvanizing Line 2 Electrostatic Oiler	SPM2-ME	Mist Eliminator (Only for Skin Pass Mill #2)	NO_X	--	--	--		--	19.54	135	337,500	18.75	582	172.08	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	1.84	8.04	Gas	O (BACT)	1.45								
						PM	0.55	2.42	Solid	O (BACT)	0.44								
						PM_{10}	0.55	2.42	Solid/Gas	O (BACT)	0.44								
						$PM_{2.5}$	0.53	2.33	Solid/Gas	O (BACT)	0.42								
						Lead	--	--	--	--	--								
						Total HAPs	0.58	2.53	Solid/Gas	EE	0.46								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
CGL1_ST1	Upward Vertical Stack	CGI1	CGL1 - Cleaning Section	CGL1-ME	Mist Eliminator	NO_X	--	--	--		--	2.00	190	16,862	89.46	582	152.00	4,279	398,278
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	0.26	1.16	Solid	O (BACT)	4.19								
						PM_{10}	0.26	1.16	Solid/Gas	O (BACT)	4.19								
						$PM_{2.5}$	0.26	1.16	Solid/Gas	O (BACT)	4.19								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
CGL2_ST1	Upward Vertical Stack	CGL2	CGL2 - Cleaning Section	CGL2-ME	Mist Eliminator	NO_X	--	--	--		--	2.00	190	16,862	89.46	582	95.00	4,279	398,329
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	0.26	1.16	Solid	O (BACT)	4.19								
						PM_{10}	0.26	1.16	Solid/Gas	O (BACT)	4.19								
						$PM_{2.5}$	0.26	1.16	Solid/Gas	O (BACT)	4.19								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								

NSWV
Attachment J - Emission Points Data Summary Sheet

Emission Point ID	Emission Point Type[1]	Emission Units Vented Through this Point: Emission Unit ID	Emission Units Vented Through this Point: Emission Unit Description	Air Pollution Control Device: Control Device ID	Air Pollution Control Device: Control Device Type	Pollutant Chemical Name/CAS[3] (See Emission Calculations for Speciated HAP)	Maximum Controlled Emissions[5]: lb/hr	Maximum Controlled Emissions[5]: tpy	Emission Form or Phase (At Exit Conditions)	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^3)	Inner Diameter (ft)	Exit Gas Temp (°F)	Exit Gas Volumetric Flow[8] (ACFM)	Exit Gas Velocity (fps)	Elevation: Ground Level (ft)	Stack Height above Ground Level[9] (ft)	UTM Northing (km)	UTM Easting (km)
GALVFN1	Upward Vertical Stack	GALVFN1	Galvanizing Furnace #1	N/A	N/A	NO_X	5.13	22.47	Gas	O (BACT)	31.12	5.00	662	44,025	37.37	582	164.60	4,279	398,292
						CO	6.04	26.44	Gas	O (BACT)	36.61								
						SO_2	4.3E-02	0.19	Gas	O (BACT)	0.26								
						VOC	0.40	1.73	Gas	O (BACT)	2.40								
						PM	0.14	0.60	Solid	O (BACT)	0.83								
						PM_{10}	3.7E-02	0.16	Solid/Gas	O (BACT)	0.23								
						$PM_{2.5}$	3.1E-02	0.14	Solid/Gas	O (BACT)	0.19								
						Lead	3.6E-05	1.6E-04	Solid	EE	2.2E-04								
						Total HAPs	0.14	0.59	Solid/Gas	EE	0.82								
						CO_2	8,574	37,556	Gas	O (BACT)	51,997								
						CH_4	0.16	0.71	Gas	O (BACT)	0.98								
						N_2O	1.6E-02	7.1E-02	Gas	O (BACT)	0.10								
						CO_2e	8,583	37,595	Gas	O (BACT)	52,050								
GALVFN2	Upward Vertical Stack	GALVFN2	Galvanizing Furnace #2	SCR	Selective Catalytic Reduction	NO_X	5.59	24.47	Gas	O (BACT)	19.90	5.17	662	74,926	59.56	582	150.13	4,279	398,350
						CO	6.57	28.78	Gas	O (BACT)	23.42								
						SO_2	4.7E-02	0.21	Gas	O (BACT)	0.17								
						VOC	0.43	1.88	Gas	O (BACT)	1.53								
						PM	0.15	0.65	Solid	O (BACT)	0.53								
						PM_{10}	4.1E-02	0.18	Solid/Gas	O (BACT)	0.14								
						$PM_{2.5}$	3.4E-02	0.15	Solid/Gas	O (BACT)	0.12								
						Lead	3.9E-05	1.7E-04	Solid	EE	1.4E-04								
						Total HAPs	0.15	0.65	Solid/Gas	EE	0.53								
						CO_2	9,335	40,886	Gas	O (BACT)	33,261								
						CH_4	0.18	0.77	Gas	O (BACT)	0.63								
						N_2O	1.8E-02	7.7E-02	Gas	O (BACT)	6.3E-02								
						CO_2e	9,344	40,928	Gas	O (BACT)	33,296								
GALVMVA through GALVMVF	Upward Vertical Stack	BOXANN1-12	Box Annealing Furnace 1-12	N/A	N/A	NO_X	3.00	13.14	Gas	O (BACT)	N/A	17.48	105	N/A	10.00	582	106.08	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	4.94	21.64	Gas	O (BACT)	N/A								
						SO_2	3.5E-02	0.15	Gas	O (BACT)	N/A								
						VOC	0.32	1.42	Gas	O (BACT)	N/A								
						PM	0.11	0.49	Solid	O (BACT)	N/A								
						PM_{10}	3.1E-02	0.13	Solid/Gas	O (BACT)	N/A								
						$PM_{2.5}$	2.5E-02	0.11	Solid/Gas	O (BACT)	N/A								
						Lead	2.9E-05	1.3E-04	Solid	EE	N/A								
						Total HAPs	0.11	0.49	Solid/Gas	EE	N/A								
						CO_2	7,019	30,742	Gas	O (BACT)	N/A								
						CH_4	0.13	0.58	Gas	O (BACT)	N/A								
						N_2O	1.3E-02	5.8E-02	Gas	O (BACT)	N/A								
						CO_2e	7,026	30,773	Gas	O (BACT)	N/A								
MAUWIPA through MAUWIPE	Volume	AMU1-8	NG-Fired Makeup Air Unit, WIP Coil Storage Building	N/A	N/A	NO_X	3.20	14.02	Gas	O (BACT)	N/A	N/A	N/A	N/A	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	2.64	11.54	Gas	O (BACT)	N/A								
						SO_2	1.9E-02	8.2E-02	Gas	O (BACT)	N/A								
						VOC	0.17	0.76	Gas	O (BACT)	N/A								
						PM	6.0E-02	0.26	Solid	O (BACT)	N/A								
						PM_{10}	1.6E-02	7.1E-02	Solid/Gas	O (BACT)	N/A								
						$PM_{2.5}$	1.3E-02	5.9E-02	Solid/Gas	O (BACT)	N/A								
						Lead	1.6E-05	6.9E-05	Solid	EE	N/A								
						Total HAPs	5.9E-02	0.26	Solid/Gas	EE	N/A								
						CO_2	3,743	16,396	Gas	O (BACT)	N/A								
						CH_4	7.1E-02	0.31	Gas	O (BACT)	N/A								
						N_2O	7.1E-03	3.1E-02	Gas	O (BACT)	N/A								
						CO_2e	3,747	16,412	Gas	O (BACT)	N/A								
MAUFGA through MAUFGC	Volume	AMU-9 AMU-10 AMU-11 AMU-12 AMU-13 AMU-14 AMU-15 AMU-16 WASH9	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building Crane and Mobile Maintenance Parts Washer	N/A	N/A	NO_X	3.20	14.02	Gas	O (BACT)	N/A	N/A	N/A	N/A	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	2.64	11.54	Gas	O (BACT)	N/A								
						SO_2	1.9E-02	8.2E-02	Gas	O (BACT)	N/A								
						VOC	0.72	1.11	Gas	O (BACT)	N/A								
						PM	6.0E-02	0.26	Solid	O (BACT)	N/A								
						PM_{10}	1.6E-02	7.1E-02	Solid/Gas	O (BACT)	N/A								
						$PM_{2.5}$	1.3E-02	5.9E-02	Solid/Gas	O (BACT)	N/A								
						Lead	1.6E-05	6.9E-05	Solid	EE	N/A								
						Total HAPs	5.9E-02	0.26	Solid/Gas	EE	N/A								
						CO_2	3,743	16,396	Gas	O (BACT)	N/A								
						CH_4	7.1E-02	0.31	Gas	O (BACT)	N/A								
						N_2O	7.1E-03	3.1E-02	Gas	O (BACT)	N/A								
						CO_2e	3,747	16,412	Gas	O (BACT)	N/A								

NSWV
Attachment J - Emission Points Data Summary Sheet

Emission Point ID	Emission Point Type[1]	Emission Units Vented Through this Point		Air Pollution Control Device		Pollutant Chemical Name/CAS[3] (See Emission Calculations for Speciated HAP)	Maximum Controlled Emissions[2]		Emission Form or Phase (At Exit Conditions)	Est. Method Used[4]	Emission Concentration[5] (ppmv or mg/m³)	Inner Diameter (ft)	Exit Gas Temp (°F)	Exit Gas Volumetric Flow[6] (ACFM)	Exit Gas Velocity (fps)	Elevation: Ground Level (ft)	Stack Height above Ground Level[7] (ft)	UTM Northing (km)	UTM Easting (km)
		Emission Unit ID	Emission Unit Description	Control Device ID	Control Device Type		lb/hr	tpy											
MAUPLA through MAUPLC	Volume	AMU-17-18 PLSTEO	NG-Fired Makeup Air Unit, PLTCM Bay Pickle Line Electrostatic Oiler	N/A	N/A	NO_x	0.80	3.50	Gas	O (BACT)	N/A	N/A	N/A	N/A	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	0.66	2.89	Gas	O (BACT)	N/A								
						SO_2	4.7E-03	2.1E-02	Gas	O (BACT)	N/A								
						VOC	5.0E-02	0.22	Gas	O (BACT)	N/A								
						PM	5.7E-02	0.25	Solid	O (BACT)	N/A								
						PM_{10}	4.6E-02	0.20	Solid/Gas	O (BACT)	N/A								
						$PM_{2.5}$	2.5E-02	0.11	Solid/Gas	O (BACT)	N/A								
						Lead	3.9E-06	1.7E-05	Solid	EE	N/A								
						Total HAPs	1.3E-02	5.5E-02	Solid/Gas	EE	N/A								
						CO_2	935.82	4,099	Gas	O (BACT)	N/A								
						CH_4	1.8E-02	7.7E-02	Gas	O (BACT)	N/A								
						N_2O	1.8E-03	7.7E-03	Gas	O (BACT)	N/A								
						CO_2e	936.78	4,103	Gas	O (BACT)	N/A								
CGL1-ST1	Upward Vertical Stack	GALVBOILER1	Galv Line Boiler #1	N/A	N/A	NO_x	0.34	1.47	Gas	O (BACT)	5.30	2.00	190	16.862	89.46	582	152.00	4.279	398.278
						CO	0.55	2.42	Gas	O (BACT)	6.74								
						SO_2	3.9E-03	1.7E-02	Gas	O (BACT)	6.2E-02								
						VOC	3.6E-02	0.16	Gas	O (BACT)	0.57								
						PM	1.2E-02	5.5E-02	Solid	O (BACT)	0.20								
						PM_{10}	3.4E-03	1.5E-02	Solid/Gas	O (BACT)	5.4E-02								
						$PM_{2.5}$	2.8E-03	1.2E-02	Solid/Gas	O (BACT)	4.5E-02								
						Lead	3.3E-06	1.4E-05	Solid	EE	5.2E-05								
						Total HAPs	1.2E-02	5.4E-02	Solid/Gas	EE	0.20								
						CO_2	783.75	3,433	Gas	O (BACT)	12,409								
						CH_4	1.5E-02	6.5E-02	Gas	O (BACT)	0.23								
						N_2O	1.5E-03	6.5E-03	Gas	O (BACT)	2.3E-02								
						CO_2e	784.55	3,436	Gas	O (BACT)	12,422								
CGL2-ST1	Upward Vertical Stack	GALVBOILER2	Galv Line Boiler #2	N/A	N/A	NO_x	0.34	1.47	Gas	O (BACT)	5.30	2.00	190	16.862	89.46	582	95.00	4.279	398.329
						CO	0.55	2.42	Gas	O (BACT)	6.74								
						SO_2	3.9E-03	1.7E-02	Gas	O (BACT)	6.2E-02								
						VOC	3.6E-02	0.16	Gas	O (BACT)	0.57								
						PM	1.2E-02	5.5E-02	Solid	O (BACT)	0.20								
						PM_{10}	3.4E-03	1.5E-02	Solid/Gas	O (BACT)	5.4E-02								
						$PM_{2.5}$	2.8E-03	1.2E-02	Solid/Gas	O (BACT)	4.5E-02								
						Lead	3.3E-06	1.4E-05	Solid	EE	5.2E-05								
						Total HAPs	1.2E-02	5.4E-02	Solid/Gas	EE	0.20								
						CO_2	783.75	3,433	Gas	O (BACT)	12,409								
						CH_4	1.5E-02	6.5E-02	Gas	O (BACT)	0.23								
						N_2O	1.5E-03	6.5E-03	Gas	O (BACT)	2.3E-02								
						CO_2e	784.55	3,436	Gas	O (BACT)	12,422								
PLTCMBLR	Upward Vertical Stack	PLTCMBOILER1 PLTCMBOILER2	PLTCM Boiler #1 PLTCM Boiler #2	N/A	N/A	NO_x	7.28	31.90	Gas	O (BACT)	54.25	3.75	307	35.833	54.07	582	70.00	4.279	398.222
						CO	11.99	52.53	Gas	O (BACT)	89.36								
						SO_2	8.6E-02	0.38	Gas	O (BACT)	0.64								
						VOC	0.79	3.44	Gas	O (BACT)	5.85								
						PM	0.27	1.19	Solid	O (BACT)	2.02								
						PM_{10}	7.4E-02	0.33	Solid/Gas	O (BACT)	0.55								
						$PM_{2.5}$	6.1E-02	0.27	Solid/Gas	O (BACT)	0.46								
						Lead	7.1E-05	3.1E-04	Solid	EE	5.3E-04								
						Total HAPs	0.27	1.18	Solid/Gas	EE	2.01								
						CO_2	17,037	74,620	Gas	O (BACT)	126,931								
						CH_4	0.32	1.41	Gas	O (BACT)	2.39								
						N_2O	3.2E-02	0.14	Gas	O (BACT)	0.24								
						CO_2e	17,054	74,697	Gas	O (BACT)	127,062								
SUBSUNL	Volume	RAW-FEED1	Crane Unloading to Dock Scrap Substitute Bin	BV-0011-0016	Bin Vents	NO_x	--	--	--		--	N/A	N/A	N/A	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	0.34	0.93	Solid	O (BACT)	N/A								
						PM_{10}	0.13	0.34	Solid/Gas	O (BACT)	N/A								
						$PM_{2.5}$	3.5E-02	0.10	Solid/Gas	O (BACT)	N/A								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								

NSWV
Attachment J - Emission Points Data Summary Sheet

Emission Point ID	Emission Point Type[1]	Emission Units Vented Through this Point: Emission Unit ID	Emission Units Vented Through this Point: Emission Unit Description	Air Pollution Control Device: Control Device ID	Air Pollution Control Device: Control Device Type	Pollutant Chemical Name/CAS[3] (See Emission Calculations for Speciated HAP)	Maximum Controlled Emissions[2]: lb/hr	Maximum Controlled Emissions[2]: tpy	Emission Form or Phase (At Exit Conditions)	Est. Method Used[4]	Emission Concentration[5] (ppmv or mg/m³)	Inner Diameter (ft)	Exit Gas Temp (°F)	Exit Gas Volumetric Flow[6] (ACFM)	Exit Gas Velocity (fps)	Elevation: Ground Level (ft)	Stack Height above Ground Level[7] (ft)	UTM Northing (km)	UTM Easting (km)
BULKMH	Volume	RAW-FEED3 RAW-FEED4 RAW-FEED5 RAW-FEED6 RAW-FEED7 RAW-FEED8 EAF-FEED1 EAF-FEED2 EAF-FEED3 EAF-FEED4 EAF-FEED5 EAF-FEED6 LMF-FEED1 LMF-FEED2 LMF-FEED3 LMF-FEED4 LMF-FEED5	Unnamed feed into UDH01 unloading hopper Unnamed feed into UDH02 unloading hopper Unnamed feed into UDH03 unloading hopper Unnamed feed into UDH04 unloading hopper Unnamed feed into UDH05 unloading hopper Unnamed feed into UDH06 unloading hopper UDH01 unloading hopper to RBC10 reversible belt conveyor UDH02 unloading hopper to RBC10 reversible belt conveyor UDH03 unloading hopper to RBC10 reversible belt conveyor RBC10 reversible belt conveyor to EBC11 elevating belt conveyor EBC11 elevating belt conveyor to WBC11 weighing belt conveyor WBC11 weighing belt conveyor to RSC11 reversible shuttle belt conveyor UDH04 unloading hopper to RBC20 reversible belt conveyor UDH05 unloading hopper to RBC20 reversible belt conveyor UDH06 unloading hopper to RBC20 reversible belt conveyor RBC20 reversible belt conveyor to EBC21 elevating belt conveyor EBC21 elevating belt conveyor to WBC21 weighing belt conveyor	EXT Baghouse	Baghouse	NO_x	--	--	--		--	N/A	N/A	N/A	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	0.22	0.12	Solid	O (BACT)	N/A								
						PM_{10}	8.0E-02	4.4E-02	Solid/Gas	O (BACT)	N/A								
						$PM_{2.5}$	2.3E-02	1.2E-02	Solid/Gas	O (BACT)	N/A								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
SUBSILOF	Volume	RAW-FEED2 SUBS-FEED1 SUBS-FEED2	Dock Scrap Substitute Bin to NBC01 normal belt conveyor NBC01 normal belt conveyor to SBM01-SBM04 silos SBM01-SBM04 silos to NBC02 normal belt conveyor	BV-303 BV-301-BV-304 BV-305-BV-308	Bin Vents	NO_x	--	--	--	--	--	N/A	N/A	N/A	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	0.48	1.53	Solid	O (BACT)	N/A								
						PM_{10}	0.18	0.56	Solid/Gas	O (BACT)	N/A								
						$PM_{2.5}$	5.0E-02	0.16	Solid/Gas	O (BACT)	N/A								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
SUBSFUG	Area	SUBS-FEED3 SUBS-FEED4 SUBS-FEED5	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment SBN01-SBN02 bin extraction equipment to WBC02 weighing belt conveyor SBN03-SBN04 bin extraction equipment to WBC01 weighing belt conveyor	BV-309-BV-313 BV-314-BV-315 BV-316-BV-317	Bin Vents	NO_x	--	--	--	--	--	N/A	N/A	N/A	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	0.13	0.56	Solid	O (BACT)	N/A								
						PM_{10}	4.7E-02	0.20	Solid/Gas	O (BACT)	N/A								
						$PM_{2.5}$	1.3E-02	5.8E-02	Solid/Gas	O (BACT)	N/A								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
EXBHUNLD	Volume	EXBHUNLD	Raw Material Handling External Baghouse Dust	N/A	N/A	NO_x	--	--	--	--	--	N/A	N/A	N/A	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	1.6E-05	7.0E-05	Solid	O (BACT)	N/A								
						PM_{10}	5.8E-06	2.6E-05	Solid/Gas	O (BACT)	N/A								
						$PM_{2.5}$	1.7E-06	7.2E-06	Solid/Gas	O (BACT)	N/A								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
SUBSDCK1-6	Point	BV-0011-0016	Crane Unloading Transfers to Dock Scrap Substitute Bin	N/A	N/A	NO_x	--	--	--	--	--	1.00	Ambient	28680	594	528	3625	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	1.4E-02	6.3E-02	Solid	O (BACT)	13.73								
						PM_{10}	1.4E-02	6.3E-02	Solid/Gas	O (BACT)	13.73								
						$PM_{2.5}$	7.2E-03	3.2E-02	Solid/Gas	O (BACT)	6.87								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								

NSWV
Attachment J - Emission Points Data Summary Sheet

Emission Point ID	Emission Point Type[1]	Emission Units Vented Through this Point: Emission Unit ID	Emission Units Vented Through this Point: Emission Unit Description	Air Pollution Control Device: Control Device ID	Air Pollution Control Device: Control Device Type	Pollutant Chemical Name/CAS[3] (See Emission Calculations for Speciated HAP)	Maximum Controlled Emissions[5]: lb/hr	Maximum Controlled Emissions[5]: tpy	Emission Form or Phase (At Exit Conditions)	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^3)	Inner Diameter (ft)	Exit Gas Temp (°F)	Exit Gas Volumetric Flow[8] (ACFM)	Exit Gas Velocity (fps)	Elevation: Ground Level (ft)	Stack Height above Ground Level[9] (ft)	UTM Northing (km)	UTM Easting (km)
BV-003	Upward Vertical Stack	BV-003	Dock Scrap Substitute Bin to NBC01 normal belt conveyor	N/A	N/A	NO_X	--	--	--	--	--	2.00	Ambient	1,000.00	5	582	89	4277.748	398.265
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	8.6E-03	3.8E-02	Solid	O (BACT)	2.29								
						PM_{10}	8.6E-03	3.8E-02	Solid/Gas	O (BACT)	2.29								
						$PM_{2.5}$	4.3E-03	1.9E-02	Solid/Gas	O (BACT)	1.14								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
SUBSILO1-4	Upward Vertical Stack	BV-301-BV-304	SBM01-04 silos bin vent	N/A	N/A	NO_X	--	--	--	--	--	2.00	Ambient	1,000.00	5	582	89	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	3.4E-02	0.15	Solid	O (BACT)	9.15								
						PM_{10}	3.4E-02	0.15	Solid/Gas	O (BACT)	9.15								
						$PM_{2.5}$	1.7E-02	7.5E-02	Solid/Gas	O (BACT)	4.58								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
BV-305-BV-308	Upward Vertical Stack	BV-305-BV-308	SBM01-04 silos to NBC02 normal belt conveyor	N/A	N/A	NO_X	--	--	--	--	--	0.75	Ambient	1,000.00	38	582	16	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	3.4E-02	0.15	Solid	O (BACT)	9.15								
						PM_{10}	3.4E-02	0.15	Solid/Gas	O (BACT)	9.15								
						$PM_{2.5}$	1.7E-02	7.5E-02	Solid/Gas	O (BACT)	4.58								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
BV-309-BV-313	Upward Vertical Stack	BV-309-BV-313	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment	N/A	N/A	NO_X	--	--	--	--	--	0.75	Ambient	1,000.00	38	582	76	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	4.3E-02	0.19	Solid	O (BACT)	11.44								
						PM_{10}	4.3E-02	0.19	Solid/Gas	O (BACT)	11.44								
						$PM_{2.5}$	2.1E-02	9.4E-02	Solid/Gas	O (BACT)	5.72								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
BV-314-BV-315	Upward Vertical Stack	BV-314-BV-315	SBN01-SBN02 bin extraction equipment to WBC02 weighing belt conveyor	N/A	N/A	NO_X	--	--	--	--	--	0.75	Ambient	1,000.00	38	582	49	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	1.7E-02	7.5E-02	Solid	O (BACT)	4.58								
						PM_{10}	1.7E-02	7.5E-02	Solid/Gas	O (BACT)	4.58								
						$PM_{2.5}$	8.6E-03	3.8E-02	Solid/Gas	O (BACT)	2.29								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								

NSWV
Attachment J - Emission Points Data Summary Sheet

Emission Point ID	Emission Point Type[1]	Emission Units Vented Through this Point: Emission Unit ID	Emission Units Vented Through this Point: Emission Unit Description	Air Pollution Control Device: Control Device ID	Air Pollution Control Device: Control Device Type	Pollutant Chemical Name/CAS[3] (See Emission Calculations for Speciated HAP)	Maximum Controlled Emissions[5]: lb/hr	Maximum Controlled Emissions[5]: tpy	Emission Form or Phase (At Exit Conditions)	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m³)	Inner Diameter (ft)	Exit Gas Temp (°F)	Exit Gas Volumetric Flow[8] (ACFM)	Exit Gas Velocity (fps)	Elevation: Ground Level (ft)	Stack Height above Ground Level[9] (ft)	UTM Northing (km)	UTM Easting (km)
BV-316-BV-317	Upward Vertical Stack	BV-316-BV-317	SBN03-SBN04 bin extraction equipment to WBC01 weighing belt conveyor	N/A	N/A	NO_X	--	--	--	--	--	0.75	Ambient	1,000.00	38	582	49	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	1.7E-02	7.5E-02	Solid	O (BACT)	4.58								
						PM_{10}	1.7E-02	7.5E-02	Solid/Gas	O (BACT)	4.58								
						$PM_{2.5}$	8.6E-03	3.8E-02	Solid/Gas	O (BACT)	2.29								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
SLAGPORT	Area	SLAG-BULK1 SLAG-BULK2 SLAG-BULK3 SLAG-BULK4 SLAG-BULK5 SLAG-BULK6 SLAG-BULK7 SLAG-BULK8 HSCRAP-BULK9 SLAG-BULK10 SLAG-BULK11 HSCRAP-BULK12 SLAG-BULK13 SLAG-BULK14 SLAG-BULK15 SLAG-BULK16 SLAG-BULK17 SLAG-BULK18 SLAG-BULK19 SLAG-BULK20 SLAG-BULK21 SLAG-BULK22 SLAG-BULK23 SLAG-BULK24 SLGSKP5 SLGSKP6 SLGSKP7 SLGSKP8 SLGSKP9 SLGSKP10 SLGSKP11 SLGSKP12 SLGSKP13 SLGSKP14	Tractor to SP-JP-H1 Hopper SP-JP-H1 Hopper to SP-JP-VGF1 Vibrating Grizzly Feeder SP-JP-VGF1 Vibrating Grizzly Feeder to SP-JP-CR1 Crusher SP-JP-CR1 Crusher to SP-JP-PF1 Vibrating Pan Feeder SP-JP-PF1 Vibrating Pan Feeder to SP-JP-CV1 Conveyor SP-JP-VGF1 Vibrating Grizzly Feeder to SP-JP-CV1 Conveyor SP-JP-CV1 Conveyor to SP-CV2 Portable Transfer Conveyor SP-CV2 Portable Transfer Conveyor to SP-OBM1 Magnet SP-OBM1 Magnet to Stockpile SP-CV2 Portable Transfer Conveyor to SP-CV3 Portable Transfer Conveyor SP-CV3 Portable Transfer Conveyor to MAG HP MAG HP to Stockpile SP-CV3 Portable Transfer Conveyor to SP-DB-SCR1 Screener Sp-DB-SCR1 Screener to SP-DB-CV5 Reversing Conveyor SP-DB-CV5 Conveyor to SP-RS2 Radial Stacker SP-RS2 Radial Stacker to Durabase SP-DB-SCR1 Screener to SP-DB-CV4 Conveyor SP-DB-CV4 Conveyor to SP-RS1 Radial Stacker SP-RS1 Radial Stacker to Duraberm SP-CP-SCR1 Screener to SP-CP-CV6 Conveyor SP-CP-CV6 Conveyor to SP-CP-CV7 Conveyor SP-CP-CV7 Conveyor to SP-CP-CR2 Cone Crusher SP-CP-CR2 Cone Crusher to SP-CP-CV8 Conveyor SP-CP-CV8 Conveyor to SP-CP-CV2 Conveyor SP-OBM1 Magnet Pile MAG HP Magnet Pile SP-RS1 Radial Stacker Pile Duraberm SP-RS2 Radial Stacker Pile Durabase SP-RS1 Radial Stacker Pile S Small Chips SP-RS2 Radial Stacker Pile 6 Big Chips Long-Term Radial Stacker Pile Duraberm Long-Term Radial Stacker Pile Durabase Long-Term Radial Stacker Pile Small Chips Long-Term Radial Stacker Pile Big Chips	WS	Wet Suppression	NO_X	--	--	--	--	--	N/A	N/A	N/A	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	2.60	3.23	Solid	O (BACT)	N/A								
						PM_{10}	0.95	1.38	Solid/Gas	O (BACT)	N/A								
						$PM_{2.5}$	0.15	0.23	Solid/Gas	O (BACT)	N/A								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
SLAGMRP	Area	SLAG-BULK25 SLAG-BULK26 SLAG-BULK27 SLAG-BULK28 SLAG-BULK29 HSCRAP-BULK30 HSCRAP-BULK31 HSCRAP-BULK32 HSCRAP-BULK33 HSCRAP-BULK34 HSCRAP-BULK35 HSCRAP-BULK36 HSCRAP-BULK37 HSCRAP-BULK38 HSCRAP-BULK39 HSCRAP-BULK40 SLAG-BULK41 SLAG-BULK42 HSCRAP-BULK43 HSCRAP-BULK44 SLAG-BULK45 SLAG-BULK46 SLAG-BULK47 SLGSKP1 SLGSKP2 SLGSKP3 SLGSKP4	Front-End Loader to GFH-MA1 Hopper GFH-MA1 Hopper to Stockpile GFH-MA1 Hopper to PF-MA1 Pan Feeder PF-MA1 Pan Feeder to CV-MA1 Conveyor CV-MA1 Conveyor to MD1 Mag Drum MD1 Mag Drum to FD-MA1 Feeder FD-MA1 Feeder to CV-MA2 Conveyor CV-MA2 Conveyor to SC-MA1 Screener SC-MA1 Screener to FD-MA3 Syntron Feeder FD-MA3 Syntron Feeder to CV-MA6 Conveyor CV-MA6 Conveyor to FE Pallet SC-MA1 Screener to CV-MA5 Conveyor CV-MA5 Conveyor to OBM-MA2 Magnet OBM-MA2 Magnet to FE Dump Bin CV-MA5 Conveyor to CV-MA-RS2 Radial Stacker CV-MA-RS2 Radial Stacker to Stockpile MD1 Mag Drum to FD-MA2 Feeder FD-MA2 Feeder to CV-MA3 Conveyor CV-MA3 Conveyor to OBM-MA1 Magnet OBM-MA1 Magnet to Stockpile CV-MA3 Conveyor to CV-MA4 Conveyor CV-MA4 Conveyor to CV-MA-RS1 Radial Stacker CV-MA-RS1 Radial Stacker to Stockpile GFH-MA Hopper Pile CV-MA-RS2 Radial Stacker Pile OBM-MA1 Magnet Pile CV-MA-RS1 Radial Stacker Pile	WS	Wet Suppression	NO_X	--	--	--	--	--	N/A	N/A	N/A	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	1.36	1.42	Solid	O (BACT)	N/A								
						PM_{10}	0.47	0.53	Solid/Gas	O (BACT)	N/A								
						$PM_{2.5}$	7.9E-02	8.8E-02	Solid/Gas	O (BACT)	N/A								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								

NSWV
Attachment J - Emission Points Data Summary Sheet

Emission Point ID	Emission Point Type[1]	Emission Units Vented Through this Point: Emission Unit ID	Emission Units Vented Through this Point: Emission Unit Description	Air Pollution Control Device: Control Device ID	Air Pollution Control Device: Control Device Type	Pollutant Chemical Name/CAS[3] (See Emission Calculations for Speciated HAP)	Maximum Controlled Emissions[5]: lb/hr	Maximum Controlled Emissions[5]: tpy	Emission Form or Phase (At Exit Conditions)	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^3)	Inner Diameter (ft)	Exit Gas Temp (°F)	Exit Gas Volumetric Flow[8] (ACFM)	Exit Gas Velocity (fps)	Elevation: Ground Level (ft)	Stack Height above Ground Level[9] (ft)	UTM Northing (km)	UTM Easting (km)
SLAGDROP	Open Pit	SLAG-BULK48 SLAG-BULK49 SLAG-BULK50 SLAG-BULK51 SLAG-BULK52	Slag loading from Stockpiles Crane unload oversize product to drop ball Drop ball crushing Crane/Front End Loader to Trucks Transfer of resized material to storage pile	WS	Wet Suppression	NO_X	--	--	--	--	--	N/A	N/A	N/A	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	3.1E-03	1.3E-02	Solid	O (BACT)	N/A								
						PM_{10}	1.3E-03	5.5E-03	Solid/Gas	O (BACT)	N/A								
						$PM_{2.5}$	2.6E-04	1.2E-03	Solid/Gas	O (BACT)	N/A								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
SCRPBRGE	Volume	SCRAP-RECEIVING1 SCRAP-RECEIVING2 SCRAP-RECEIVING3	Scrap Handling Scrap Handling Scrap Handling	N/A	N/A	NO_X	--	--	--	--	--	N/A	N/A	N/A	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	0.29	0.50	Solid	EE	N/A								
						PM_{10}	0.14	0.25	Solid/Gas	EE	N/A								
						$PM_{2.5}$	4.1E-02	7.1E-02	Solid/Gas	EE	N/A								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
SCRPHNDA through SCRPHNDC	Volume	SCRAP-HANDLING1 SCRAP-HANDLING2 SCRAP-HANDLING3	Scrap Handling Scrap Handling Scrap Handling	N/A	N/A	NO_X	--	--	--	--	--	N/A	N/A	N/A	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	2.61	4.53	Solid	EE	N/A								
						PM_{10}	1.23	2.14	Solid/Gas	EE	N/A								
						$PM_{2.5}$	0.19	0.32	Solid/Gas	EE	N/A								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
SCRPSKPA	Volume	SCRAP-PILE1	Scrap Yard Stockpiles	N/A	N/A	NO_X	--	--	--	--	--	N/A	N/A	N/A	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	0.61	2.69	Solid	EE	N/A								
						PM_{10}	0.31	1.34	Solid/Gas	EE	N/A								
						$PM_{2.5}$	4.6E-02	0.20	Solid/Gas	EE	N/A								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
SCRPSKPB	Volume	SCRAP-PILE2	Scrap Yard Stockpiles	N/A	N/A	NO_X	--	--	--	--	--	N/A	N/A	N/A	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	0.61	2.69	Solid	EE	N/A								
						PM_{10}	0.31	1.34	Solid/Gas	EE	N/A								
						$PM_{2.5}$	4.6E-02	0.20	Solid/Gas	EE	N/A								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								

NSWV
Attachment J - Emission Points Data Summary Sheet

Emission Point ID	Emission Point Type[1]	Emission Units Vented Through this Point: Emission Unit ID	Emission Units Vented Through this Point: Emission Unit Description	Air Pollution Control Device: Control Device ID	Air Pollution Control Device: Control Device Type	Pollutant Chemical Name/CAS[3] (See Emission Calculations for Speciated HAP)	Maximum Controlled Emissions[5]: lb/hr	Maximum Controlled Emissions[5]: tpy	Emission Form or Phase (At Exit Conditions)	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^3)	Inner Diameter (ft)	Exit Gas Temp (°F)	Exit Gas Volumetric Flow[8] (ACFM)	Exit Gas Velocity (fps)	Elevation: Ground Level (ft)	Stack Height above Ground Level[9] (ft)	UTM Northing (km)	UTM Easting (km)
SCRPSKPC	Volume	SCRAP-PILE3	Scrap Yard Stockpiles	N/A	N/A	NO_X	--	--	--	--	--	N/A	N/A	N/A	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	0.61	2.69	Solid	EE	N/A								
						PM_{10}	0.31	1.34	Solid/Gas	EE	N/A								
						$PM_{2.5}$	4.6E-02	0.20	Solid/Gas	EE	N/A								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
CSP1	Horizontal Stack	CSP1	Caster Spray Vents	N/A	N/A	NO_X	--	--	--	--	--	6.30	135	121,154	64.78	582	165.50	4.278	398.392
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	1.45	6.37	Gas	EE	3.20								
						PM	10.78	47.22	Solid	EE	23.76								
						PM_{10}	3.66	16.02	Solid/Gas	EE	8.06								
						$PM_{2.5}$	2.15	9.40	Solid/Gas	EE	4.73								
						Lead	--	--	--	--	--								
						Total HAPs	0.32	1.41	Solid/Gas	EE	0.71								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
CSP2	Horizontal Stack	CSP2	Caster Spray Vents	N/A	N/A	NO_X	--	--	--	--	--	7.90	135	242,308	82.39	582	159.00	4.278	398.404
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	2.91	12.73	Gas	EE	3.20								
						PM	21.56	94.44	Solid	EE	23.76								
						PM_{10}	7.32	32.05	Solid/Gas	EE	8.06								
						$PM_{2.5}$	4.29	18.81	Solid/Gas	EE	4.73								
						Lead	--	--	--	--	--								
						Total HAPs	0.11	0.47	Solid/Gas	EE	0.12								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
SCRCUTNG	Area	SCRAP-CUT	Scrap Cutting in Scrap Processing Area	N/A	N/A	NO_X	0.72	3.15	Gas	O (BACT)	N/A	N/A	N/A	N/A	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	0.59	2.60	Gas	O (BACT)	N/A								
						SO_2	4.2E-03	1.9E-02	Gas	O (BACT)	N/A								
						VOC	3.9E-02	0.17	Gas	O (BACT)	N/A								
						PM	1.3E-02	5.9E-02	Solid	O (BACT)	N/A								
						PM_{10}	3.7E-03	1.6E-02	Solid/Gas	O (BACT)	N/A								
						$PM_{2.5}$	3.0E-03	1.3E-02	Solid/Gas	O (BACT)	N/A								
						Lead	3.5E-06	1.5E-05	Solid	EE	N/A								
						Total HAPs	1.3E-02	5.8E-02	Solid/Gas	EE	N/A								
						CO_2	842.24	3,689	Gas	O (BACT)	N/A								
						CH_4	1.6E-02	7.0E-02	Gas	O (BACT)	N/A								
						N_2O	1.6E-03	7.0E-03	Gas	O (BACT)	N/A								
						CO_2e	843.10	3,693	Gas	O (BACT)	N/A								
CUTBHUNL	Volume	SCRAP-CUT	Scrap and Coil Cutting Baghouse Dust	N/A	N/A	NO_X	--	--	--		--	N/A	N/A	N/A	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	6.3E-05	2.8E-04	Solid	EE	N/A								
						PM_{10}	2.3E-05	1.0E-04	Solid/Gas	EE	N/A								
						$PM_{2.5}$	6.5E-06	2.9E-05	Solid/Gas	EE	N/A								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								

NSWV
Attachment J - Emission Points Data Summary Sheet

Emission Point ID	Emission Point Type[1]	Emission Units Vented Through this Point: Emission Unit ID	Emission Units Vented Through this Point: Emission Unit Description	Air Pollution Control Device: Control Device ID	Air Pollution Control Device: Control Device Type	Pollutant Chemical Name/CAS[3] (See Emission Calculations for Speciated HAP)	Maximum Controlled Emissions[5]: lb/hr	Maximum Controlled Emissions[5]: tpy	Emission Form or Phase (At Exit Conditions)	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^3)	Inner Diameter (ft)	Exit Gas Temp (°F)	Exit Gas Volumetric Flow[8] (ACFM)	Exit Gas Velocity (fps)	Elevation: Ground Level (ft)	Stack Height above Ground Level[9] (ft)	UTM Northing (km)	UTM Easting (km)
CUTBH	Upward Vertical Stack	SCRAP-CUT	Scrap and Coil Cutting Baghouse	CUTBH	Baghouse	NO_x	--	--	--		--	6.00	120	109,841	64.66	582	40.00	4278.038	398.555
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	0.86	3.75	Solid	O (BACT)	2.08								
						PM_{10}	0.86	3.75	Solid/Gas	O (BACT)	2.08								
						$PM_{2.5}$	0.86	3.75	Solid/Gas	O (BACT)	2.08								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
ASP	Upward Vertical Stack	ASP	Water Bath Vaporizer	N/A	N/A	NO_x	4.65	20.37	Gas	O (BACT)	777.11	1.00	400	1,597	34	597	20	4278.622	399.139
						CO	3.83	16.77	Gas	O (BACT)	639.97								
						SO_2	2.7E-02	0.12	Gas	O (BACT)	4.57								
						VOC	0.25	1.10	Gas	O (BACT)	41.90								
						PM	8.7E-02	0.38	Solid	O (BACT)	14.48								
						PM_{10}	2.4E-02	0.10	Solid/Gas	O (BACT)	3.96								
						$PM_{2.5}$	2.0E-02	8.6E-02	Solid/Gas	O (BACT)	3.28								
						Lead	2.3E-05	1.0E-04	Solid	EE	3.8E-03								
						Total HAPs	8.6E-02	0.38	Solid/Gas	EE	14.39								
						CO_2	5,439	23,825	Gas	O (BACT)	909,040								
						CH_4	0.10	0.45	Gas	O (BACT)	17.13								
						N_2O	1.0E-02	4.5E-02	Gas	O (BACT)	1.71								
						CO_2e	5,445	23,849	Gas	O (BACT)	909,974								
NCT1A through NCT1E	Upward Vertical Stack	NCT1	Melt Shop Cooling Tower 1	DE	Drift Eliminator	NO_x	--	--	--	--	--	30.00	115	355,408	8.38	582	48.50	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	0.42	1.84	Solid	O (BACT)	0.32								
						PM_{10}	0.13	0.57	Solid/Gas	O (BACT)	0.10								
						$PM_{2.5}$	0.13	0.57	Solid/Gas	O (BACT)	0.10								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
CCT4A through CCT4B	Upward Vertical Stack	CCT4	Caster Cooling Tower 2	DE	Drift Eliminator	NO_x	--	--	--	--	--	26.00	115	229,043	7.19	582	40.50	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	1.3E-02	8.1E-02	Gas	O (BACT)	2.1E-02								
						PM	7.3E-02	0.34	Solid	O (BACT)	9.0E-02								
						PM_{10}	2.4E-02	0.10	Solid/Gas	O (BACT)	2.8E-02								
						$PM_{2.5}$	2.4E-02	0.10	Solid/Gas	O (BACT)	2.8E-02								
						Lead	--	--	--	--	--								
						Total HAPs	1.6E-02	7.1E-02	Solid/Gas	EE	1.9E-02								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								

NSWV
Attachment J - Emission Points Data Summary Sheet

Emission Point ID	Emission Point Type[1]	Emission Units Vented Through this Point: Emission Unit ID	Emission Units Vented Through this Point: Emission Unit Description	Air Pollution Control Device: Control Device ID	Air Pollution Control Device: Control Device Type	Pollutant Chemical Name/CAS[3] (See Emission Calculations for Speciated HAP)	Maximum Controlled Emissions[5]: lb/hr	Maximum Controlled Emissions[5]: tpy	Emission Form or Phase (At Exit Conditions)	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^3)	Inner Diameter (ft)	Exit Gas Temp (°F)	Exit Gas Volumetric Flow[8] (ACFM)	Exit Gas Velocity (fps)	Elevation: Ground Level (ft)	Stack Height above Ground Level[9] (ft)	UTM Northing (km)	UTM Easting (km)
NCT5A through NCT5B	Upward Vertical Stack	NCT5	Caster Cooling Tower 3	DE	Drift Eliminator	NO_x	--	--	--		--	30.00	115	359,225	8.47	582	41.00	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	0.14	0.61	Solid	O (BACT)	0.10								
						PM_{10}	4.3E-02	0.19	Solid/Gas	O (BACT)	3.2E-02								
						$PM_{2.5}$	4.3E-02	0.19	Solid/Gas	O (BACT)	3.2E-02								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
CCT6A through CCT6C	Upward Vertical Stack	CCT6	Hot Mill Cooling Tower 4	DE	Drift Eliminator	NO_x	--	--	--		--	30.00	115	387,641	9.14	582	44.50	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	8.4E-02	0.37	Gas	EE	5.8E-02								
						PM	0.36	1.56	Solid	O (BACT)	0.24								
						PM_{10}	0.11	0.48	Solid/Gas	O (BACT)	7.5E-02								
						$PM_{2.5}$	0.11	0.48	Solid/Gas	O (BACT)	7.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	7.5E-02	0.33	Solid/Gas	EE	5.1E-02								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
LCT7A through LCT7C	Upward Vertical Stack	LCT7	Hot Mill Cooling Tower 5	DE	Drift Eliminator	NO_x	--	--	--		--	26.00	115	258,987	8	582	45	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	6.7E-02	0.29	Gas	O (BACT)	6.9E-02								
						PM	0.28	1.24	Solid	O (BACT)	0.29								
						PM_{10}	8.7E-02	0.38	Solid	O (BACT)	9.0E-02								
						$PM_{2.5}$	8.7E-02	0.38	Solid	O (BACT)	9.0E-02								
						Lead	--	--	--	--	--								
						Total HAPs	6.0E-02	0.26	Solid/Gas	EE	6.1E-02								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
NCT8A through NCT8B	Upward Vertical Stack	NCT8	Cold Mill Cooling Tower 6	DE	Drift Eliminator	NO_x	--	--	--		--	26.00	115	210,885	7	582	38	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	0.11	0.46	Solid	O (BACT)	0.13								
						PM_{10}	3.2E-02	0.14	Solid	O (BACT)	4.1E-02								
						$PM_{2.5}$	3.2E-02	0.14	Solid	O (BACT)	4.1E-02								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
ASPCTA through ASPCTE	Upward Vertical Stack	ASPCT	Air Separation Plant Cooling Tower 7	DE	Drift Eliminator	NO_x	--	--	--		--	13.94	115	74,519	8	589	40	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	1.3E-03	5.8E-03	Solid	O (BACT)	4.7E-03								
						PM_{10}	4.0E-04	1.8E-03	Solid	O (BACT)	1.4E-03								
						$PM_{2.5}$	4.0E-04	1.8E-03	Solid	O (BACT)	1.4E-03								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								

NSWV
Attachment J - Emission Points Data Summary Sheet

Emission Point ID	Emission Point Type[1]	Emission Units Vented Through this Point: Emission Unit ID	Emission Units Vented Through this Point: Emission Unit Description	Air Pollution Control Device: Control Device ID	Air Pollution Control Device: Control Device Type	Pollutant Chemical Name/CAS[3] (See Emission Calculations for Speciated HAP)	Maximum Controlled Emissions[5]: lb/hr	Maximum Controlled Emissions[5]: tpy	Emission Form or Phase (At Exit Conditions)	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^3)	Inner Diameter (ft)	Exit Gas Temp (°F)	Exit Gas Volumetric Flow[8] (ACFM)	Exit Gas Velocity (fps)	Elevation: Ground Level (ft)	Stack Height above Ground Level[9] (ft)	UTM Northing (km)	UTM Easting (km)
BRCKCRSH	Area	BRCKCRSH	Truck unloading to Primary Crusher Primary Crusher to Conveyor 1 Truck unloading to Surge Pile Conveyor 1 to Surge Pile Surge Pile to Conveyor 2 Conveyor 2 to Scalping Screener Scalping Screener to Conveyor 3 Conveyor 3 to Product Pile Scalping Screener to Conveyor 4 Conveyor 4 to Secondary Crusher Conveyor 4 to Conveyor 5 Secondary Crusher to Conveyor 6 Conveyor 6 to Tertiary Crusher Conveyor 6 to Sizing Screener Tertiary Crusher to Conveyor 7 Conveyor 7 to Sizing Screener Sizing Screener to Conveyor 8 Conveyor 8 to Truck	WS	Wet Suppression	NO_X	--	--	--	--	--	N/A	N/A	N/A	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	0.63	7.6E-02	Solid	O (BACT)	N/A								
						PM_{10}	0.23	2.8E-02	Solid	O (BACT)	N/A								
						$PM_{2.5}$	3.2E-02	3.8E-03	Solid	O (BACT)	N/A								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
EMGEN1	Upward Vertical Stack	EMGEN1	Emergency Generator 1	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	68	582	10	4279.001	398.368
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								
EMGEN2	Upward Vertical Stack	EMGEN2	Emergency Generator 2	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	68	582	10	4278.999	398.369
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								
EMGEN3	Upward Vertical Stack	EMGEN3	Emergency Generator 3	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	68	582	10	4278.997	398.370
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								

NSWV
Attachment J - Emission Points Data Summary Sheet

Emission Point ID	Emission Point Type[1]	Emission Units Vented Through this Point: Emission Unit ID	Emission Units Vented Through this Point: Emission Unit Description	Air Pollution Control Device: Control Device ID	Air Pollution Control Device: Control Device Type	Pollutant Chemical Name/CAS[3] (See Emission Calculations for Speciated HAP)	Maximum Controlled Emissions[5]: lb/hr	Maximum Controlled Emissions[5]: tpy	Emission Form or Phase (At Exit Conditions)	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^3)	Inner Diameter (ft)	Exit Gas Temp (°F)	Exit Gas Volumetric Flow[8] (ACFM)	Exit Gas Velocity (fps)	Elevation: Ground Level (ft)	Stack Height above Ground Level[9] (ft)	UTM Northing (km)	UTM Easting (km)
EMGEN4	Upward Vertical Stack	EMGEN4	Emergency Generator 4	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	67.61	582	10	4278.994	398.371
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid/Gas	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid/Gas	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								
EMGEN5	Upward Vertical Stack	EMGEN5	Emergency Generator 5	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	68	582	10	4278.929	398.398
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid/Gas	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid/Gas	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								
EMGEN6	Upward Vertical Stack	EMGEN6	Emergency Generator 6	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	68	582	10	4278.927	398.399
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid/Gas	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid/Gas	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								
EMGEN7	Upward Vertical Stack	EMGEN7	Emergency Generator 7	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	68	582	10	4278.924	398.400
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid/Gas	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid/Gas	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								
EMGEN8	Upward Vertical Stack	EMGEN8	Emergency Generator 8	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	68	582	10	4278.922	398.401
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid/Gas	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid/Gas	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								

NSWV
Attachment J - Emission Points Data Summary Sheet

Emission Point ID	Emission Point Type[1]	Emission Units Vented Through this Point: Emission Unit ID	Emission Units Vented Through this Point: Emission Unit Description	Air Pollution Control Device: Control Device ID	Air Pollution Control Device: Control Device Type	Pollutant Chemical Name/CAS[3] (See Emission Calculations for Speciated HAP)	Maximum Controlled Emissions[5]: lb/hr	Maximum Controlled Emissions[5]: tpy	Emission Form or Phase (At Exit Conditions)	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^3)	Inner Diameter (ft)	Exit Gas Temp (°F)	Exit Gas Volumetric Flow[8] (ACFM)	Exit Gas Velocity (fps)	Elevation: Ground Level (ft)	Stack Height above Ground Level[9] (ft)	UTM Northing (km)	UTM Easting (km)
EMGEN9	Upward Vertical Stack	EMGEN9	Emergency Generator 9	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	68	582	10	4278.134	398.543
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid/Gas	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid/Gas	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								
EMGEN10	Upward Vertical Stack	EMGEN10	Emergency Generator 10	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	68	582	10	4278.135	398.546
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid/Gas	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid/Gas	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								
EMGEN11	Upward Vertical Stack	EMGEN11	Emergency Generator 11	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	68	582	10	4278.135	398.548
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid/Gas	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid/Gas	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								
EMGEN12	Upward Vertical Stack	EMGEN12	Emergency Generator 12	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	67.61	582	10	4278.136	398.550
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid/Gas	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid/Gas	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								
EMGEN13	Upward Vertical Stack	EMGEN13	Emergency Generator 13	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	68	582	10	4278.491	398.460
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid/Gas	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid/Gas	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								

NSWV
Attachment J - Emission Points Data Summary Sheet

Emission Point ID	Emission Point Type[1]	Emission Units Vented Through this Point: Emission Unit ID	Emission Units Vented Through this Point: Emission Unit Description	Air Pollution Control Device: Control Device ID	Air Pollution Control Device: Control Device Type	Pollutant Chemical Name/CAS[3] (See Emission Calculations for Speciated HAP)	Maximum Controlled Emissions[5]: lb/hr	Maximum Controlled Emissions[5]: tpy	Emission Form or Phase (At Exit Conditions)	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^3)	Inner Diameter (ft)	Exit Gas Temp (°F)	Exit Gas Volumetric Flow[8] (ACFM)	Exit Gas Velocity (fps)	Elevation: Ground Level (ft)	Stack Height above Ground Level[9] (ft)	UTM Northing (km)	UTM Easting (km)
EMGEN14	Upward Vertical Stack	EMGEN14	Emergency Generator 14	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	68	582	10	4278.493	398.463
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid/Gas	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid/Gas	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								
EMGEN15	Upward Vertical Stack	EMGEN15	Emergency Generator 15	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	68	582	10	4278.494	398.465
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid/Gas	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid/Gas	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								
EMGEN16	Upward Vertical Stack	EMGEN16	Emergency Generator 16	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	68	582	10	4278.495	398.468
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid/Gas	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid/Gas	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								
EMGEN17	Upward Vertical Stack	EMGEN17	Emergency Generator 17	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	68	582	10	4278.404	398.442
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid/Gas	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid/Gas	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								
EMGEN18	Upward Vertical Stack	EMGEN18	Emergency Generator 18	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	68	582	10	4278.401	398.443
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid/Gas	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid/Gas	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								

NSWV
Attachment J - Emission Points Data Summary Sheet

Emission Point ID	Emission Point Type[1]	Emission Units Vented Through this Point		Air Pollution Control Device		Pollutant Chemical Name/CAS[3] (See Emission Calculations for Speciated HAP)	Maximum Controlled Emissions[5]		Emission Form or Phase (At Exit Conditions)	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^3)	Inner Diameter (ft)	Exit Gas Temp (°F)	Exit Gas Volumetric Flow[8] (ACFM)	Exit Gas Velocity (fps)	Elevation: Ground Level (ft)	Stack Height above Ground Level[9] (ft)	UTM Northing (km)	UTM Easting (km)
		Emission Unit ID	Emission Unit Description	Control Device ID	Control Device Type		lb/hr	tpy											
EMGEN19	Upward Vertical Stack	EMGEN19	Emergency Generator 19	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	68	582	10	4278.399	398.444
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid/Gas	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid/Gas	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								
EMGEN20	Upward Vertical Stack	EMGEN20	Emergency Generator 20	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	68	582	10	4278.397	398.445
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid/Gas	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid/Gas	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								
EMGEN21	Upward Vertical Stack	EMGEN21	Emergency Generator 21	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	68	582	10	4278.797	398.231
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid/Gas	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid/Gas	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								
EMGEN22	Upward Vertical Stack	EMGEN22	Emergency Generator 22	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	68	582	10	4278.795	398.232
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid/Gas	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid/Gas	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								

NSWV
Attachment J - Emission Points Data Summary Sheet

Emission Point ID	Emission Point Type[1]	Emission Units Vented Through this Point: Emission Unit ID	Emission Units Vented Through this Point: Emission Unit Description	Air Pollution Control Device: Control Device ID	Air Pollution Control Device: Control Device Type	Pollutant Chemical Name/CAS[3] (See Emission Calculations for Speciated HAP)	Maximum Controlled Emissions[5]: lb/hr	Maximum Controlled Emissions[5]: tpy	Emission Form or Phase (At Exit Conditions)	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^3)	Inner Diameter (ft)	Exit Gas Temp (°F)	Exit Gas Volumetric Flow[8] (ACFM)	Exit Gas Velocity (fps)	Elevation: Ground Level (ft)	Stack Height above Ground Level[9] (ft)	UTM Northing (km)	UTM Easting (km)
EMGEN23	Upward Vertical Stack	EMGEN23	Emergency Generator 23	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	68	582	10	4278.793	398.232
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid/Gas	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid/Gas	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								
EMGEN24	Upward Vertical Stack	EMGEN24	Emergency Generator 24	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	68	582	10	4278.790	398.233
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid/Gas	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid/Gas	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								
EMGEN25	Upward Vertical Stack	EMGEN25	Emergency Generator 25	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	143.54	1.00	1,380	3,186	68	582	10	4278.673	399.005
						CO	3.43	0.17	Gas	O (BACT)	287.08								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.27								
						VOC	1.50	7.5E-02	Gas	O (BACT)	125.64								
						PM	0.11	5.3E-03	Solid	O (BACT)	8.85								
						PM_{10}	1.7E-03	8.3E-05	Solid/Gas	O (BACT)	0.14								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid/Gas	O (BACT)	8.5E-02								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	37.20								
						CO_2	636.24	31.81	Gas	O (BACT)	53,314								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.00								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.10								
						CO_2e	636.89	31.84	Gas	O (BACT)	53,369								
EMGEN26	Upward Vertical Stack	EMGEN26	Emergency Generator 26	N/A	N/A	NO_X	1.71	8.6E-02	Gas	O (BACT)	208.08	0.83	1,380	2,198	67	582	10	4278.576	398.612
						CO	3.43	0.17	Gas	O (BACT)	416.16								
						SO_2	3.2E-03	1.6E-04	Gas	O (BACT)	0.39								
						VOC	1.50	7.5E-02	Gas	O (BACT)	182.13								
						PM	0.11	5.3E-03	Solid	O (BACT)	12.82								
						PM_{10}	1.7E-03	8.3E-05	Solid/Gas	O (BACT)	0.20								
						$PM_{2.5}$	1.0E-03	5.1E-05	Solid/Gas	O (BACT)	0.12								
						Lead	--	--	--	--	--								
						Total HAPs	0.44	2.2E-02	Solid/Gas	EE	53.93								
						CO_2	636.24	31.81	Gas	O (BACT)	77,286								
						CH_4	1.2E-02	6.0E-04	Gas	O (BACT)	1.46								
						N_2O	1.2E-03	6.0E-05	Gas	O (BACT)	0.15								
						CO_2e	636.89	31.84	Gas	O (BACT)	77,365								
ROAD1 through ROAD184	Volume	FUGD-PAVED-01P FUGD-PAVED-02P FUGD-PAVED-03P FUGD-PAVED-04P FUGD-PAVED-05P FUGD-PAVED-06P FUGD-PAVED-07P FUGD-PAVED-08P FUGD-PAVED-09P FUGD-PAVED-10P FUGD-PAVED-11P FUGD-PAVED-12P	North Entry to P&O North Entry to FG North Entry to HB Yard North Entry to Scrap Yard North Entry to Alloy Storage North Entry to EAF Bay North Entry to Slag Bay Scrap Yard to EAF Bay South Port to Scrap Yard South Port to HB Yard South Port to FG South Port to P&O	WS	Wet Suppression	NO_X	--	--	--	--	--	N/A	N/A	N/A	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	N/A	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	8.91	35.28	Solid	O (BACT)	N/A								
						PM_{10}	1.78	7.06	Solid/Gas	O (BACT)	N/A								
						$PM_{2.5}$	0.44	1.73	Solid/Gas	O (BACT)	N/A								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								

NSWV
Attachment J - Emission Points Data Summary Sheet

Emission Point ID	Emission Point Type[1]	Emission Units Vented Through this Point: Emission Unit ID	Emission Units Vented Through this Point: Emission Unit Description	Air Pollution Control Device: Control Device ID	Air Pollution Control Device: Control Device Type	Pollutant Chemical Name/CAS[3] (See Emission Calculations for Speciated HAP)	Maximum Controlled Emissions[5]: lb/hr	Maximum Controlled Emissions[5]: tpy	Emission Form or Phase (At Exit Conditions)	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^3)	Inner Diameter (ft)	Exit Gas Temp (°F)	Exit Gas Volumetric Flow[8] (ACFM)	Exit Gas Velocity (fps)	Elevation: Ground Level (ft)	Stack Height above Ground Level[9] (ft)	UTM Northing (km)	UTM Easting (km)
TME0MVA and TME0MVB	Upward Vertical Stack	STMSTEO RCLEO	Temper Mill Electrostatic Oiler Recoiler Electrostatic Oiler	N/A	N/A	NO_x	--	--	--	--	--	17.48	105	144,000	10	582	106	See Air Dispersion Modeling Report in Appendix D of Permit Application	See Air Dispersion Modeling Report in Appendix D of Permit Application
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	2.2E-02	0.10	Gas	O (BACT)	4.1E-02								
						PM	0.14	0.59	Solid	O (BACT)	0.25								
						PM_{10}	0.14	0.59	Solid/Gas	O (BACT)	0.25								
						$PM_{2.5}$	6.8E-02	0.30	Solid/Gas	O (BACT)	0.13								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
T001	Upward Vertical Stack	T001	Diesel Tank	N/A	N/A	NO_x	--	--	--	--	--	TBD	Ambient	TBD	Negligible	TBD	N/A	TBD	TBD
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	5.1E-04	2.2E-03	Gas	O (BACT)	TBD								
						PM	--	--	--	--	--								
						PM_{10}	--	--	--	--	--								
						$PM_{2.5}$	--	--	--	--	--								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
T002	Upward Vertical Stack	T002	Diesel Tank	N/A	N/A	NO_x	--	--	--	--	--	TBD	Ambient	TBD	Negligible	TBD	N/A	TBD	TBD
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	5.1E-04	2.2E-03	Gas	O (BACT)	TBD								
						PM	--	--	--	--	--								
						PM_{10}	--	--	--	--	--								
						$PM_{2.5}$	--	--	--	--	--								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
T003	Upward Vertical Stack	T003	Diesel Tank	N/A	N/A	NO_x	--	--	--	--	--	TBD	Ambient	TBD	Negligible	TBD	N/A	TBD	TBD
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	5.1E-04	2.2E-03	Gas	O (BACT)	TBD								
						PM	--	--	--	--	--								
						PM_{10}	--	--	--	--	--								
						$PM_{2.5}$	--	--	--	--	--								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								

NSWV
Attachment J - Emission Points Data Summary Sheet

Emission Point ID	Emission Point Type[1]	Emission Units Vented Through this Point: Emission Unit ID	Emission Units Vented Through this Point: Emission Unit Description	Air Pollution Control Device: Control Device ID	Air Pollution Control Device: Control Device Type	Pollutant Chemical Name/CAS[3] (See Emission Calculations for Speciated HAP)	Maximum Controlled Emissions[5]: lb/hr	Maximum Controlled Emissions[5]: tpy	Emission Form or Phase (At Exit Conditions)	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^3)	Inner Diameter (ft)	Exit Gas Temp (°F)	Exit Gas Volumetric Flow[8] (ACFM)	Exit Gas Velocity (fps)	Elevation: Ground Level (ft)	Stack Height above Ground Level[9] (ft)	UTM Northing (km)	UTM Easting (km)
T004	Upward Vertical Stack	T004	Diesel Tank	N/A	N/A	NO_X	--	--	--	--	--	TBD	Ambient	TBD	Negligible	TBD	N/A	TBD	TBD
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	5.1E-04	2.2E-03	Gas	O (BACT)	TBD								
						PM	--	--	--	--	--								
						PM_{10}	--	--	--	--	--								
						$PM_{2.5}$	--	--	--	--	--								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
T005	Upward Vertical Stack	T005	Diesel Tank	N/A	N/A	NO_X	--	--	--	--	--	TBD	Ambient	TBD	Negligible	TBD	N/A	TBD	TBD
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	5.1E-04	2.2E-03	Gas	O (BACT)	TBD								
						PM	--	--	--	--	--								
						PM_{10}	--	--	--	--	--								
						$PM_{2.5}$	--	--	--	--	--								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
T006	Upward Vertical Stack	T006	Gasoline Tank	N/A	N/A	NO_X	--	--	--	--	--	TBD	Ambient	TBD	Negligible	TBD	N/A	TBD	TBD
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	0.10	0.46	Gas	O (BACT)	TBD								
						PM	--	--	--	--	--								
						PM_{10}	--	--	--	--	--								
						$PM_{2.5}$	--	--	--	--	--								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
CMTKFUG	Upward Vertical Stack	T007 T008 T009 T010 T011 T012 T013 T014 T015 T016 T017 T018	HCL Tank #1 HCL Tank #2 HCL Tank #3 HCL Tank #4 SPL Tank #1 SPL Tank #2 SPL Tank #3 SPL Tank #4 SPL Tank #5 SPL Tank #6 SPL Tank #7 SPL Tank #8	N/A	N/A	NO_X	--	--	--	--	--	TBD	Ambient	TBD	Negligible	TBD	N/A	TBD	TBD
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	--	--	--	--	--								
						PM	--	--	--	--	--								
						PM_{10}	--	--	--	--	--								
						$PM_{2.5}$	--	--	--	--	--								
						Lead	--	--	--	--	--								
						Total HAPs	7.1E-03	3.1E-02	Gas	EE	TBD								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
T019	Upward Vertical Stack	T019	WOT9.1	N/A	N/A	NO_X	--	--	--	--	--	TBD	Ambient	TBD	Negligible	TBD	N/A	TBD	TBD
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	2.8E-06	1.2E-05	Gas	O (BACT)	TBD								
						PM	--	--	--	--	--								
						PM_{10}	--	--	--	--	--								
						$PM_{2.5}$	--	--	--	--	--								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								

NSWV
Attachment J - Emission Points Data Summary Sheet

Emission Point ID	Emission Point Type[1]	Emission Units Vented Through this Point		Air Pollution Control Device		Pollutant Chemical Name/CAS[3] (See Emission Calculations for Speciated HAP)	Maximum Controlled Emissions[5]		Emission Form or Phase (At Exit Conditions)	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^3)	Inner Diameter (ft)	Exit Gas Temp (°F)	Exit Gas Volumetric Flow[8] (ACFM)	Exit Gas Velocity (fps)	Elevation: Ground Level (ft)	Stack Height above Ground Level[9] (ft)	UTM Northing (km)	UTM Easting (km)
		Emission Unit ID	Emission Unit Description	Control Device ID	Control Device Type		lb/hr	tpy											
T020	Upward Vertical Stack	T020	COT6.3	N/A	N/A	NO_X	--	--	--	--	--	TBD	Ambient	TBD	Negligible	TBD	N/A	TBD	TBD
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	2.8E-06	1.2E-05	Gas	O (BACT)	TBD								
						PM	--	--	--	--	--								
						PM_{10}	--	--	--	--	--								
						$PM_{2.5}$	--	--	--	--	--								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
T021	Upward Vertical Stack	T021	COT4.3	N/A	N/A	NO_X	--	--	--	--	--	TBD	Ambient	TBD	Negligible	TBD	N/A	TBD	TBD
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	2.8E-06	1.2E-05	Gas	O (BACT)	TBD								
						PM	--	--	--	--	--								
						PM_{10}	--	--	--	--	--								
						$PM_{2.5}$	--	--	--	--	--								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
T022	Upward Vertical Stack	T022	COT6.1	N/A	N/A	NO_X	--	--	--	--	--	TBD	Ambient	TBD	Negligible	TBD	N/A	TBD	TBD
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	6.7E-07	2.9E-06	Gas	O (BACT)	TBD								
						PM	--	--	--	--	--								
						PM_{10}	--	--	--	--	--								
						$PM_{2.5}$	--	--	--	--	--								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								
T023	Upward Vertical Stack	T023	COT4.1	N/A	N/A	NO_X	--	--	--	--	--	TBD	Ambient	TBD	Negligible	TBD	N/A	TBD	TBD
						CO	--	--	--	--	--								
						SO_2	--	--	--	--	--								
						VOC	6.7E-07	2.9E-06	Gas	O (BACT)	TBD								
						PM	--	--	--	--	--								
						PM_{10}	--	--	--	--	--								
						$PM_{2.5}$	--	--	--	--	--								
						Lead	--	--	--	--	--								
						Total HAPs	--	--	--	--	--								
						CO_2	--	--	--	--	--								
						CH_4	--	--	--	--	--								
						N_2O	--	--	--	--	--								
						CO_2e	--	--	--	--	--								

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

[1] Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.

[2] Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (ie., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).

[3] List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS_2, VOCs, H_2S, Inorganics, Lead, Organics, O_3, NO, NO_2, SO_2, SO_3, all applicable Greenhouse Gases (including CO_2 and methane), etc. DO NOT LIST H_2, H_2O, N_2, O_2, and Noble Gases.

[4] Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g., 5 lb VOC/20 minute batch).

[5] Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g., 5 lb VOC/20 minute batch).

[6] Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

[7] Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv) are used. If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric) use units of milligram per dry cubic meter (mg/m^3) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO_2, use units of ppmv (See 45CSR10).

[8] Give at operating conditions. Include inerts.

[9] Release height of emissions above ground level.

Note: Extraneous information unrelated to regulatory requirements and air emissions has been excluded from the application form. Information labeled as "to be determined" (TBD) will be provided once specific equipment vendors have been selected.

Note: The EXT Baghouse, INT Baghouse, and Canopy Hood are all routed to a common header where emissions are sent to both the EAF1-BH and EAF2-BH.

Note: The following combined emission points have identical stack parameters within each group with the exception of the UTM coordinates: MSMVA through MSMVF, HMMVA through HMMVL CGL1MVA through CGL1MVE, CGL2MVA through CGL2MVE, GALVMVA through GALVMVF, SUBSILO1-4, BV-305-BV-308 BV-309-BV-313, BV-314-BV-315, BV-316-BV-317, NCT1A through NCT1E, CCT4A through CCT4B, NCT5A through NCT5B, CCT6A through CCT6C, LCT7A through LCT7C, NCT8A through NCT8B, ASPCTA through ASPCTE, TMEOMVA and TMEOMVB.

Attachment K – Fugitive Emissions Data Sheet

NSWV
Attachment K - Fugitive Emissions Data Summary Sheet

The FUGITIVE EMISSIONS SUMMARY SHEET provides a summation of fugitive emissions. Fugitive emissions are those emissions which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening. Note that uncaptured process emissions are not typically considered to be fugitive, and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET.

Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions).

APPLICATION FORMS CHECKLIST - FUGITIVE EMISSIONS

1.) Will there be haul road activities?

Yes	If YES, then complete the HAUL ROAD EMISSIONS UNIT DATA SHEET.

2.) Will there be Storage Piles?

No*	If YES, complete Table 1 of the NONMETALLIC MINERALS PROCESSING EMISSIONS UNIT DATA SHEET.

** The storage piles for NSWV will all be metalic materials (i.e., scrap metal and slag).*

3.) Will there be Liquid Loading/Unloading Operations?

No	If YES, complete the BULK LIQUID TRANSFER OPERATIONS EMISSIONS UNIT DATA SHEET.

4.) Will there be emissions of air pollutants from Wastewater Treatment Evaporation?

No	If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.

5.) Will there be Equipment Leaks (e.g. leaks from pumps, compressors, in-line process valves, pressure relief devices, open-ended valves, sampling connections, flanges, agitators, cooling towers, etc.)?

No	If YES, complete the LEAK SOURCE DATA SHEET section of the CHEMICAL PROCESSES EMISSIONS UNIT DATA SHEET.

6.) Will there be General Clean-up VOC Operations?

No	If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.

7.) Will there be any other activities that generate fugitive emissions?

Yes	If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET or the most appropriate form.

NSWV

Attachment K - Fugitive Emissions Data Summary Sheet

FUGITIVE EMISSIONS SUMMARY	All Regulated Pollutants - Chemical Name/CAS[1]	Maximum Potential Uncontrolled Emissions[2]		Maximum Potential Controlled Emissions[3]		Est. Method Used[4]
		lb/hr	ton/yr	lb/hr	ton/yr	
Paved Roadway Fugitive Emissions	PM	8.91	35.28	8.91	35.28	EE
	PM_{10}	1.78	7.06	1.78	7.06	EE
	$PM_{2.5}$	0.44	1.73	0.44	1.73	EE
Storage Pile Emissions	Form K specifically requests information for nonmetallic mineral storage piles. The storage piles for NSWV will store metallic materials (i.e., scrap metal and slag). As such, the information for facility storage piles is presented in the R13-L (General) worksheet.					
Liquid Loading/Unloading Operations	N/A	N/A	N/A	N/A	N/A	N/A
Wastewater Treatment Evaporation & Operations	N/A	N/A	N/A	N/A	N/A	N/A
Equipment Leaks	N/A	N/A	N/A	N/A	N/A	N/A
General Clean-up VOC Emissions:	VOC	N/A	N/A	N/A	N/A	N/A
	Total HAPs	N/A	N/A	N/A	N/A	N/A
Other: Uncaptured Bulk Material Handling and Storage Emissions, including Scrap Substitute Silo Loadouts, Scrap Handling & Storage, Slag Processing, Handling & Storage, Parts Washers	NO_X	7.92	34.69	7.92	34.69	O (BACT)
	CO	6.52	28.57	6.52	28.57	O(BACT)
	SO_2	0.05	0.20	0.05	0.20	O(BACT)
	VOC	0.99	2.28	0.99	2.28	O(BACT)
	PM	10.51	21.83	10.51	21.83	EE & O (BACT)
	PM_{10}	4.40	9.94	4.40	9.94	EE & O (BACT)
	$PM_{2.5}$	0.79	1.93	0.79	1.93	EE & O (BACT)
	Lead	0.00	0.00	0.00	0.00	EE
	Total HAPs	0.15	0.64	0.15	0.64	EE
	CO_2	9264.60	40578.95	9264.60	40578.95	O (BACT)
	CH_4	0.17	0.76	0.17	0.76	O(BACT)
	N_2O	0.02	0.08	0.02	0.08	O(BACT)
	CO_2e	9274.12	40620.63	9274.12	40620.63	O(BACT)

[1] *List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS_2, VOCs, H_2S, Inorganics, Lead, Organics, O_3, NO, NO_2, SO_2, SO_3, all applicable Greenhouse Gases (including CO_2 and methane), etc. DO NOT LIST H_2, H_2O, N_2, O_2, and Noble Gases.*

[2] *Give rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).*

[3] *Give rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).*

[4] *Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).*

Attachment L – Emissions Units Data Sheet

NSWV
Attachment L - Emissions Unit Data Sheet (General)

Emission Unit Form Number:		1	3	4	6a	6g	7. Projected operating schedule:			8. Projected amount of pollutants								9. Proposed Monitoring, Recordkeeping, Reporting, and Testing			
										Controlled Emission Rates (lb/hr)											
Emission Unit ID	Emission Point ID	Name or Type and Model	Name(s) and Maximum Process Materials Charged	Name(s) and Maximum Material Produced	Type and Amount of Fuel(s) Burned	Proposed Maximum Design Heat Input	Hours/Day	Days/Week	Weeks/Year	@ Temp and Pressure (°F & psia)	NO_X	SO_2	CO	PM_{10}	Hydrocarbons	VOC	Lead	Monitoring	Recordkeeping	Reporting	Testing
EAF1/LMF1/CAST1	BHST1	Electric Arc Furnace 1 Ladle Metallurgical Furnace 1 Caster	Scrap Substitute - 283,305 lb/hr Scrap - 377,740 lb/hr Additives - 26,256 lb/hr Electrode - 368 lb/hr Carbon - 9,759 lb/hr	Steel - 560,000 lb/hr Slag - 56,087 lb/hr	Natural Gas - 58,824 scf/hr	60.0 MMBtu/hr	24	7	52	224 °F / Ambient Pressure	111.72	63.84	537.32	72.24	26.07	26.07	0.12	See regulatory write-up in the application narrative			
EAF2/LMF2/CAST1	BHST2	Electric Arc Furnace 2 Ladle Metallurgical Furnace 2 Caster	Scrap Substitute - 283,305 lb/hr Scrap - 377,740 lb/hr Additives - 26,256 lb/hr Electrode - 368 lb/hr Carbon - 9,759 lb/hr	Steel - 560,000 lb/hr Slag - 56,087 lb/hr	Natural Gas - 58,824 scf/hr	60.0 MMBtu/hr	24	7	52	224 °F / Ambient Pressure	111.72	63.84	537.32	72.24	26.07	26.07	0.12	See regulatory write-up in the application narrative			
MSFUG	MSMVA through MSMVF	Uncaptured Electric Arc Furnace Fugitives	Per EAF: Scrap Substitute - 283,305 lb/hr Scrap - 377,740 lb/hr Additives - 26,256 lb/hr Electrode - 368 lb/hr Carbon - 9,759 lb/hr	Per EAF: Steel - 560,000 lb/hr Slag - 56,087 lb/hr	Included under EAF1/LMF1/CAST 1	Included under EAF1/LMF1/CAST1	24	7	52	Ambient Temperature / Ambient Pressure	11.76	6.72	56.56	1.54	2.74	2.74	1.3E-02	See regulatory write-up in the application narrative			
CASTFUG	MSMVA through MSMVF	Uncaptured Casting Fugitives	Per EAF: Scrap Substitute - 283,305 lb/hr Scrap - 377,740 lb/hr Additives - 26,256 lb/hr Electrode - 368 lb/hr Carbon - 9,759 lb/hr	Per EAF: Steel - 560,000 lb/hr Slag - 56,087 lb/hr	Included under EAF1/LMF1/CAST 2	Included under EAF1/LMF1/CAST2	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.71	--	--	--	See regulatory write-up in the application narrative			
EAFVF1	VF1UNLD	EAF Baghouse 1 Dust Silo Baghouse Dust	Dust - 1.77 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.9E-03	--	--	--	See regulatory write-up in the application narrative			
EAFVF2	VF2UNLD	EAF Baghouse 2 Dust Silo Baghouse Dust	Dust - 1.77 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.9E-03	--	--	--	See regulatory write-up in the application narrative			
EAFVF1	EAFVF1	EAF Baghouse 1 Dust Silo	Dust - 1.77 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	3.7E-02	--	--	--	See regulatory write-up in the application narrative			
EAFVF2	EAFVF2	EAF Baghouse 2 Dust Silo	Dust - 1.77 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	3.7E-02	--	--	--	See regulatory write-up in the application narrative			
LD1	MSMVA through MSMVF	Ladle Dryer #1	Natural Gas - 14,706 scf/hr	N/A	Natural Gas - 14,706 scf/hr	15 MMBtu/hr	24	7	52	135 °F / Ambient Pressure	1.50	8.8E-03	1.24	7.6E-03	8.1E-02	8.1E-02	7.4E-06	See regulatory write-up in the application narrative			
LD2	MSMVA through MSMVF	Ladle Dryer #2	Natural Gas - 14,706 scf/hr	N/A	Natural Gas - 14,706 scf/hr	15 MMBtu/hr	24	7	52	135 °F / Ambient Pressure	1.50	8.8E-03	1.24	7.6E-03	8.1E-02	8.1E-02	7.4E-06	See regulatory write-up in the application narrative			
LD3	MSMVA through MSMVF	Ladle Dryer #3	Natural Gas - 14,706 scf/hr	N/A	Natural Gas - 14,706 scf/hr	15 MMBtu/hr	24	7	52	135 °F / Ambient Pressure	1.50	8.8E-03	1.24	7.6E-03	8.1E-02	8.1E-02	7.4E-06	See regulatory write-up in the application narrative			
LPHTR1	MSMVA through MSMVF	Horizontal Ladle Preheater 1	Natural Gas - 14,706 scf/hr	N/A	Natural Gas - 14,706 scf/hr	15 MMBtu/hr	24	7	52	135 °F / Ambient Pressure	1.50	8.8E-03	1.24	7.6E-03	8.1E-02	8.1E-02	7.4E-06	See regulatory write-up in the application narrative			
LPHTR2	MSMVA through MSMVF	Horizontal Ladle Preheater 2	Natural Gas - 14,706 scf/hr	N/A	Natural Gas - 14,706 scf/hr	15 MMBtu/hr	24	7	52	135 °F / Ambient Pressure	1.50	8.8E-03	1.24	7.6E-03	8.1E-02	8.1E-02	7.4E-06	See regulatory write-up in the application narrative			
LPHTR3	MSMVA through MSMVF	Horizontal Ladle Preheater 3	Natural Gas - 14,706 scf/hr	N/A	Natural Gas - 14,706 scf/hr	15 MMBtu/hr	24	7	52	135 °F / Ambient Pressure	1.50	8.8E-03	1.24	7.6E-03	8.1E-02	8.1E-02	7.4E-06	See regulatory write-up in the application narrative			
LPHTR4	MSMVA through MSMVF	Horizontal Ladle Preheater 4	Natural Gas - 14,706 scf/hr	N/A	Natural Gas - 14,706 scf/hr	15 MMBtu/hr	24	7	52	135 °F / Ambient Pressure	1.50	8.8E-03	1.24	7.6E-03	8.1E-02	8.1E-02	7.4E-06	See regulatory write-up in the application narrative			
LPHTR5	MSMVA through MSMVF	Horizontal Ladle Preheater 5	Natural Gas - 14,706 scf/hr	N/A	Natural Gas - 14,706 scf/hr	15 MMBtu/hr	24	7	52	135 °F / Ambient Pressure	1.50	8.8E-03	1.24	7.6E-03	8.1E-02	8.1E-02	7.4E-06	See regulatory write-up in the application narrative			
LPHTR6	MSMVA through MSMVF	Vertical Ladle Preheater 6	Natural Gas - 9,804 scf/hr	N/A	Natural Gas - 9,804 scf/hr	10 MMBtu/hr	24	7	52	135 °F / Ambient Pressure	1.00	5.9E-03	0.82	5.1E-03	5.4E-02	5.4E-02	4.9E-06	See regulatory write-up in the application narrative			
LPHTR7	MSMVA through MSMVF	Vertical Ladle Preheater 7	Natural Gas - 9,804 scf/hr	N/A	Natural Gas - 9,804 scf/hr	10 MMBtu/hr	24	7	52	135 °F / Ambient Pressure	1.00	5.9E-03	0.82	5.1E-03	5.4E-02	5.4E-02	4.9E-06	See regulatory write-up in the application narrative			
TD1	MSMVA through MSMVF	Tundish Dryer 1	Natural Gas - 5,882 scf/hr	N/A	Natural Gas - 5,882 scf/hr	6 MMBtu/hr	24	7	52	135 °F / Ambient Pressure	0.60	3.5E-03	0.49	3.1E-03	3.2E-02	3.2E-02	2.9E-06	See regulatory write-up in the application narrative			
TD2	MSMVA through MSMVF	Tundish Dryer 2	Natural Gas - 5,882 scf/hr	N/A	Natural Gas - 5,882 scf/hr	6 MMBtu/hr	24	7	52	135 °F / Ambient Pressure	0.60	3.5E-03	0.49	3.1E-03	3.2E-02	3.2E-02	2.9E-06	See regulatory write-up in the application narrative			
TPHTR1	MSMVA through MSMVF	Tundish Preheater 1	Natural Gas - 8,824 scf/hr	N/A	Natural Gas - 8,824 scf/hr	9 MMBtu/hr	24	7	52	135 °F / Ambient Pressure	0.90	5.3E-03	0.74	4.6E-03	4.9E-02	4.9E-02	4.4E-06	See regulatory write-up in the application narrative			
TPHTR2	MSMVA through MSMVF	Tundish Preheater 2	Natural Gas - 8,824 scf/hr	N/A	Natural Gas - 8,824 scf/hr	9 MMBtu/hr	24	7	52	135 °F / Ambient Pressure	0.90	5.3E-03	0.74	4.6E-03	4.9E-02	4.9E-02	4.4E-06	See regulatory write-up in the application narrative			
SENPHTR1	MSMVA through MSMVF	Subentry Nozzle (SEN) Preheater 1	Natural Gas - 608 scf/hr	N/A	Natural Gas - 608 scf/hr	1 MMBtu/hr	24	7	52	135 °F / Ambient Pressure	6.2E-02	3.6E-04	5.1E-02	3.2E-04	3.3E-03	3.3E-03	3.0E-07	See regulatory write-up in the application narrative			
SENPHTR2	MSMVA through MSMVF	Subentry Nozzle (SEN) Preheater 2	Natural Gas - 608 scf/hr	N/A	Natural Gas - 608 scf/hr	1 MMBtu/hr	24	7	52	135 °F / Ambient Pressure	6.2E-02	3.6E-04	5.1E-02	3.2E-04	3.3E-03	3.3E-03	3.0E-07	See regulatory write-up in the application narrative			
SENPHTR3	MSMVA through MSMVF	Subentry Nozzle (SEN) Preheater Oven	Natural Gas - 669 scf/hr	N/A	Natural Gas - 669 scf/hr	1 MMBtu/hr	24	7	52	135 °F / Ambient Pressure	6.8E-02	4.0E-04	5.6E-02	3.5E-04	3.7E-03	3.7E-03	3.3E-07	See regulatory write-up in the application narrative			
VTD1	VTDST1	Vacuum Tank 1	440 lb Degassed CO/hr	N/A	N/A	N/A	24	7	52	1,832 °F / Ambient Pressure	0.84	7.3E-03	9.82	7.5E-02	1.73	1.73	6.1E-06	See regulatory write-up in the application narrative			
VTD2	VTDST2	Vacuum Tank 2	440 lb Degassed CO/hr	N/A	N/A	N/A	24	7	52	1,832 °F / Ambient Pressure	0.84	7.3E-03	9.82	7.5E-02	1.73	1.73	6.1E-06	See regulatory write-up in the application narrative			
TF1	TFST-1	Hot Mill Tunnel Furnace 1	Natural Gas - 245,098 scf/hr	N/A	Natural Gas - 245,098 scf/hr	250 MMBtu/hr	24	7	52	1,076 °F / Ambient Pressure	17.50	0.15	20.59	0.13	1.35	1.35	1.2E-04	See regulatory write-up in the application narrative			
HM	HMMVA through HMMVL	Hot Mill Matrix Vents	Steel - 1,120,000 lb/hr	N/A	N/A	N/A	24	7	52	150 °F / Ambient Pressure	--	--	--	7.57	7.14	7.14	--	See regulatory write-up in the application narrative			

NSWV
Attachment L - Emissions Unit Data Sheet (General)

Emission Unit Form Number:		1	3	4	6a	6g	7. Projected operating schedule:			8. Projected amount of pollutants								9. Proposed Monitoring, Recordkeeping, Reporting, and Testing			
										Controlled Emission Rates (lb/hr)											
Emission Unit ID	Emission Point ID	Name or Type and Model	Name(s) and Maximum Process Materials Charged	Name(s) and Maximum Material Produced	Type and Amount of Fuel(s) Burned	Proposed Maximum Design Heat Input	Hours/Day	Days/Week	Weeks/Year	@ Temp and Pressure (°F & psia)	NO_X	SO_2	CO	PM_{10}	Hydrocarbons	VOC	Lead	Monitoring	Recordkeeping	Reporting	Testing
PKL-1	PLST1	Pickling Line #1	Steel - 1,120,000 lb/hr	N/A	N/A	N/A	24	7	52	343 °F / Ambient Pressure	--	--	--	1.43	--	--	--	See regulatory write-up in the application narrative			
PKLSB	PKLSB	Pickle Line Scale Breaker	Steel - 1,120,000 lb/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.32	--	--	--	See regulatory write-up in the application narrative			
TCM	TCMST	Tandem Cold Mill	Steel - 1,120,000 lb/hr	N/A	N/A	N/A	24	7	52	115 °F / Ambient Pressure	--	--	--	13.23	8.82	8.82	--	See regulatory write-up in the application narrative			
STM	STMST	Standalone Temper Mill	Steel - 1,120,000 lb/hr	N/A	N/A	N/A	24	7	52	90 °F / Ambient Pressure	--	--	--	0.44	0.88	0.88	--	See regulatory write-up in the application narrative			
SPM1	CGL1MVA through CGL1MVE	Skin Pass Mill #1	Steel - 560,000 lb/hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	0.51	--	--	--	See regulatory write-up in the application narrative			
SPM2	CGL2MVA through CGL2MVE	Skin Pass Mill #2	Steel - 560,000 lb/hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	0.51	--	--	--	See regulatory write-up in the application narrative			
CGL1	CGL1_ST1	CGL1 - Cleaning Section	Steel - 560,000 lb/hr	N/A	N/A	N/A	24	7	52	190 °F / Ambient Pressure	--	--	--	0.26	--	--	--	See regulatory write-up in the application narrative			
CGL2	CGL2_ST1	CGL2 - Cleaning Section	Steel - 560,000 lb/hr	N/A	N/A	N/A	24	7	52	190 °F / Ambient Pressure	--	--	--	0.26	--	--	--	See regulatory write-up in the application narrative			
GALVFN1	GALVFN1	Galvanizing Furnace #1	Natural Gas - 71,863 scf/hr	N/A	Natural Gas - 71,863 scf/hr	73 MMBtu/hr	24	7	52	662 °F / Ambient Pressure	5.13	4.3E-02	6.04	3.7E-02	0.40	0.40	3.6E-05	See regulatory write-up in the application narrative			
GALVFN2	GALVFN2	Galvanizing Furnace #2	Natural Gas - 78,235 scf/hr	N/A	Natural Gas - 78,235 scf/hr	80 MMBtu/hr	24	7	52	662 °F / Ambient Pressure	5.59	4.7E-02	6.57	4.1E-02	0.43	0.43	3.9E-05	See regulatory write-up in the application narrative			
BOXANN1	GALVMVA through GALVMVF	Box Annealing Furnace #1	Natural Gas - 4,902 scf/hr	N/A	Natural Gas - 4,902 scf/hr	5 MMBtu/hr	24	7	52	105 °F / Ambient Pressure	0.25	2.9E-03	0.41	2.5E-03	2.7E-02	2.7E-02	2.5E-06	See regulatory write-up in the application narrative			
BOXANN2	GALVMVA through GALVMVF	Box Annealing Furnace #2	Natural Gas - 4,902 scf/hr	N/A	Natural Gas - 4,902 scf/hr	5 MMBtu/hr	24	7	52	105 °F / Ambient Pressure	0.25	2.9E-03	0.41	2.5E-03	2.7E-02	2.7E-02	2.5E-06	See regulatory write-up in the application narrative			
BOXANN3	GALVMVA through GALVMVF	Box Annealing Furnace #3	Natural Gas - 4,902 scf/hr	N/A	Natural Gas - 4,902 scf/hr	5 MMBtu/hr	24	7	52	105 °F / Ambient Pressure	0.25	2.9E-03	0.41	2.5E-03	2.7E-02	2.7E-02	2.5E-06	See regulatory write-up in the application narrative			
BOXANN4	GALVMVA through GALVMVF	Box Annealing Furnace #4	Natural Gas - 4,902 scf/hr	N/A	Natural Gas - 4,902 scf/hr	5 MMBtu/hr	24	7	52	105 °F / Ambient Pressure	0.25	2.9E-03	0.41	2.5E-03	2.7E-02	2.7E-02	2.5E-06	See regulatory write-up in the application narrative			
BOXANN5	GALVMVA through GALVMVF	Box Annealing Furnace #5	Natural Gas - 4,902 scf/hr	N/A	Natural Gas - 4,902 scf/hr	5 MMBtu/hr	24	7	52	105 °F / Ambient Pressure	0.25	2.9E-03	0.41	2.5E-03	2.7E-02	2.7E-02	2.5E-06	See regulatory write-up in the application narrative			
BOXANN6	GALVMVA through GALVMVF	Box Annealing Furnace #6	Natural Gas - 4,902 scf/hr	N/A	Natural Gas - 4,902 scf/hr	5 MMBtu/hr	24	7	52	105 °F / Ambient Pressure	0.25	2.9E-03	0.41	2.5E-03	2.7E-02	2.7E-02	2.5E-06	See regulatory write-up in the application narrative			
BOXANN7	GALVMVA through GALVMVF	Box Annealing Furnace #7	Natural Gas - 4,902 scf/hr	N/A	Natural Gas - 4,902 scf/hr	5 MMBtu/hr	24	7	52	105 °F / Ambient Pressure	0.25	2.9E-03	0.41	2.5E-03	2.7E-02	2.7E-02	2.5E-06	See regulatory write-up in the application narrative			
BOXANN8	GALVMVA through GALVMVF	Box Annealing Furnace #8	Natural Gas - 4,902 scf/hr	N/A	Natural Gas - 4,902 scf/hr	5 MMBtu/hr	24	7	52	105 °F / Ambient Pressure	0.25	2.9E-03	0.41	2.5E-03	2.7E-02	2.7E-02	2.5E-06	See regulatory write-up in the application narrative			
BOXANN9	GALVMVA through GALVMVF	Box Annealing Furnace #9	Natural Gas - 4,902 scf/hr	N/A	Natural Gas - 4,902 scf/hr	5 MMBtu/hr	24	7	52	105 °F / Ambient Pressure	0.25	2.9E-03	0.41	2.5E-03	2.7E-02	2.7E-02	2.5E-06	See regulatory write-up in the application narrative			
BOXANN10	GALVMVA through GALVMVF	Box Annealing Furnace #10	Natural Gas - 4,902 scf/hr	N/A	Natural Gas - 4,902 scf/hr	5 MMBtu/hr	24	7	52	105 °F / Ambient Pressure	0.25	2.9E-03	0.41	2.5E-03	2.7E-02	2.7E-02	2.5E-06	See regulatory write-up in the application narrative			
BOXANN11	GALVMVA through GALVMVF	Box Annealing Furnace #11	Natural Gas - 4,902 scf/hr	N/A	Natural Gas - 4,902 scf/hr	5 MMBtu/hr	24	7	52	105 °F / Ambient Pressure	0.25	2.9E-03	0.41	2.5E-03	2.7E-02	2.7E-02	2.5E-06	See regulatory write-up in the application narrative			
BOXANN12	GALVMVA through GALVMVF	Box Annealing Furnace #12	Natural Gas - 4,902 scf/hr	N/A	Natural Gas - 4,902 scf/hr	5 MMBtu/hr	24	7	52	105 °F / Ambient Pressure	0.25	2.9E-03	0.41	2.5E-03	2.7E-02	2.7E-02	2.5E-06	See regulatory write-up in the application narrative			
AMU-1	MAUWIPA through MAUWIPE	NG-Fired Makeup Air Unit, WIP Coil Storage Building	Natural Gas - 3,922 scf/hr	N/A	Natural Gas - 3,922 scf/hr	4 MMBtu/hr	24	7	52	Ambient Temperature / Ambient Pressure	0.40	2.4E-03	0.33	2.0E-03	2.2E-02	2.2E-02	2.0E-06	See regulatory write-up in the application narrative			
AMU-2	MAUWIPA through MAUWIPE	NG-Fired Makeup Air Unit, WIP Coil Storage Building	Natural Gas - 3,922 scf/hr	N/A	Natural Gas - 3,922 scf/hr	4 MMBtu/hr	24	7	52	Ambient Temperature / Ambient Pressure	0.40	2.4E-03	0.33	2.0E-03	2.2E-02	2.2E-02	2.0E-06	See regulatory write-up in the application narrative			
AMU-3	MAUWIPA through MAUWIPE	NG-Fired Makeup Air Unit, WIP Coil Storage Building	Natural Gas - 3,922 scf/hr	N/A	Natural Gas - 3,922 scf/hr	4 MMBtu/hr	24	7	52	Ambient Temperature / Ambient Pressure	0.40	2.4E-03	0.33	2.0E-03	2.2E-02	2.2E-02	2.0E-06	See regulatory write-up in the application narrative			
AMU-4	MAUWIPA through MAUWIPE	NG-Fired Makeup Air Unit, WIP Coil Storage Building	Natural Gas - 3,922 scf/hr	N/A	Natural Gas - 3,922 scf/hr	4 MMBtu/hr	24	7	52	Ambient Temperature / Ambient Pressure	0.40	2.4E-03	0.33	2.0E-03	2.2E-02	2.2E-02	2.0E-06	See regulatory write-up in the application narrative			
AMU-5	MAUWIPA through MAUWIPE	NG-Fired Makeup Air Unit, WIP Coil Storage Building	Natural Gas - 3,922 scf/hr	N/A	Natural Gas - 3,922 scf/hr	4 MMBtu/hr	24	7	52	Ambient Temperature / Ambient Pressure	0.40	2.4E-03	0.33	2.0E-03	2.2E-02	2.2E-02	2.0E-06	See regulatory write-up in the application narrative			
AMU-6	MAUWIPA through MAUWIPE	NG-Fired Makeup Air Unit, WIP Coil Storage Building	Natural Gas - 3,922 scf/hr	N/A	Natural Gas - 3,922 scf/hr	4 MMBtu/hr	24	7	52	Ambient Temperature / Ambient Pressure	0.40	2.4E-03	0.33	2.0E-03	2.2E-02	2.2E-02	2.0E-06	See regulatory write-up in the application narrative			
AMU-7	MAUWIPA through MAUWIPE	NG-Fired Makeup Air Unit, WIP Coil Storage Building	Natural Gas - 3,922 scf/hr	N/A	Natural Gas - 3,922 scf/hr	4 MMBtu/hr	24	7	52	Ambient Temperature / Ambient Pressure	0.40	2.4E-03	0.33	2.0E-03	2.2E-02	2.2E-02	2.0E-06	See regulatory write-up in the application narrative			
AMU-8	MAUWIPA through MAUWIPE	NG-Fired Makeup Air Unit, WIP Coil Storage Building	Natural Gas - 3,922 scf/hr	N/A	Natural Gas - 3,922 scf/hr	4 MMBtu/hr	24	7	52	Ambient Temperature / Ambient Pressure	0.40	2.4E-03	0.33	2.0E-03	2.2E-02	2.2E-02	2.0E-06	See regulatory write-up in the application narrative			
AMU-9	MAUFGA through MAUFGC	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	Natural Gas - 3,922 scf/hr	N/A	Natural Gas - 3,922 scf/hr	4 MMBtu/hr	24	7	52	Ambient Temperature / Ambient Pressure	0.40	2.4E-03	0.33	2.0E-03	2.2E-02	2.2E-02	2.0E-06	See regulatory write-up in the application narrative			
AMU-10	MAUFGA through MAUFGC	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	Natural Gas - 3,922 scf/hr	N/A	Natural Gas - 3,922 scf/hr	4 MMBtu/hr	24	7	52	Ambient Temperature / Ambient Pressure	0.40	2.4E-03	0.33	2.0E-03	2.2E-02	2.2E-02	2.0E-06	See regulatory write-up in the application narrative			
AMU-11	MAUFGA through MAUFGC	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	Natural Gas - 3,922 scf/hr	N/A	Natural Gas - 3,922 scf/hr	4 MMBtu/hr	24	7	52	Ambient Temperature / Ambient Pressure	0.40	2.4E-03	0.33	2.0E-03	2.2E-02	2.2E-02	2.0E-06	See regulatory write-up in the application narrative			
AMU-12	MAUFGA through MAUFGC	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	Natural Gas - 3,922 scf/hr	N/A	Natural Gas - 3,922 scf/hr	4 MMBtu/hr	24	7	52	Ambient Temperature / Ambient Pressure	0.40	2.4E-03	0.33	2.0E-03	2.2E-02	2.2E-02	2.0E-06	See regulatory write-up in the application narrative			
AMU-13	MAUFGA through MAUFGC	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	Natural Gas - 3,922 scf/hr	N/A	Natural Gas - 3,922 scf/hr	4 MMBtu/hr	24	7	52	Ambient Temperature / Ambient Pressure	0.40	2.4E-03	0.33	2.0E-03	2.2E-02	2.2E-02	2.0E-06	See regulatory write-up in the application narrative			
AMU-14	MAUFGA through MAUFGC	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	Natural Gas - 3,922 scf/hr	N/A	Natural Gas - 3,922 scf/hr	4 MMBtu/hr	24	7	52	Ambient Temperature / Ambient Pressure	0.40	2.4E-03	0.33	2.0E-03	2.2E-02	2.2E-02	2.0E-06	See regulatory write-up in the application narrative			
AMU-15	MAUFGA through MAUFGC	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	Natural Gas - 3,922 scf/hr	N/A	Natural Gas - 3,922 scf/hr	4 MMBtu/hr	24	7	52	Ambient Temperature / Ambient Pressure	0.40	2.4E-03	0.33	2.0E-03	2.2E-02	2.2E-02	2.0E-06	See regulatory write-up in the application narrative			
AMU-16	MAUFGA through MAUFGC	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	Natural Gas - 3,922 scf/hr	N/A	Natural Gas - 3,922 scf/hr	4 MMBtu/hr	24	7	52	Ambient Temperature / Ambient Pressure	0.40	2.4E-03	0.33	2.0E-03	2.2E-02	2.2E-02	2.0E-06	See regulatory write-up in the application narrative			
AMU-17	MAUPLA through MAUPLC	NG-Fired Makeup Air Unit, PLTCM Bay	Natural Gas - 3,922 scf/hr	N/A	Natural Gas - 3,922 scf/hr	4 MMBtu/hr	24	7	52	Ambient Temperature / Ambient Pressure	0.40	2.4E-03	0.33	2.0E-03	2.2E-02	2.2E-02	2.0E-06	See regulatory write-up in the application narrative			

NSWV
Attachment L - Emissions Unit Data Sheet (General)

Emission Unit Form Number:		1	3	4	6a	6g	7. Projected operating schedule:			8. Projected amount of pollutants								9. Proposed Monitoring, Recordkeeping, Reporting, and Testing			
										Controlled Emission Rates (lb/hr)											
Emission Unit ID	Emission Point ID	Name or Type and Model	Name(s) and Maximum Process Materials Charged	Name(s) and Maximum Material Produced	Type and Amount of Fuel(s) Burned	Proposed Maximum Design Heat Input	Hours/Day	Days/Week	Weeks/Year	@ Temp and Pressure (°F & psia)	NO_X	SO_2	CO	PM_{10}	Hydrocarbons	VOC	Lead	Monitoring	Recordkeeping	Reporting	Testing
AMU-18	MAUPLA through MAUPLC	NG-Fired Makeup Air Unit, PLTCM Bay	Natural Gas - 3,922 scf/hr	N/A	Natural Gas - 3,922 scf/hr	4 MMBtu/hr	24	7	52	Ambient Temperature / Ambient Pressure	0.40	2.4E-03	0.33	2.0E-03	2.2E-02	2.2E-02	2.0E-06	See regulatory write-up in the application narrative			
GALVBOILER1	CGL1-ST1	Galv Line Boiler #1	Natural Gas - 6,569 scf/hr	N/A	Natural Gas - 6,569 scf/hr	7 MMBtu/hr	24	7	52	190 °F / Ambient Pressure	0.34	3.9E-03	0.55	3.4E-03	3.6E-02	3.6E-02	3.3E-06	See regulatory write-up in the application narrative			
GALVBOILER2	CGL2-ST1	Galv Line Boiler #2	Natural Gas - 6,569 scf/hr	N/A	Natural Gas - 6,569 scf/hr	7 MMBtu/hr	24	7	52	190 °F / Ambient Pressure	0.34	3.9E-03	0.55	3.4E-03	3.6E-02	3.6E-02	3.3E-06	See regulatory write-up in the application narrative			
PLTCMBOILER1	PLTCMBLR	PLTCM Boiler #1	Natural Gas - 72,549 scf/hr	N/A	Natural Gas - 72,549 scf/hr	74 MMBtu/hr	24	7	52	307 °F / Ambient Pressure	3.70	4.4E-02	6.09	3.8E-02	0.40	0.40	3.6E-05	See regulatory write-up in the application narrative			
PLTCMBOILER2	PLTCMBLR	PLTCM Boiler #2	Natural Gas - 70,235 scf/hr	N/A	Natural Gas - 70,235 scf/hr	72 MMBtu/hr	24	7	52	307 °F / Ambient Pressure	3.58	4.2E-02	5.90	3.7E-02	0.39	0.39	3.5E-05	See regulatory write-up in the application narrative			
RAW-FEED1	SUBSUNL	Crane Unloading to Dock Scrap Substitute Bin	Scrap Substitute - 455 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	0.13	--	--	--	See regulatory write-up in the application narrative			
RAW-FEED2	SUBSILOF	Dock Scrap Substitute Bin to NBC01 normal belt conveyor	Scrap Substitute - 455 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	0.13	--	--	--	See regulatory write-up in the application narrative			
RAW-FEED3	BULKMH	Unnamed feed into UDH01 unloading hopper	Lime, Alloy, Carbon - 240 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.3E-02	--	--	--	See regulatory write-up in the application narrative			
RAW-FEED4	BULKMH	Unnamed feed into UDH02 unloading hopper	Lime, Alloy, Carbon - 240 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure								See regulatory write-up in the application narrative			
RAW-FEED5	BULKMH	Unnamed feed into UDH03 unloading hopper	Lime, Alloy, Carbon - 240 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure								See regulatory write-up in the application narrative			
RAW-FEED6	BULKMH	Unnamed feed into UDH04 unloading hopper	Lime, Alloy, Carbon - 240 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.3E-02	--	--	--	See regulatory write-up in the application narrative			
RAW-FEED7	BULKMH	Unnamed feed into UDH05 unloading hopper	Lime, Alloy, Carbon - 240 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure								See regulatory write-up in the application narrative			
RAW-FEED8	BULKMH	Unnamed feed into UDH06 unloading hopper	Lime, Alloy, Carbon - 240 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure								See regulatory write-up in the application narrative			
EAF-FEED1	BULKMH	UDH01 unloading hopper to RBC10 reversible belt conveyor	Lime, Alloy, Carbon - 240 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure								See regulatory write-up in the application narrative			
EAF-FEED2	BULKMH	UDH02 unloading hopper to RBC10 reversible belt conveyor	Lime, Alloy, Carbon - 240 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.3E-02	--	--	--	See regulatory write-up in the application narrative			
EAF-FEED3	BULKMH	UDH03 unloading hopper to RBC10 reversible belt conveyor	Lime, Alloy, Carbon - 240 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure								See regulatory write-up in the application narrative			
EAF-FEED4	BULKMH	RBC10 reversible belt conveyor to EBC11 elevating belt conveyor	Lime, Alloy, Carbon - 240 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.3E-02	--	--	--	See regulatory write-up in the application narrative			
EAF-FEED5	BULKMH	EBC11 elevating belt conveyor to WBC11 weighing belt conveyor	Lime, Alloy, Carbon - 240 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.3E-02	--	--	--	See regulatory write-up in the application narrative			
EAF-FEED6	BULKMH	WBC11 weighing belt conveyor to RSC11 reversible shuttle belt conveyor	Lime, Alloy, Carbon - 240 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.3E-02	--	--	--	See regulatory write-up in the application narrative			
EAF-FEED7	MSMVA through MSMVF	RSC11 reversible shuttle belt conveyor to SBN11-SBN22 daily bins	Lime, Alloy, Carbon - 240 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.3E-02	--	--	--	See regulatory write-up in the application narrative			
EAF-FEED8	MSMVA through MSMVF	SBN11 daily bin to DBC11 dosing and weighing belt conveyor	Lime, Carbon - 27 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.5E-04	--	--	--	See regulatory write-up in the application narrative			
EAF-FEED9	MSMVA through MSMVF	SBN12 daily bin to DBC12 dosing and weighing belt conveyor	Lime, Carbon - 27 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.5E-04	--	--	--	See regulatory write-up in the application narrative			
EAF-FEED10	MSMVA through MSMVF	SBN13 daily bin to DBC13 dosing and weighing belt conveyor	Lime, Carbon - 27 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.5E-04	--	--	--	See regulatory write-up in the application narrative			
EAF-FEED11	MSMVA through MSMVF	SBN14 daily bin to DBC14 dosing and weighing belt conveyor	Lime, Carbon - 27 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.5E-04	--	--	--	See regulatory write-up in the application narrative			
EAF-FEED12	MSMVA through MSMVF	DBC11-DBC14 dosing and weighing belt conveyor to RBC11 reversible belt conveyor	Lime, Carbon - 27 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.5E-04	--	--	--	See regulatory write-up in the application narrative			
EAF-FEED13	MSMVA through MSMVF	SBN15-SBN16 daily bins to FWH11 fixed weighing hopper	Alloys - 5 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	2.9E-05	--	--	--	See regulatory write-up in the application narrative			
EAF-FEED14	MSMVA through MSMVF	FWH11 fixed weighing hopper to RBC11 reversible belt conveyor	Alloys - 5 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	2.9E-05	--	--	--	See regulatory write-up in the application narrative			
EAF-FEED15	MSMVA through MSMVF	SBN17 daily bin to DBC15 dosing and weighing belt conveyor	Lime, Carbon - 27 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.5E-04	--	--	--	See regulatory write-up in the application narrative			
EAF-FEED16	MSMVA through MSMVF	SBN18 daily bin to DBC16 dosing and weighing belt conveyor	Lime, Carbon - 27 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.5E-04	--	--	--	See regulatory write-up in the application narrative			
EAF-FEED17	MSMVA through MSMVF	SBN19 daily bin to DBC17 dosing and weighing belt conveyor	Lime, Carbon - 27 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.5E-04	--	--	--	See regulatory write-up in the application narrative			
EAF-FEED18	MSMVA through MSMVF	SBN20 daily bin to DBC18 dosing and weighing belt conveyor	Lime, Carbon - 27 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.5E-04	--	--	--	See regulatory write-up in the application narrative			
EAF-FEED19	MSMVA through MSMVF	DBC15-DBC18 dosing and weighing belt conveyor to RBC12 reversible belt conveyor	Lime, Carbon - 27 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.5E-04	--	--	--	See regulatory write-up in the application narrative			
EAF-FEED20	MSMVA through MSMVF	SBN21-SBN22 daily bins to FWH12 fixed weighing hopper	Alloys - 5 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	2.9E-05	--	--	--	See regulatory write-up in the application narrative			
EAF-FEED21	MSMVA through MSMVF	FWH12 fixed weighing hopper to RBC12 reversible belt conveyor	Alloys - 5 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	2.9E-05	--	--	--	See regulatory write-up in the application narrative			
EAF-FEED22	MSMVA through MSMVF	RBC11 reversible belt conveyor to EBC12 elevating belt conveyor	Lime, Alloy, Carbon - 33 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.8E-04	--	--	--	See regulatory write-up in the application narrative			
EAF-FEED23	MSMVA through MSMVF	RBC12 reversible belt conveyor to EBC13 elevating belt conveyor	Lime, Alloy, Carbon - 33 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.8E-04	--	--	--	See regulatory write-up in the application narrative			
EAF-FEED24	MSMVA through MSMVF	EBC12 elevating belt conveyor to NBC12 normal belt conveyor	Lime, Alloy, Carbon - 33 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.8E-04	--	--	--	See regulatory write-up in the application narrative			

NSWV
Attachment L - Emissions Unit Data Sheet (General)

Emission Unit Form Number:		1	3	4	6a	6g	7. Projected operating schedule:			8. Projected amount of pollutants								9. Proposed Monitoring, Recordkeeping, Reporting, and Testing			
										Controlled Emission Rates (lb/hr)											
Emission Unit ID	Emission Point ID	Name or Type and Model	Name(s) and Maximum Process Materials Charged	Name(s) and Maximum Material Produced	Type and Amount of Fuel(s) Burned	Proposed Maximum Design Heat Input	Hours/Day	Days/Week	Weeks/Year	@ Temp and Pressure (°F & psia)	NO_X	SO_2	CO	PM_{10}	Hydrocarbons	VOC	Lead	Monitoring	Recordkeeping	Reporting	Testing
EAF-FEED25	MSMVA through MSMVF	EBC13 elevating belt conveyor to NBC13 normal belt conveyor	Lime, Alloy, Carbon - 33 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.8E-04	--	--	--	See regulatory write-up in the application narrative			
SUBS-FEED1	SUBSILOF	NBC01 normal belt conveyor to SBM01-SBM04 silos	Scrap Substitute - 455 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	2.5E-02	--	--	--	See regulatory write-up in the application narrative			
SUBS-FEED2	SUBSILOF	SBM01-SBM04 silos to NBC02 normal belt conveyor	Scrap Substitute - 455 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	2.5E-02	--	--	--	See regulatory write-up in the application narrative			
SUBS-FEED3	SUBSFUG	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment	Scrap Substitute - 283 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.6E-02	--	--	--	See regulatory write-up in the application narrative			
SUBS-FEED4	SUBSFUG	SBN01-SBN02 bin extraction equipment to WBC02 weighing belt conveyor	Scrap Substitute - 283 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.6E-02	--	--	--	See regulatory write-up in the application narrative			
SUBS-FEED5	SUBSFUG	SBN03-SBN04 bin extraction equipment to WBC01 weighing belt conveyor	Scrap Substitute - 283 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.6E-02	--	--	--	See regulatory write-up in the application narrative			
SUBS-FEED6	MSMVA through MSMVF	WBC02 weighing belt conveyor to NBC13 for EAF #2 Feed	Scrap Substitute - 283 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-02	--	--	--	See regulatory write-up in the application narrative			
SUBS-FEED7	MSMVA through MSMVF	WBC01 weighing belt conveyor to NBC12 for EAF #1 Feed	Scrap Substitute - 283 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-02	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED1	BULKMH	UDH04 unloading hopper to RBC20 reversible belt conveyor	Alloys, Carbon, Lime - 9 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	4.9E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED2	BULKMH	UDH05 unloading hopper to RBC20 reversible belt conveyor	Alloys, Carbon, Lime - 9 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure								See regulatory write-up in the application narrative			
LMF-FEED3	BULKMH	UDH06 unloading hopper to RBC20 reversible belt conveyor	Alloys, Carbon, Lime - 9 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure								See regulatory write-up in the application narrative			
LMF-FEED4	BULKMH	RBC20 reversible belt conveyor to EBC21 elevating belt conveyor	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED5	BULKMH	EBC21 elevating belt conveyor to WBC21 weighing belt conveyor	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED6	MSMVA through MSMVF	WBC21 weighing belt conveyor to RSC21 reversible shuttle belt conveyor	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-05	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED7	MSMVA through MSMVF	RSC21 reversible shuttle belt conveyor to SBN31-58 bin extraction equipment	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-05	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED8	MSMVA through MSMVF	SBN31-SBN36 bin extraction equipment to FWH21 fixed weighing hopper	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-05	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED9	MSMVA through MSMVF	SBN37-SBN40 bin extraction equipment to FWH22 fixed weighing hopper	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-05	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED10	MSMVA through MSMVF	SBN41-SBN44 bin extraction equipment to FWH23 fixed weighing hopper	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-05	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED11	MSMVA through MSMVF	SBN45-SBN50 bin extraction equipment to FWH24 fixed weighing hopper	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-05	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED12	MSMVA through MSMVF	SBN51-SBN54 bin extraction equipment to FWH25 fixed weighing hopper	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-05	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED13	MSMVA through MSMVF	SBN55-SBN58 bin extraction equipment to FWH26 fixed weighing hopper	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-05	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED14	MSMVA through MSMVF	FWH21-FWH23 fixed weighing hopper to RBC21 reversible belt conveyor	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-05	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED15	MSMVA through MSMVF	FWH24-FWH26 fixed weighing hopper to RBC22 reversible belt conveyor	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-05	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED16	MSMVA through MSMVF	RBC21 reversible belt conveyor to EBC22 elevating belt conveyor	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-05	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED17	MSMVA through MSMVF	EBC22 elevating belt conveyor to NBC22 normal belt conveyor	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-05	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED18	MSMVA through MSMVF	NBC22 normal belt conveyor to RBC23 reversible belt conveyor	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-05	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED19	MSMVA through MSMVF	RBC23 reversible belt conveyor to NBC24 normal belt conveyor	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-05	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED20	MSMVA through MSMVF	NBC24 normal belt conveyor to SHP21-SHP23 surge hopper	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED21	MSMVA through MSMVF	SHP21-SHP23 surge hopper to LF #1.1 ladle furnace	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED22	MSMVA through MSMVF	NBC22 normal belt conveyor to NBC25 normal belt conveyor	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-05	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED23	MSMVA through MSMVF	NBC25 normal belt conveyor to SHP24-SHP26 surge hopper	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED24	MSMVA through MSMVF	SHP24-SHP26 surge hopper to LF #1.2 ladle furnace	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED25	MSMVA through MSMVF	RBC23 reversible belt conveyor to SHP27-SHP28 surge hopper	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED26	MSMVA through MSMVF	SHP27-SHP28 surge hopper to VCG21 vibrating channel	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED27	MSMVA through MSMVF	VCG21 vibrating channel to VD #1 vacuum degasser	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED28	MSMVA through MSMVF	From main crane to SBN59-SBN62 bin extraction equipment	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED29	MSMVA through MSMVF	From main crane to SBN63-SBN66 bin extraction equipment	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			

NSWV
Attachment L - Emissions Unit Data Sheet (General)

Emission Unit Form Number:		1	3	4	6a	6g	7. Projected operating schedule:			8. Projected amount of pollutants								9. Proposed Monitoring, Recordkeeping, Reporting, and Testing			
										Controlled Emission Rates (lb/hr)											
Emission Unit ID	Emission Point ID	Name or Type and Model	Name(s) and Maximum Process Materials Charged	Name(s) and Maximum Material Produced	Type and Amount of Fuel(s) Burned	Maximum Design Heat Input (10^6 BTU/hr)	Hours/Day	Days/Week	Weeks/Year	@ Temp and Pressure (°F & psia)	NO_X	SO_2	CO	PM_{10}	Hydrocarbons	VOC	Lead	Monitoring	Recordkeeping	Reporting	Testing
LMF-FEED30	MSMVA through MSMVF	SBN59-SBN62 bin extraction equipment to TWH21 traveling weighing hopper	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED31	MSMVA through MSMVF	SBN63-SBN66 bin extraction equipment to TWH22 traveling weighing hopper	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED32	MSMVA through MSMVF	TWH21 traveling weighing hopper to LF #1.1 ladle furnace	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED33	MSMVA through MSMVF	TWH22 traveling weighing hopper to LF #1.2 ladle furnace	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED34	MSMVA through MSMVF	RBC22 reversible belt conveyor to EBC23 elevating belt conveyor	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-05	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED35	MSMVA through MSMVF	EBC23 elevating belt conveyor to NBC23 normal belt conveyor	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-05	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED36	MSMVA through MSMVF	NBC23 normal belt conveyor to NBC27 normal belt conveyor	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-05	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED37	MSMVA through MSMVF	NBC27 normal belt conveyor to SHP32-SHP34 surge hopper	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED38	MSMVA through MSMVF	SHP32-SHP34 surge hopper to LF #2.2 ladle furnace	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED39	MSMVA through MSMVF	NBC23 normal belt conveyor to RBC24 reversible belt conveyor	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-05	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED40	MSMVA through MSMVF	RBC24 reversible belt conveyor to SHP35-SHP36 surge hopper	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED41	MSMVA through MSMVF	SHP35-SHP36 surge hopper to VCG21 vibrating channel	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED42	MSMVA through MSMVF	VCG21 vibrating channel to VD #1 vacuum degasser	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED43	MSMVA through MSMVF	RBC24 reversible belt conveyor to NBC26 normal belt conveyor	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-05	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED44	MSMVA through MSMVF	NBC26 normal belt conveyor to SHP29-SHP31 surge hopper	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED45	MSMVA through MSMVF	SHP29-SHP31 surger hopper to LF #2.1 ladle furnace	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED46	MSMVA through MSMVF	From main crane to SBN67-SBN70 bin extraction equipment	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED47	MSMVA through MSMVF	From main crane to SBN71-SBN74 bin extraction equipment	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED48	MSMVA through MSMVF	SBN67-SBN70 bin extraction equipment to TWH23 traveling weighing hopper	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED49	MSMVA through MSMVF	SBN71-SBN74 bin extraction equipment to TWH24 traveling weighing hopper	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED50	MSMVA through MSMVF	TWH23 traveling weighing hopper to LF #2.1 ladle furnace	Alloys, Carbon, Lime - 3 Ton/Hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
EXBHUNLD	EXBHUNLD	Raw Material Handling External Baghouse Dust	Dust - 0.005 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	5.8E-06	--	--	--	See regulatory write-up in the application narrative			
INBHUNLD	MSMVA through MSMVF	Raw Material Handling Internal Baghouse Dust	Dust - 0.005 Ton/hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	5.6E-06	--	--	--	See regulatory write-up in the application narrative			
LMF-FEED51	MSMVA through MSMVF	TWH24 traveling weighing hopper to LF #2.2 ladle furnace	Alloys, Carbon, Lime - 3 ton/hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.6E-04	--	--	--	See regulatory write-up in the application narrative			
BV-0011-0016	SUBSDCK1-6	Crane Unloading Transfers to Dock Scrap Substitute Bin	Air - 1,680 dscfm	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.4E-02	--	--	--	See regulatory write-up in the application narrative			
BV-003	BV-003	Dock Scrap Substitute Bin to NBC01 normal belt conveyor	Air - 1,000 dscfm	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	8.6E-03	--	--	--	See regulatory write-up in the application narrative			
BV-111-122	MSMVA through MSMVF	RSC11 reversible shuttle belt conveyor to SBN11-SBN22 daily bins	Air - 12,000 dscfm	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	0.10	--	--	--	See regulatory write-up in the application narrative			
BV-123-BV-124	MSMVA through MSMVF	EBC12 elevating belt conveyor to NBC12 normal belt conveyor	Air - 2,000 dscfm	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.7E-02	--	--	--	See regulatory write-up in the application narrative			
BV-125-BV-126	MSMVA through MSMVF	EBC13 elevating belt conveyor to NBC13 normal belt conveyor	Air - 2,000 dscfm	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	1.7E-02	--	--	--	See regulatory write-up in the application narrative			
BV-301-BV-304	SUBSILO1-4	SBM01-04 silos bin vent	Air - 4,000 dscfm	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	3.4E-02	--	--	--	See regulatory write-up in the application narrative			
BV-305-BV-308	BV-305-BV-308	SBM01-04 silos to NBC02 normal belt conveyor	Air - 4,000 dscfm	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	3.4E-02	--	--	--	See regulatory write-up in the application narrative			
BV-309-BV-313	BV-309-BV-313	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment	Air - 5,000 dscfm	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	4.3E-02	--	--	--	See regulatory write-up in the application narrative			
BV-314-BV-315	BV-314-BV-315	SBN01-SBN02 bin extraction equipment to WBC02 weighing belt conveyor	Air - 2,000 dscfm	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.7E-02	--	--	--	See regulatory write-up in the application narrative			
BV-316-BV-317	BV-316-BV-317	SBN03-SBN04 bin extraction equipment to WBC01 weighing belt conveyor	Air - 2,000 dscfm	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.7E-02	--	--	--	See regulatory write-up in the application narrative			
BV-318	MSMVA through MSMVF	WBC02 weighing belt conveyor to NBC13 for EAF #2 Feed	Air - 1,000 dscfm	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	8.6E-03	--	--	--	See regulatory write-up in the application narrative			
BV-319	MSMVA through MSMVF	WBC01 weighing belt conveyor to NBC12 for EAF #1 Feed	Air - 1,000 dscfm	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	8.6E-03	--	--	--	See regulatory write-up in the application narrative			
BV-400-BV-427	MSMVA through MSMVF	RSC21 reversible shuttle belt conveyor to SBN31-58 bin extraction equipment	Air - 7,840 dscfm	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	6.7E-02	--	--	--	See regulatory write-up in the application narrative			

NSWV
Attachment L - Emissions Unit Data Sheet (General)

Emission Unit Form Number:		1	3	4	6a	6g	7. Projected operating schedule:			8. Projected amount of pollutants								9. Proposed Monitoring, Recordkeeping, Reporting, and Testing			
										Controlled Emission Rates (lb/hr)											
Emission Unit ID	Emission Point ID	Name or Type and Model	Name(s) and Maximum Process Materials Charged	Name(s) and Maximum Material Produced	Type and Amount of Fuel(s) Burned	Proposed Maximum Design Heat Input	Hours/Day	Days/Week	Weeks/Year	@ Temp and Pressure (°F & psia)	NO_X	SO_2	CO	PM_{10}	Hydrocarbons	VOC	Lead	Monitoring	Recordkeeping	Reporting	Testing
SLAG-BULK1	SLAGPORT	Tractor to SP-JP-H1 Hopper	Slag - 500 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	2.3E-02	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK2	SLAGPORT	SP-JP-H1 Hopper to SP-JP-VGF1 Vibrating Grizzly Feeder	Slag - 500 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	2.3E-02	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK3	SLAGPORT	SP-JP-VGF1 Vibrating Grizzly Feeder to SP-JP-CR1 Crusher	Slag - 158 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	8.5E-02	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK4	SLAGPORT	SP-JP-CR1 Crusher to SP-JP-PF1 Vibrating Pan Feeder	Slag - 158 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	7.3E-03	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK5	SLAGPORT	SP-JP-PF1 Vibrating Pan Feeder to SP-JP-CV1 Conveyor	Slag - 158 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	7.3E-03	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK6	SLAGPORT	SP-JP-VGF1 Vibrating Grizzly Feeder to SP-JP-CV1 Conveyor	Slag - 342 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.6E-02	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK7	SLAGPORT	SP-JP-CV1 Conveyor to SP-CV2 Portable Transfer Conveyor	Slag - 500 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	2.3E-02	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK8	SLAGPORT	SP-CV2 Portable Transfer Conveyor to SP-OBM1 Magnet	Slag - 567 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	2.6E-02	--	--	--	See regulatory write-up in the application narrative			
HSCRAP-BULK9	SLAGPORT	SP-OBM1 Magnet to Stockpile	Scrap - 9 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	4.1E-04	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK10	SLAGPORT	SP-CV2 Portable Transfer Conveyor to SP-CV3 Portable Transfer Conveyor	Slag - 558 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	2.6E-02	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK11	SLAGPORT	SP-CV3 Portable Transfer Conveyor to MAG HP	Slag - 558 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	2.6E-02	--	--	--	See regulatory write-up in the application narrative			
HSCRAP-BULK12	SLAGPORT	MAG HP to Stockpile	Scrap - 3 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.4E-04	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK13	SLAGPORT	SP-CV3 Portable Transfer Conveyor to SP-DB-SCR1 Screener	Slag - 555 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	0.41	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK14	SLAGPORT	Sp-DB-SCR1 Screener to SP-DB-CV5 Reversing Conveyor	Slag - 210 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	9.7E-03	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK15	SLAGPORT	SP-DB-CV5 Conveyor to SP-RS2 Radial Stacker	Slag - 210 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	9.7E-03	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK16	SLAGPORT	SP-RS2 Radial Stacker to Durabase	Slag - 210 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	9.7E-03	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK17	SLAGPORT	SP-DB-SCR1 Screener to SP-DB-CV4 Conveyor	Slag - 279 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.3E-02	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK18	SLAGPORT	SP-DB-CV4 Conveyor to SP-RS1 Radial Stacker	Slag - 279 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.3E-02	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK19	SLAGPORT	SP-RS1 Radial Stacker to Duraberm	Slag - 279 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.3E-02	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK20	SLAGPORT	SP-CP-SCR1 Screener to SP-CP-CV6 Conveyor	Slag - 67 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	3.1E-03	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK21	SLAGPORT	SP-CP-CV6 Conveyor to SP-CP-CV7 Conveyor	Slag - 67 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	3.1E-03	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK22	SLAGPORT	SP-CP-CV7 Conveyor to SP-CP-CR2 Cone Crusher	Slag - 67 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	3.6E-02	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK23	SLAGPORT	SP-CP-CR2 Cone Crusher to SP-CP-CV8 Conveyor	Slag - 67 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	3.1E-03	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK24	SLAGPORT	SP-CP-CV8 Conveyor to SP-CP-CV2 Conveyor	Slag - 67 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	3.1E-03	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK25	SLAGMRP	Front-End Loader to GFH-MA1 Hopper	Slag - 500 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	2.3E-02	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK26	SLAGMRP	GFH-MA1 Hopper to Stockpile	Slag - 10 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	4.6E-04	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK27	SLAGMRP	GFH-MA1 Hopper to PF-MA1 Pan Feeder	Slag - 490 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	2.3E-02	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK28	SLAGMRP	PF-MA1 Pan Feeder to CV-MA1 Conveyor	Slag - 490 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	2.3E-02	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK29	SLAGMRP	CV-MA1 Conveyor to MD1 Mag Drum	Slag - 490 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	2.3E-02	--	--	--	See regulatory write-up in the application narrative			
HSCRAP-BULK30	SLAGMRP	MD1 Mag Drum to FD-MA1 Feeder	Scrap - 301 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.4E-02	--	--	--	See regulatory write-up in the application narrative			
HSCRAP-BULK31	SLAGMRP	FD-MA1 Feeder to CV-MA2 Conveyor	Scrap - 301 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.4E-02	--	--	--	See regulatory write-up in the application narrative			
HSCRAP-BULK32	SLAGMRP	CV-MA2 Conveyor to SC-MA1 Screener	Scrap - 301 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	0.22	--	--	--	See regulatory write-up in the application narrative			
HSCRAP-BULK33	SLAGMRP	SC-MA1 Screener to FD-MA3 Syntron Feeder	Scrap - 20 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	9.2E-04	--	--	--	See regulatory write-up in the application narrative			
HSCRAP-BULK34	SLAGMRP	FD-MA3 Syntron Feeder to CV-MA6 Conveyor	Scrap - 20 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	9.2E-04	--	--	--	See regulatory write-up in the application narrative			
HSCRAP-BULK35	SLAGMRP	CV-MA6 Conveyor to FE Pallet	Scrap - 20 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	9.2E-04	--	--	--	See regulatory write-up in the application narrative			
HSCRAP-BULK36	SLAGMRP	SC-MA1 Screener to CV-MA5 Conveyor	Scrap - 281 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.3E-02	--	--	--	See regulatory write-up in the application narrative			
HSCRAP-BULK37	SLAGMRP	CV-MA5 Conveyor to OBM-MA2 Magnet	Scrap - 1 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	4.6E-05	--	--	--	See regulatory write-up in the application narrative			

NSWV
Attachment L - Emissions Unit Data Sheet (General)

Emission Unit Form Number:		1	3	4	6a	6g	7. Projected operating schedule:			8. Projected amount of pollutants								9. Proposed Monitoring, Recordkeeping, Reporting, and Testing			
										Controlled Emission Rates (lb/hr)											
Emission Unit ID	Emission Point ID	Name or Type and Model	Name(s) and Maximum Process Materials Charged	Name(s) and Maximum Material Produced	Type and Amount of Fuel(s) Burned	Proposed Maximum Design Heat Input	Hours/Day	Days/Week	Weeks/Year	@ Temp and Pressure (°F & psia)	NO_X	SO_2	CO	PM_{10}	Hydrocarbons	VOC	Lead	Monitoring	Recordkeeping	Reporting	Testing
HSCRAP-BULK38	SLAGMRP	OBM-MA2 Magnet to FE Dump Bin	Scrap - 1 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	4.6E-05	--	--	--	See regulatory write-up in the application narrative			
HSCRAP-BULK39	SLAGMRP	CV-MA5 Conveyor to CV-MA-RS2 Radial Stacker	Scrap - 280 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.3E-02	--	--	--	See regulatory write-up in the application narrative			
HSCRAP-BULK40	SLAGMRP	CV-MA-RS2 Radial Stacker to Stockpile	Scrap - 280 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.3E-02	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK41	SLAGMRP	MD1 Mag Drum to FD-MA2 Feeder	Slag - 189 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	8.7E-03	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK42	SLAGMRP	FD-MA2 Feeder to CV-MA3 Conveyor	Slag - 189 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	8.7E-03	--	--	--	See regulatory write-up in the application narrative			
HSCRAP-BULK43	SLAGMRP	CV-MA3 Conveyor to OBM-MA1 Magnet	Scrap - 4 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.8E-04	--	--	--	See regulatory write-up in the application narrative			
HSCRAP-BULK44	SLAGMRP	OBM-MA1 Magnet to Stockpile	Scrap - 4 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.8E-04	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK45	SLAGMRP	CV-MA3 Conveyor to CV-MA4 Conveyor	Slag - 185 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	8.5E-03	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK46	SLAGMRP	CV-MA4 Conveyor to CV-MA-RS1 Radial Stacker	Slag - 185 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	8.5E-03	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK47	SLAGMRP	CV-MA-RS1 Radial Stacker to Stockpile	Slag - 185 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	8.5E-03	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK48	SLAGDROP	Slag loading from Stockpiles	Slag - 2 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	8.0E-05	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK49	SLAGDROP	Crane unload oversize product to drop ball	Slag - 2 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	8.0E-05	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK50	SLAGDROP	Drop ball crushing	Slag - 2 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	9.4E-04	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK51	SLAGDROP	Crane/Front End Loader to Trucks	Slag - 2 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	8.0E-05	--	--	--	See regulatory write-up in the application narrative			
SLAG-BULK52	SLAGDROP	Transfer of resized material to storage pile	Slag - 2 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	8.0E-05	--	--	--	See regulatory write-up in the application narrative			
SCRAP-RECEIVING1	SCRPBRGE	Scrap Handling	Scrap - 952 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	0.14	--	--	--	See regulatory write-up in the application narrative			
SCRAP-RECEIVING2	SCRPBRGE	Scrap Handling		N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure								See regulatory write-up in the application narrative			
SCRAP-RECEIVING3	SCRPBRGE	Scrap Handling		N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure								See regulatory write-up in the application narrative			
SCRAP-HANDLING1	SCRPHNDA through SCRPHNDC	Scrap Handling	Scrap - 952 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	0.41	--	--	--	See regulatory write-up in the application narrative			
SCRAP-HANDLING2	SCRPHNDA through SCRPHNDC	Scrap Handling	Scrap - 952 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	0.41	--	--	--	See regulatory write-up in the application narrative			
SCRAP-HANDLING3	SCRPHNDA through SCRPHNDC	Scrap Handling	Scrap - 952 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	0.41	--	--	--	See regulatory write-up in the application narrative			
SCRAP-PILE1	SCRPSKPA	Scrap Yard Stockpiles	Scrap - 435,602 sq.ft	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	0.31	--	--	--	See regulatory write-up in the application narrative			
SCRAP-PILE2	SCRPSKPB	Scrap Yard Stockpiles	Scrap - 435,602 sq.ft	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	0.31	--	--	--	See regulatory write-up in the application narrative			
SCRAP-PILE3	SCRPSKPC	Scrap Yard Stockpiles	Scrap - 435,602 sq.ft	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	0.31	--	--	--	See regulatory write-up in the application narrative			
SLGSKP1	SLAGMRP	GFH-MA Hopper Pile	Slag - 1,332 sq.ft	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.2E-03	--	--	--	See regulatory write-up in the application narrative			
SLGSKP2	SLAGMRP	CV-MA-RS2 Radial Stacker Pile	Scrap - 24,643 sq.ft	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.7E-02	--	--	--	See regulatory write-up in the application narrative			
SLGSKP3	SLAGMRP	OBM-MA1 Magnet Pile	Scrap - 533 sq.ft	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	3.8E-04	--	--	--	See regulatory write-up in the application narrative			
SLGSKP4	SLAGMRP	CV-MA-RS1 Radial Stacker Pile	Slag - 24,643 sq.ft	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	2.1E-02	--	--	--	See regulatory write-up in the application narrative			
SLGSKP5	SLAGPORT	SP-OBM1 Magnet Pile	Scrap - 507 sq.ft	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	3.6E-04	--	--	--	See regulatory write-up in the application narrative			
SLGSKP6	SLAGPORT	MAG HP Magnet Pile	Scrap - 169 sq.ft	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.2E-04	--	--	--	See regulatory write-up in the application narrative			
SLGSKP7	SLAGPORT	SP-RS1 Radial Stacker Pile Duraberm	Slag - 15,730 sq.ft	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.4E-02	--	--	--	See regulatory write-up in the application narrative			
SLGSKP8	SLAGPORT	SP-RS2 Radial Stacker Pile Durabase	Slag - 15,730 sq.ft	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.4E-02	--	--	--	See regulatory write-up in the application narrative			
SLGSKP9	SLAGPORT	SP-RS1 Radial Stacker Pile 5 Small Chips	Slag - 15,730 sq.ft	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.4E-02	--	--	--	See regulatory write-up in the application narrative			
SLGSKP10	SLAGPORT	SP-RS2 Radial Stacker Pile 6 Big Chips	Slag - 15,730 sq.ft	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	1.4E-02	--	--	--	See regulatory write-up in the application narrative			
SLGSKP11	SLAGPORT	Long-Term Radial Stacker Pile Duraberm	Slag - 31,459 sq.ft	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	2.7E-02	--	--	--	See regulatory write-up in the application narrative			
SLGSKP12	SLAGPORT	Long-Term Radial Stacker Pile Durabase	Slag - 31,459 sq.ft	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	2.7E-02	--	--	--	See regulatory write-up in the application narrative			
SLGSKP13	SLAGPORT	Long-Term Radial Stacker Pile Small Chips	Slag - 31,459 sq.ft	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	2.7E-02	--	--	--	See regulatory write-up in the application narrative			

NSWV
Attachment L - Emissions Unit Data Sheet (General)

Emission Unit Form Number:		1	3	4	6a	6g	7. Projected operating schedule:			8. Projected amount of pollutants								9. Proposed Monitoring, Recordkeeping, Reporting, and Testing			
										Controlled Emission Rates (lb/hr)											
Emission Unit ID	Emission Point ID	Name or Type and Model	Name(s) and Maximum Process Materials Charged	Name(s) and Maximum Material Produced	Type and Amount of Fuel(s) Burned	Proposed Maximum Design Heat Input	Hours/Day	Days/Week	Weeks/Year	@ Temp and Pressure (°F & psia)	NO_X	SO_2	CO	PM_{10}	Hydrocarbons	VOC	Lead	Monitoring	Recordkeeping	Reporting	Testing
SLGSKP14	SLAGPORT	Long-Term Radial Stacker Pile Big Chips	Slag - 31,459 sq.ft	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	2.7E-02	--	--	--	See regulatory write-up in the application narrative			
CGL1	CGL1MVA through CGL1MVE	Galvanizing Line 1 Passivation Roll Coater	Coating - 1.625 GPH	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	--	1.16	1.16	--	See regulatory write-up in the application narrative			
CGL2	CGL2MVA through CGL2MVE	Galvanizing Line 2 Passivation Roll Coater	Coating - 1.625 GPH	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	--	1.16	1.16	--	See regulatory write-up in the application narrative			
CGL1	CGL1MVA through CGL1MVE	Galvanizing Line 1 Stenciling	Coating - 0.094 GPH	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	--	1.16	1.16	--	See regulatory write-up in the application narrative			
CGL2	CGL2MVA through CGL2MVE	Galvanizing Line 2 Stenciling	Coating - 0.094 GPH	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	--	1.16	1.16	--	See regulatory write-up in the application narrative			
CSP1	CSP1	Caster Spray Vents	Steel - 606 Ton/hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	3.66	1.45	1.45	--	See regulatory write-up in the application narrative			
CSP2	CSP2	Caster Spray Vents	Steel - 606 Ton/hr	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	7.32	2.91	2.91	--	See regulatory write-up in the application narrative			
SCRAP-CUT	SCRCUTNG	Scrap Cutting in Scrap Processing Area	Natural Gas - 7,059 scf/hr	N/A	Natural Gas - 7,059 scf/hr	7 MMBtu/hr	24	7	52	Ambient Temperature / Ambient Pressure	0.72	4.2E-03	0.59	3.7E-03	3.9E-02	3.9E-02	3.5E-06	See regulatory write-up in the application narrative			
SCRAP-CUT	CUTBHUNL	Scrap and Coil Cutting Baghouse Dust	Dust - 0.021 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	2.3E-05	--	--	--	See regulatory write-up in the application narrative			
SCRAP-CUT	CUTBH	Scrap and Coil Cutting Baghouse	Scrap - 60,274 dscfm	N/A	N/A	N/A	24	7	52	120 °F / Ambient Pressure	--	--	--	0.86	--	--	--	See regulatory write-up in the application narrative			
ASP	ASP	Water Bath Vaporizer	Natural Gas - 45,588 scf/hr	N/A	Natural Gas - 45,588 scf/hr	47 MMBtu/hr	24	7	52	400 °F / Ambient Pressure	4.65	2.7E-02	3.83	2.4E-02	0.25	0.25	2.3E-05	See regulatory write-up in the application narrative			
NCT1	NCT1A through NCT1E	Melt Shop Cooling Tower 1	Water - 112,000 GPM	N/A	N/A	N/A	24	7	52	115 °F / Ambient Pressure	--	--	--	0.13	--	--	--	See regulatory write-up in the application narrative			
CCT4	CCT4A through CCT4B	Caster Cooling Tower 2	Water - 15,500 GPM	N/A	N/A	N/A	24	7	52	115 °F / Ambient Pressure	--	--	--	2.4E-02	1.8E-02	1.8E-02	--	See regulatory write-up in the application narrative			
NCT5	NCT5A through NCT5B	Caster Cooling Tower 3	Water - 37,200 GPM	N/A	N/A	N/A	24	7	52	115 °F / Ambient Pressure	--	--	--	4.3E-02	--	--	--	See regulatory write-up in the application narrative			
CCT6	CCT6A through CCT6C	Hot Mill Cooling Tower 4	Water - 71,000 GPM	N/A	N/A	N/A	24	7	52	115 °F / Ambient Pressure	--	--	--	0.11	8.4E-02	8.4E-02	--	See regulatory write-up in the application narrative			
LCT7	LCT7A through LCT7C	Hot Mill Cooling Tower 5	Water - 56,710 GPM	N/A	N/A	N/A	24	7	52	115 °F / Ambient Pressure	--	--	--	8.7E-02	6.7E-02	6.7E-02	--	See regulatory write-up in the application narrative			
NCT8	NCT8A through NCT8B	Cold Mill Cooling Tower 6	Water - 28,000 GPM	N/A	N/A	N/A	24	7	52	115 °F / Ambient Pressure	--	--	--	3.2E-02	--	--	--	See regulatory write-up in the application narrative			
ASPCT	ASPCTA through ASPCTE	Air Separation Plant Cooling Tower 7	Water - 350 GPM	N/A	N/A	N/A	24	7	52	115 °F / Ambient Pressure	--	--	--	4.0E-04	--	--	--	See regulatory write-up in the application narrative			
BRCKCRSH	BRCKCRSH	Brick Crushing	Brick - 60 Ton/hr	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	0.23	--	--	--	See regulatory write-up in the application narrative			
EMGEN1	EMGEN1	Emergency Generator 1	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN2	EMGEN2	Emergency Generator 2	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN3	EMGEN3	Emergency Generator 3	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN4	EMGEN4	Emergency Generator 4	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN5	EMGEN5	Emergency Generator 5	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN6	EMGEN6	Emergency Generator 6	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN7	EMGEN7	Emergency Generator 7	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN8	EMGEN8	Emergency Generator 8	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN9	EMGEN9	Emergency Generator 9	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN10	EMGEN10	Emergency Generator 10	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN11	EMGEN11	Emergency Generator 11	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN12	EMGEN12	Emergency Generator 12	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN13	EMGEN13	Emergency Generator 13	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN14	EMGEN14	Emergency Generator 14	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN15	EMGEN15	Emergency Generator 15	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN16	EMGEN16	Emergency Generator 16	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN17	EMGEN17	Emergency Generator 17	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN18	EMGEN18	Emergency Generator 18	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN19	EMGEN19	Emergency Generator 19	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			

NSWV
Attachment L - Emissions Unit Data Sheet (General)

Emission Unit Form Number:		1	3	4	6a	6g	7. Projected operating schedule:			8. Projected amount of pollutants								9. Proposed Monitoring, Recordkeeping, Reporting, and Testing			
										Controlled Emission Rates (lb/hr)											
Emission Unit ID	Emission Point ID	Name or Type and Model	Name(s) and Maximum Process Materials Charged	Name(s) and Maximum Material Produced	Type and Amount of Fuel(s) Burned	Proposed Maximum Design Heat Input	Hours/Day	Days/Week	Weeks/Year	@ Temp and Pressure (°F & psia)	NO_X	SO_2	CO	PM_{10}	Hydrocarbons	VOC	Lead	Monitoring	Recordkeeping	Reporting	Testing
EMGEN20	EMGEN20	Emergency Generator 20	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN21	EMGEN21	Emergency Generator 21	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN22	EMGEN22	Emergency Generator 22	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN23	EMGEN23	Emergency Generator 23	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN24	EMGEN24	Emergency Generator 24	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN25	EMGEN25	Emergency Generator 25	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
EMGEN26	EMGEN26	Emergency Generator 26	Natural Gas - 5,332 scf/hr	N/A	Natural Gas - 5,332 scf/hr	5 MMBtu/hr	24	7	52	1,380 °F / Ambient Pressure	1.71	3.2E-03	3.43	1.7E-03	1.50	1.50	--	See regulatory write-up in the application narrative			
PLSTEO	MAUPLA through MAUPLC	Pickle Line Electrostatic Oiler	Steel - 656 ft/min	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	4.2E-02	7.0E-03	7.0E-03	--	See regulatory write-up in the application narrative			
STMSTEO	TMEOMVA and TMEOMVB	Temper Mill Electrostatic Oiler	Steel - 1,400 ft/min	N/A	N/A	N/A	24	7	52	105 °F / Ambient Pressure	--	--	--	9.0E-02	1.5E-02	1.5E-02	--	See regulatory write-up in the application narrative			
CGLEO1	CGL1MVA through CGL1MVE	Galvanizing Line 1 Electrostatic Oiler	Steel - 750 ft/min	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	3.8E-02	6.3E-03	6.3E-03	--	See regulatory write-up in the application narrative			
CGLEO2	CGL2MVA through CGL2MVE	Galvanizing Line 2 Electrostatic Oiler	Steel - 750 ft/min	N/A	N/A	N/A	24	7	52	135 °F / Ambient Pressure	--	--	--	3.8E-02	6.3E-03	6.3E-03	--	See regulatory write-up in the application narrative			
RCLEO	TMEOMVA and TMEOMVB	Recoiler Electrostatic Oiler	Steel - 700 ft/min	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	4.5E-02	7.4E-03	7.4E-03	--	See regulatory write-up in the application narrative			
WASH1	MSMVA through MSMVF	Melt Shop Parts Washer	Solvent - 80 Gallons/Month	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	--	0.54	0.54	--	See regulatory write-up in the application narrative			
WASH2	HMMVA through HMMVL	Hot Mill Parts Washer 01	Solvent - 80 Gallons/Month	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	--	0.54	0.54	--	See regulatory write-up in the application narrative			
WASH3	HMMVA through HMMVL	Hot Mill Parts Washer 02	Solvent - 80 Gallons/Month	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	--	0.54	0.54	--	See regulatory write-up in the application narrative			
WASH4	HMMVA through HMMVL	Hot Mill Parts Washer 03	Solvent - 80 Gallons/Month	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	--	0.54	0.54	--	See regulatory write-up in the application narrative			
WASH5	HMMVA through HMMVL	Hot Mill Parts Washer 04	Solvent - 80 Gallons/Month	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	--	0.54	0.54	--	See regulatory write-up in the application narrative			
WASH6	CGL1MVA through CGL1MVE	Cold Mill Parts Washer 01	Solvent - 80 Gallons/Month	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	--	0.54	0.54	--	See regulatory write-up in the application narrative			
WASH7	CGL1MVA through CGL1MVE	Cold Mill Parts Washer 02	Solvent - 80 Gallons/Month	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	--	0.54	0.54	--	See regulatory write-up in the application narrative			
WASH8	MSMVA through MSMVF	Caster Parts Washer	Solvent - 80 Gallons/Month	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	--	0.54	0.54	--	See regulatory write-up in the application narrative			
WASH9	MAUFGA through MAUFGC	Crane and Mobile Maintenance Parts Washer	Solvent - 80 Gallons/Month	N/A	N/A	N/A	24	7	52	Ambient Temperature / Ambient Pressure	--	--	--	--	0.54	0.54	--	See regulatory write-up in the application narrative			

Note: Extraneous information unrelated to regulatory requirements and air emissions has been excluded from the application form. Information labeled as "to be determined" (TBD) will be provided once specific equipment vendors have been selected.

NSWV
Attachment L - Fugitive Emissions from Paved Haulroads

INDUSTRIAL PAVED HAULROADS & PARKING AREAS (including all equipment traffic involved in process, haul trucks, endloaders, etc.)

s =	Surface material silt content (g/m^2)	3

Roadway Segment	Description	Mean Vehicle Weight (tons)	Daily Miles Traveled (VMT/day)	Annual Miles Traveled (VMT/yr)	Control Device ID Number	Control Efficiency (%)
FUGD-PAVED-01P	North Entry to P&O	15.00	23.30	8,506	Watering	90%
FUGD-PAVED-02P	North Entry to FG	15.00	51.89	18,939	Watering	90%
FUGD-PAVED-03P	North Entry to HB Yard	15.00	36.69	13,392	Watering	90%
FUGD-PAVED-04P	North Entry to Scrap Yard	40.00	54.42	19,864	Watering	90%
FUGD-PAVED-05P	North Entry to Alloy Storage	40.00	69.74	25,455	Watering	90%
FUGD-PAVED-06P	North Entry to EAF Bay	40.00	27.79	10,143	Watering	90%
FUGD-PAVED-07P	North Entry to Slag Bay	20.00	31.77	11,597	Watering	90%
FUGD-PAVED-08P	Scrap Yard to EAF Bay	57.88	182.36	66,560	Watering	90%
FUGD-PAVED-09P	South Port to Scrap Yard	123.25	154.94	56,552	Watering	90%
FUGD-PAVED-10P	South Port to HB Yard	37.33	8.60	3,138	Watering	90%
FUGD-PAVED-11P	South Port to FG	37.33	45.87	16,741	Watering	90%
FUGD-PAVED-12P	South Port to P&O	37.33	31.33	11,436	Watering	90%

SUMMARY OF PAVED HAULROAD EMISSIONS

	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
Roadway Segment	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
FUGD-PAVED-01P	0.81	3.21	0.08	0.32	0.16	0.64	0.02	0.06
FUGD-PAVED-02P	1.88	7.43	0.19	0.74	0.38	1.49	0.04	0.15
FUGD-PAVED-03P	1.33	5.27	0.13	0.53	0.27	1.05	0.03	0.11
FUGD-PAVED-04P	2.01	7.95	0.20	0.79	0.40	1.59	0.04	0.16
FUGD-PAVED-05P	2.58	10.21	0.26	1.02	0.52	2.04	0.05	0.20
FUGD-PAVED-06P	1.02	4.03	0.10	0.40	0.20	0.81	0.02	0.08
FUGD-PAVED-07P	1.56	6.18	0.16	0.62	0.31	1.24	0.03	0.12
FUGD-PAVED-08P	26.27	104.05	2.63	10.40	5.25	20.81	0.53	2.08
FUGD-PAVED-09P	34.61	137.06	3.46	13.71	6.92	27.41	0.69	2.74
FUGD-PAVED-10P	1.43	5.66	0.14	0.57	0.29	1.13	0.03	0.11
FUGD-PAVED-11P	9.39	37.20	0.94	3.72	1.88	7.44	0.19	0.74
FUGD-PAVED-12P	6.21	24.58	0.62	2.46	1.24	4.92	0.12	0.49

Note: Extraneous information unrelated to regulatory requirements and air emissions has been excluded from the application form. Information labeled as "to be determined" (TBD) will be provided once specific equipment vendors have been selected.

NSWV

Attachment L - Emission Unit Data Sheet (Storage Tanks)

Form Number:	2	3	4	5	6	7A	7B	7C	8	9A	9B	10A
	Tank Name	Tank Equipment Identification No. (As Assigned on Equipment List Form)	Emission Point Identification No. (As Assigned on Equipment List Form)	Date of Commencement of Construction (For Existing Tanks)	Type of Change	Does the Tank Have More Than One Mode of Operation? (e.g., Is There More Than One Product Stored in the Tank?)	If YES, Explain and Identify Which Mode is Covered by this Application (Note: A Separate Form Must be Completed for Each Mode).	Provide Any Limitations on Source Operation Affecting Emissions, Any Work Practice Standards (e.g. Production Variation, etc.)	Design Capacity (gal)	Tank Internal Diameter (ft)	Tank Internal Height (or Length) (ft)	Maximum Liquid Height (ft)
	Diesel Tank	T001	T001	N/A	New Construction	No	N/A	N/A	15,000	12	18	17
	Diesel Tank	T002	T002	N/A	New Construction	No	N/A	N/A	1,000	5	8	7
	Diesel Tank	T003	T003	N/A	New Construction	No	N/A	N/A	1,000	5	8	7
	Diesel Tank	T004	T004	N/A	New Construction	No	N/A	N/A	1,000	5	8	7
	Diesel Tank	T005	T005	N/A	New Construction	No	N/A	N/A	1,000	5	8	7
	Gasoline Tank	T006	T006	N/A	New Construction	No	N/A	N/A	1,000	5	8	7
	HCL Tank #1	T007	CMTKFUG	N/A	New Construction	No	N/A	N/A	40,414	14	35	34
	HCL Tank #2	T008	CMTKFUG	N/A	New Construction	No	N/A	N/A	40,414	14	35	34
	HCL Tank #3	T009	CMTKFUG	N/A	New Construction	No	N/A	N/A	40,414	14	35	34
	HCL Tank #4	T010	CMTKFUG	N/A	New Construction	No	N/A	N/A	40,414	14	35	34
	SPL Tank #1	T011	CMTKFUG	N/A	New Construction	No	N/A	N/A	40,414	14	35	34
	SPL Tank #2	T012	CMTKFUG	N/A	New Construction	No	N/A	N/A	40,414	14	35	34
	SPL Tank #3	T013	CMTKFUG	N/A	New Construction	No	N/A	N/A	40,414	14	35	34
	SPL Tank #4	T014	CMTKFUG	N/A	New Construction	No	N/A	N/A	40,414	14	35	34
	SPL Tank #5	T015	CMTKFUG	N/A	New Construction	No	N/A	N/A	40,414	14	35	34
	SPL Tank #6	T016	CMTKFUG	N/A	New Construction	No	N/A	N/A	40,414	14	35	34
	SPL Tank #7	T017	CMTKFUG	N/A	New Construction	No	N/A	N/A	40,414	14	35	34
	SPL Tank #8	T018	CMTKFUG	N/A	New Construction	No	N/A	N/A	40,414	14	35	34
	WOT9.1	T019	T019	N/A	New Construction	No	N/A	N/A	10,000	12	12	11
	COT6.3	T020	T020	N/A	New Construction	No	N/A	N/A	8,225	10	14	13
	COT4.3	T021	T021	N/A	New Construction	No	N/A	N/A	8,225	10	14	13
	COT6.1	T022	T022	N/A	New Construction	No	N/A	N/A	1,750	5	12	11
	COT4.1	T023	T023	N/A	New Construction	No	N/A	N/A	1,750	5	12	11
	Hydraulic Bulk	T024	MVA through HMM	N/A	New Construction	No	N/A	N/A	6,000	8	16	15
	Hydraulic (Morgoil) Bulk	T025	MVA through HMM	N/A	New Construction	No	N/A	N/A	8,000	8	22	21
	Grease Bulk RM/FM	T026	MVA through HMM	N/A	New Construction	No	N/A	N/A	4,500	8	12	11
	Grease Bulk Coilers	T027	MVA through HMM	N/A	New Construction	No	N/A	N/A	4,500	8	12	11
	Grease Bulk RM/FM	T028	MVA through HMM	N/A	New Construction	No	N/A	N/A	1,700	6	8	7
	Grease Bulk Coilers	T029	MVA through HMM	N/A	New Construction	No	N/A	N/A	1,700	6	8	7
	Grease Bulk Roll Shop	T030	MVA through HMM	N/A	New Construction	No	N/A	N/A	1,700	6	8	7

NSWV

Attachment L - Emission Unit Data Sheet (Storage Tanks)

Form Number:	2	3	4	10B	11A	11B	12	13A	13B	14	16	17. Variable Vapor Space Systems (If Applicable)	
	Tank Name	Tank Equipment Identification No. (As Assigned on Equipment List Form)	Emission Point Identification No. (As Assigned on Equipment List Form)	Average Liquid Height (ft)	Maximum Vapor Space Height (ft)	Average Vapor Space Height (ft)	Nominal Capacity (gal)	Maximum Annual Throughput (gal/yr)	Maximum Daily Throughput (gal/day)	Turnovers per Year	Tank Fill Method	Volume Expansion Capacity of System (gal)	Number of Transfers Into System per Year
	Diesel Tank	T001	T001	9	18	9	15,000	120,000	24,000	8	TBD	N/A	N/A
	Diesel Tank	T002	T002	4	8	4	1,000	120,000	24,000	120	TBD	N/A	N/A
	Diesel Tank	T003	T003	4	8	4	1,000	120,000	24,000	120	TBD	N/A	N/A
	Diesel Tank	T004	T004	4	8	4	1,000	120,000	24,000	120	TBD	N/A	N/A
	Diesel Tank	T005	T005	4	8	4	1,000	120,000	24,000	120	TBD	N/A	N/A
	Gasoline Tank	T006	T006	4	8	4	1,000	120,000	24,000	120	TBD	N/A	N/A
	HCL Tank #1	T007	CMTKFUG	17.5	35	17.5	40,414	600,000	120,000	15	TBD	N/A	N/A
	HCL Tank #2	T008	CMTKFUG	17.5	35	17.5	40,414	600,000	120,000	15	TBD	N/A	N/A
	HCL Tank #3	T009	CMTKFUG	17.5	35	17.5	40,414	600,000	120,000	15	TBD	N/A	N/A
	HCL Tank #4	T010	CMTKFUG	17.5	35	17.5	40,414	600,000	120,000	15	TBD	N/A	N/A
	SPL Tank #1	T011	CMTKFUG	17.5	35	17.5	40,414	600,000	120,000	15	TBD	N/A	N/A
	SPL Tank #2	T012	CMTKFUG	17.5	35	17.5	40,414	600,000	120,000	15	TBD	N/A	N/A
	SPL Tank #3	T013	CMTKFUG	17.5	35	17.5	40,414	600,000	120,000	15	TBD	N/A	N/A
	SPL Tank #4	T014	CMTKFUG	17.5	35	17.5	40,414	600,000	120,000	15	TBD	N/A	N/A
	SPL Tank #5	T015	CMTKFUG	17.5	35	17.5	40,414	600,000	120,000	15	TBD	N/A	N/A
	SPL Tank #6	T016	CMTKFUG	17.5	35	17.5	40,414	600,000	120,000	15	TBD	N/A	N/A
	SPL Tank #7	T017	CMTKFUG	17.5	35	17.5	40,414	600,000	120,000	15	TBD	N/A	N/A
	SPL Tank #8	T018	CMTKFUG	17.5	35	17.5	40,414	600,000	120,000	15	TBD	N/A	N/A
	WOT9.1	T019	T019	6	12	6	10,000	30,000	6,000	3	TBD	N/A	N/A
	COT6.3	T020	T020	7	14	7	8,225	30,000	6,000	4	TBD	N/A	N/A
	COT4.3	T021	T021	7	14	7	8,225	30,000	6,000	4	TBD	N/A	N/A
	COT6.1	T022	T022	6	12	6	1,750	12,000	2,400	7	TBD	N/A	N/A
	COT4.1	T023	T023	6	12	6	1,750	12,000	2,400	7	TBD	N/A	N/A
	Hydraulic Bulk	T024	MVA through HMM	8	16	8	6,000	30,000	6,000	5	TBD	N/A	N/A
	Hydraulic (Morgoil) Bulk	T025	MVA through HMM	11	22	11	8,000	30,000	6,000	4	TBD	N/A	N/A
	Grease Bulk RM/FM	T026	MVA through HMM	6	12	6	4,500	30,000	6,000	7	TBD	N/A	N/A
	Grease Bulk Coilers	T027	MVA through HMM	6	12	6	4,500	30,000	6,000	7	TBD	N/A	N/A
	Grease Bulk RM/FM	T028	MVA through HMM	4	8	4	1,700	12,000	2,400	7	TBD	N/A	N/A
	Grease Bulk Coilers	T029	MVA through HMM	4	8	4	1,700	12,000	2,400	7	TBD	N/A	N/A
	Grease Bulk Roll Shop	T030	MVA through HMM	4	8	4	1,700	12,000	2,400	7	TBD	N/A	N/A

NSWV
Attachment L - Emission Unit Data Sheet (Storage Tanks)

Form Number:	2	3	4	18	20A	20B	20C	22A	22B	22C	24A	24B	27
	Tank Name	Tank Equipment Identification No. (As Assigned on Equipment List Form)	Emission Point Identification No. (As Assigned on Equipment List Form)	Type of Tanks (Select All that Apply)	Shell Color	Roof Color	Year Last Painted	Is the tank heated?	If YES, Provide the Operating Temperature (°F)	If YES, Please Describe How Heat is Provided to Tank	For Domed Roof, Provide Roof Radius (ft)	For Cone Roof, Provide Slope (ft/ft)	Provide the City and State on Which the Data in this Section are Based
	Diesel Tank	T001	T001	Fixed Roof - Horizontal	White	White	N/A	No	N/A	N/A	N/A	N/A	Huntington, West Virginia
	Diesel Tank	T002	T002	Fixed Roof - Horizontal	White	White	N/A	No	N/A	N/A	N/A	N/A	Huntington, West Virginia
	Diesel Tank	T003	T003	Fixed Roof - Horizontal	White	White	N/A	No	N/A	N/A	N/A	N/A	Huntington, West Virginia
	Diesel Tank	T004	T004	Fixed Roof - Horizontal	White	White	N/A	No	N/A	N/A	N/A	N/A	Huntington, West Virginia
	Diesel Tank	T005	T005	Fixed Roof - Horizontal	White	White	N/A	No	N/A	N/A	N/A	N/A	Huntington, West Virginia
	Gasoline Tank	T006	T006	Fixed Roof - Horizontal	White	White	N/A	No	N/A	N/A	N/A	N/A	Huntington, West Virginia
	HCL Tank #1	T007	CMTKFUG	Fixed Roof - Cone Roof	White	White	N/A	No	N/A	N/A	N/A	0.0625	Huntington, West Virginia
	HCL Tank #2	T008	CMTKFUG	Fixed Roof - Cone Roof	White	White	N/A	No	N/A	N/A	N/A	0.0625	Huntington, West Virginia
	HCL Tank #3	T009	CMTKFUG	Fixed Roof - Cone Roof	White	White	N/A	No	N/A	N/A	N/A	0.0625	Huntington, West Virginia
	HCL Tank #4	T010	CMTKFUG	Fixed Roof - Cone Roof	White	White	N/A	No	N/A	N/A	N/A	0.0625	Huntington, West Virginia
	SPL Tank #1	T011	CMTKFUG	Fixed Roof - Cone Roof	White	White	N/A	No	N/A	N/A	N/A	0.0625	Huntington, West Virginia
	SPL Tank #2	T012	CMTKFUG	Fixed Roof - Cone Roof	White	White	N/A	No	N/A	N/A	N/A	0.0625	Huntington, West Virginia
	SPL Tank #3	T013	CMTKFUG	Fixed Roof - Cone Roof	White	White	N/A	No	N/A	N/A	N/A	0.0625	Huntington, West Virginia
	SPL Tank #4	T014	CMTKFUG	Fixed Roof - Cone Roof	White	White	N/A	No	N/A	N/A	N/A	0.0625	Huntington, West Virginia
	SPL Tank #5	T015	CMTKFUG	Fixed Roof - Cone Roof	White	White	N/A	No	N/A	N/A	N/A	0.0625	Huntington, West Virginia
	SPL Tank #6	T016	CMTKFUG	Fixed Roof - Cone Roof	White	White	N/A	No	N/A	N/A	N/A	0.0625	Huntington, West Virginia
	SPL Tank #7	T017	CMTKFUG	Fixed Roof - Cone Roof	White	White	N/A	No	N/A	N/A	N/A	0.0625	Huntington, West Virginia
	SPL Tank #8	T018	CMTKFUG	Fixed Roof - Cone Roof	White	White	N/A	No	N/A	N/A	N/A	0.0625	Huntington, West Virginia
	WOT9.1	T019	T019	Fixed Roof - Cone Roof	White	White	N/A	No	N/A	N/A	N/A	0.0625	Huntington, West Virginia
	COT6.3	T020	T020	Fixed Roof - Cone Roof	White	White	N/A	No	N/A	N/A	N/A	0.0625	Huntington, West Virginia
	COT4.3	T021	T021	Fixed Roof - Cone Roof	White	White	N/A	No	N/A	N/A	N/A	0.0625	Huntington, West Virginia
	COT6.1	T022	T022	Fixed Roof - Horizontal	White	White	N/A	No	N/A	N/A	N/A	N/A	Huntington, West Virginia
	COT4.1	T023	T023	Fixed Roof - Horizontal	White	White	N/A	No	N/A	N/A	N/A	N/A	Huntington, West Virginia
	Hydraulic Bulk	T024	MVA through HMM	Fixed Roof - Cone Roof	White	White	N/A	No	N/A	N/A	N/A	0.0625	Huntington, West Virginia
	Hydraulic (Morgoil) Bulk	T025	MVA through HMM	Fixed Roof - Horizontal	White	White	N/A	No	N/A	N/A	N/A	N/A	Huntington, West Virginia
	Grease Bulk RM/FM	T026	MVA through HMM	Fixed Roof - Cone Roof	White	White	N/A	No	N/A	N/A	N/A	0.0625	Huntington, West Virginia
	Grease Bulk Coilers	T027	MVA through HMM	Fixed Roof - Cone Roof	White	White	N/A	No	N/A	N/A	N/A	0.0625	Huntington, West Virginia
	Grease Bulk RM/FM	T028	MVA through HMM	Fixed Roof - Cone Roof	White	White	N/A	No	N/A	N/A	N/A	0.0625	Huntington, West Virginia
	Grease Bulk Coilers	T029	MVA through HMM	Fixed Roof - Cone Roof	White	White	N/A	No	N/A	N/A	N/A	0.0625	Huntington, West Virginia
	Grease Bulk Roll Shop	T030	MVA through HMM	Fixed Roof - Cone Roof	White	White	N/A	No	N/A	N/A	N/A	0.0625	Huntington, West Virginia

NSWV
Attachment L - Emission Unit Data Sheet (Storage Tanks)

Form Number:	2	3	4	28	29	30	31	32	33	34A	34B	35A	35B	36A	36B	37A	37B	38A
	Tank Name	Tank Equipment Identification No. (As Assigned on Equipment List Form)	Emission Point Identification No. (As Assigned on Equipment List Form)	Daily Average Ambient Temperature (°F)	Annual Average Maximum Temperature (°F)	Annual Average Minimum Temperature (°F)	Average Wind Speed (miles/hr)	Annual Average Solar Insulation Factor (BTU/(ft^2-day))	Atmospheric Pressure (psia)	Minimum Average Daily Temperature Range of Bulk Liquid (°F)	Maximum Average Daily Temperature Range of Bulk Liquid (°F)	Minimum Average Operating Pressure Range of Tank (psig)	Maximum Average Operating Pressure Range of Tank (psig)	Minimum Liquid Surface Temperature (°F)	Corresponding Vapor Pressure (psia)	Average Liquid Surface Temperature (°F)	Corresponding Vapor Pressure (psia)	Maximum Liquid Surface Temperature (°F)
	Diesel Tank	T001	T001	See Storage Tank Emission Calculation Worksheets														
	Diesel Tank	T002	T002	See Storage Tank Emission Calculation Worksheets														
	Diesel Tank	T003	T003	See Storage Tank Emission Calculation Worksheets														
	Diesel Tank	T004	T004	See Storage Tank Emission Calculation Worksheets														
	Diesel Tank	T005	T005	See Storage Tank Emission Calculation Worksheets														
	Gasoline Tank	T006	T006	See Storage Tank Emission Calculation Worksheets														
	HCL Tank #1	T007	CMTKFUG	See Storage Tank Emission Calculation Worksheets														
	HCL Tank #2	T008	CMTKFUG	See Storage Tank Emission Calculation Worksheets														
	HCL Tank #3	T009	CMTKFUG	See Storage Tank Emission Calculation Worksheets														
	HCL Tank #4	T010	CMTKFUG	See Storage Tank Emission Calculation Worksheets														
	SPL Tank #1	T011	CMTKFUG	See Storage Tank Emission Calculation Worksheets														
	SPL Tank #2	T012	CMTKFUG	See Storage Tank Emission Calculation Worksheets														
	SPL Tank #3	T013	CMTKFUG	See Storage Tank Emission Calculation Worksheets														
	SPL Tank #4	T014	CMTKFUG	See Storage Tank Emission Calculation Worksheets														
	SPL Tank #5	T015	CMTKFUG	See Storage Tank Emission Calculation Worksheets														
	SPL Tank #6	T016	CMTKFUG	See Storage Tank Emission Calculation Worksheets														
	SPL Tank #7	T017	CMTKFUG	See Storage Tank Emission Calculation Worksheets														
	SPL Tank #8	T018	CMTKFUG	See Storage Tank Emission Calculation Worksheets														
	WOT9.1	T019	T019	See Storage Tank Emission Calculation Worksheets														
	COT6.3	T020	T020	See Storage Tank Emission Calculation Worksheets														
	COT4.3	T021	T021	See Storage Tank Emission Calculation Worksheets														
	COT6.1	T022	T022	See Storage Tank Emission Calculation Worksheets														
	COT4.1	T023	T023	See Storage Tank Emission Calculation Worksheets														
	Hydraulic Bulk	T024	MVA through HMM	See Storage Tank Emission Calculation Worksheets														
	Hydraulic (Morgoil) Bulk	T025	MVA through HMM	See Storage Tank Emission Calculation Worksheets														
	Grease Bulk RM/FM	T026	MVA through HMM	See Storage Tank Emission Calculation Worksheets														
	Grease Bulk Coilers	T027	MVA through HMM	See Storage Tank Emission Calculation Worksheets														
	Grease Bulk RM/FM	T028	MVA through HMM	See Storage Tank Emission Calculation Worksheets														
	Grease Bulk Coilers	T029	MVA through HMM	See Storage Tank Emission Calculation Worksheets														
	Grease Bulk Roll Shop	T030	MVA through HMM	See Storage Tank Emission Calculation Worksheets														

NSWV
Attachment L - Emission Unit Data Sheet (Storage Tanks)

Form Number:	2	3	4	38B	39. Provide the following for each liquid or gas to be stored in tank							40	41. Emission Rate (Remember to attach emissions calculations, including TANKS Summary Sheets if applicable.)				
	Tank Name	Tank Equipment Identification No. (As Assigned on Equipment List Form)	Emission Point Identification No. (As Assigned on Equipment List Form)	Corresponding Vapor Pressure (psia)	Material Name or Composition	Liquid Density (lb/gal)	Vapor Molecular Weight (lb/lb-mole)	Maximum True Vapor Pressure (psia)	Maximum Reid Vapor Pressure (psia)	Months Storage per Year (Start)	Months Storage per Year (End)	Emission Control Devices (Select as Many as Apply)	Material Name & CAS No.	Breather Loss (lb/yr)	Working Loss (lb/yr)	Annual Loss (lb/yr)	Estimation Method
	Diesel Tank	T001	T001		Diesel	7.1	130	0.02	N/A	January	December	Does Not Apply	Diesel	2.13	2.37	4.50	EPA Emission Factor
	Diesel Tank	T002	T002		Diesel	7.1	130	0.02	N/A	January	December	Does Not Apply	Diesel	2.13	2.37	4.50	EPA Emission Factor
	Diesel Tank	T003	T003		Diesel	7.1	130	0.02	N/A	January	December	Does Not Apply	Diesel	2.13	2.37	4.50	EPA Emission Factor
	Diesel Tank	T004	T004		Diesel	7.1	130	0.02	N/A	January	December	Does Not Apply	Diesel	2.13	2.37	4.50	EPA Emission Factor
	Diesel Tank	T005	T005		Diesel	7.1	130	0.02	N/A	January	December	Does Not Apply	Diesel	2.13	2.37	4.50	EPA Emission Factor
	Gasoline Tank	T006	T006		Unleaded Gasoline	5.6	62	15.39	N/A	January	December	Does Not Apply	Unleaded Gasoline	343.41	572.16	915.57	EPA Emission Factor
	HCL Tank #1	T007	CMTKFUG		HCl Acid	9.83	36	0.0	N/A	January	December	Does Not Apply	HCl Acid	2.35	5.19	7.54	EPA Emission Factor
	HCL Tank #2	T008	CMTKFUG		HCl Acid	9.83	36	0.010	N/A	January	December	Does Not Apply	HCl Acid	2.35	5.19	7.54	EPA Emission Factor
	HCL Tank #3	T009	CMTKFUG		HCl Acid	9.83	36	0.010	N/A	January	December	Does Not Apply	HCl Acid	2.35	5.19	7.54	EPA Emission Factor
	HCL Tank #4	T010	CMTKFUG		HCl Acid	9.83	36	0.010	N/A	January	December	Does Not Apply	HCl Acid	2.35	5.19	7.54	EPA Emission Factor
	SPL Tank #1	T011	CMTKFUG		Spent Pickle Liquor	9.83	36	0.010	N/A	January	December	Does Not Apply	Spent Pickle Liquor	2.35	5.19	7.54	EPA Emission Factor
	SPL Tank #2	T012	CMTKFUG		Spent Pickle Liquor	9.83	36	0.010	N/A	January	December	Does Not Apply	Spent Pickle Liquor	2.35	5.19	7.54	EPA Emission Factor
	SPL Tank #3	T013	CMTKFUG		Spent Pickle Liquor	9.83	36	0.010	N/A	January	December	Does Not Apply	Spent Pickle Liquor	2.35	5.19	7.54	EPA Emission Factor
	SPL Tank #4	T014	CMTKFUG		Spent Pickle Liquor	9.83	36	0.010	N/A	January	December	Does Not Apply	Spent Pickle Liquor	2.35	5.19	7.54	EPA Emission Factor
	SPL Tank #5	T015	CMTKFUG		Spent Pickle Liquor	9.83	36	0.010	N/A	January	December	Does Not Apply	Spent Pickle Liquor	2.35	5.19	7.54	EPA Emission Factor
	SPL Tank #6	T016	CMTKFUG		Spent Pickle Liquor	9.83	36	0.010	N/A	January	December	Does Not Apply	Spent Pickle Liquor	2.35	5.19	7.54	EPA Emission Factor
	SPL Tank #7	T017	CMTKFUG		Spent Pickle Liquor	9.83	36	0.010	N/A	January	December	Does Not Apply	Spent Pickle Liquor	2.35	5.19	7.54	EPA Emission Factor
	SPL Tank #8	T018	CMTKFUG		Spent Pickle Liquor	9.83	36	0.010	N/A	January	December	Does Not Apply	Spent Pickle Liquor	2.35	5.19	7.54	EPA Emission Factor
	WOT9.1	T019	T019		Used Oil	7.26	226	0.0005	N/A	January	December	Does Not Apply	Used Oil	0.02	0.01	0.02	EPA Emission Factor
	COT6.3	T020	T020		Used Oil	7.26	226	0.0005	N/A	January	December	Does Not Apply	Used Oil	0.02	0.01	0.02	EPA Emission Factor
	COT4.3	T021	T021		Used Oil	7.26	226	0.0005	N/A	January	December	Does Not Apply	Used Oil	0.02	0.01	0.02	EPA Emission Factor
	COT6.1	T022	T022		Used Oil	7.26	226	0.0005	N/A	January	December	Does Not Apply	Used Oil	0.00	0.00	0.01	EPA Emission Factor
	COT4.1	T023	T023		Used Oil	7.26	226	0.0005	N/A	January	December	Does Not Apply	Used Oil	0.00	0.00	0.01	EPA Emission Factor
	Hydraulic Bulk	T024	MVA through HMM		Hydraulic Oil	7.26	226	0.0005	N/A	January	December	Does Not Apply	Hydraulic Oil	0.01	0.01	0.02	EPA Emission Factor
	Hydraulic (Morgoil) Bulk	T025	MVA through HMM		Hydraulic Oil	7.26	226	0.0005	N/A	January	December	Does Not Apply	Hydraulic Oil	0.01	0.01	0.02	EPA Emission Factor
	Grease Bulk RM/FM	T026	MVA through HMM		Hydraulic Oil	7.26	226	0.0005	N/A	January	December	Does Not Apply	Hydraulic Oil	0.01	0.01	0.02	EPA Emission Factor
	Grease Bulk Coilers	T027	MVA through HMM		Hydraulic Oil	7.26	226	0.0005	N/A	January	December	Does Not Apply	Hydraulic Oil	0.01	0.01	0.02	EPA Emission Factor
	Grease Bulk RM/FM	T028	MVA through HMM		Hydraulic Oil	7.26	226	0.0005	N/A	January	December	Does Not Apply	Hydraulic Oil	0.01	0.01	0.02	EPA Emission Factor
	Grease Bulk Coilers	T029	MVA through HMM		Hydraulic Oil	7.26	226	0.0005	N/A	January	December	Does Not Apply	Hydraulic Oil	0.01	0.01	0.02	EPA Emission Factor
	Grease Bulk Roll Shop	T030	MVA through HMM		Hydraulic Oil	7.26	226	0.0005	N/A	January	December	Does Not Apply	Hydraulic Oil	0.01	0.01	0.02	EPA Emission Factor

Note: Extraneous information unrelated to regulatory requirements and air emissions has been excluded from the application form. Information labeled as "to be determined" (TBD) will be provided once specific equipment vendors have been selected.

Attachment M: Air Pollution Control Device Sheet

NSWV

Attachment M - Air Pollution Control Device Sheet (Baghouse)

Form Number:		1	5	11	14. Operation Hours		16	21. Particulate Loading	22	23	24		26	31	32. Proposed Monitoring, Recordkeeping, Reporting, and Testing			
Control Device ID	Emission Point ID	Manufacturer and Model No.	Baghouse Configuration	Baghouse Operation	Max. per Day	Max. per Year	Gas flow rate into the collector (dscfm)	Outlet (gr/scf)	Type of pollutant(s) to be collected (if particulate give specific type)	Is there any SO_3 in the emission stream (If yes, also include ppmv)	Emission rate of pollutant (specify) into and out of collector at maximum design operating conditions		How is filter monitored for indications of deterioration (e.g., broken bags)?	Have you included Baghouse Control Device in the Emissions Points Data Summary Sheet?	Monitoring	Recordkeeping	Reporting	Testing
											Pollutant	Outlet (gr/dscf)						
EAF1-BH	BHST1	TBD	TBD	Continuous	24	8,760	1,620,821	0.0018	PM, PM_{10}, & $PM_{2.5}$	No	PM PM_{10} $PM_{2.5}$	0.0018 0.0052 0.0052	TBD	Yes	See regulatory write-up in the application narrative			
EAF2-BH	BHST2	TBD	TBD	Continuous	24	8,760	1,620,821	0.0018	PM, PM_{10}, & $PM_{2.5}$	No	PM PM_{10} $PM_{2.5}$	0.0018 0.0052 0.0052	TBD	Yes	See regulatory write-up in the application narrative			
PKLSB-CYCL	PKLSB	TBD	TBD	Continuous	24	8,760	47,086	0.0033	PM, PM_{10}, & $PM_{2.5}$	No	PM PM_{10} $PM_{2.5}$	0.00328 0.00328 0.00328	TBD	Yes	See regulatory write-up in the application narrative			
EXT Baghouse	BULKMH	TBD	TBD	Continuous	24	8,760	25,290	0.001	PM, PM_{10}, & $PM_{2.5}$	No	PM PM_{10} $PM_{2.5}$	0.001 0.001 0.001	TBD	Yes	See regulatory write-up in the application narrative			
INT Baghouse	MSMVA through MSMVF	TBD	TBD	Continuous	24	8,760	24,447	0.001	PM, PM_{10}, & $PM_{2.5}$	No	PM PM_{10} $PM_{2.5}$	0.001 0.001 0.001	TBD	Yes	See regulatory write-up in the application narrative			
CUTBH	CUTBH	TBD	TBD	Continuous	24	8,760	100,000	0.001	PM, PM_{10}, & $PM_{2.5}$	No	PM PM_{10} $PM_{2.5}$	0.001 0.001 0.001	TBD	Yes	See regulatory write-up in the application narrative			
BV-0011-0016	SUBSUNL	TBD	Other - Bin Vent Filter	Intermittent	24	8,760	280	0.001	PM, PM_{10}, & $PM_{2.5}$	No	PM PM_{10} $PM_{2.5}$	0.001 0.001 0.0005	TBD	Yes	See regulatory write-up in the application narrative			
BV-003	SUBSILOF	TBD	Other - Bin Vent Filter	Intermittent	24	8,760	1,000	0.001	PM, PM_{10}, & $PM_{2.5}$	No	PM PM_{10} $PM_{2.5}$	0.001 0.001 0.0005	TBD	Yes	See regulatory write-up in the application narrative			
BV-111-122	MSMVA through MSMVF	TBD	Other - Bin Vent Filter	Intermittent	24	8,760	1,000	0.001	PM, PM_{10}, & $PM_{2.5}$	No	PM PM_{10} $PM_{2.5}$	0.001 0.001 0.0005	TBD	Yes	See regulatory write-up in the application narrative			
BV-123-BV-124	MSMVA through MSMVF	TBD	Other - Bin Vent Filter	Intermittent	24	8,760	1,000	0.001	PM, PM_{10}, & $PM_{2.5}$	No	PM PM_{10} $PM_{2.5}$	0.001 0.001 0.0005	TBD	Yes	See regulatory write-up in the application narrative			
BV-125-BV-126	MSMVA through MSMVF	TBD	Other - Bin Vent Filter	Intermittent	24	8,760	1,000	0.001	PM, PM_{10}, & $PM_{2.5}$	No	PM PM_{10} $PM_{2.5}$	0.001 0.001 0.0005	TBD	Yes	See regulatory write-up in the application narrative			
BV-301-BV-304	SUBSILOF	TBD	Other - Bin Vent Filter	Intermittent	24	8,760	1,000	0.001	PM, PM_{10}, & $PM_{2.5}$	No	PM PM_{10} $PM_{2.5}$	0.001 0.001 0.0005	TBD	Yes	See regulatory write-up in the application narrative			
BV-305-BV-308	SUBSILOF	TBD	Other - Bin Vent Filter	Intermittent	24	8,760	1,000	0.001	PM, PM_{10}, & $PM_{2.5}$	No	PM PM_{10} $PM_{2.5}$	0.001 0.001 0.0005	TBD	Yes	See regulatory write-up in the application narrative			
BV-309-BV-313	SUBSFUG	TBD	Other - Bin Vent Filter	Intermittent	24	8,760	1,000	0.001	PM, PM_{10}, & $PM_{2.5}$	No	PM PM_{10} $PM_{2.5}$	0.001 0.001 0.0005	TBD	Yes	See regulatory write-up in the application narrative			
BV-314-BV-315	SUBSFUG	TBD	Other - Bin Vent Filter	Intermittent	24	8,760	1,000	0.001	PM, PM_{10}, & $PM_{2.5}$	No	PM PM_{10} $PM_{2.5}$	0.001 0.001 0.0005	TBD	Yes	See regulatory write-up in the application narrative			
BV-316-BV-317	SUBSFUG	TBD	Other - Bin Vent Filter	Intermittent	24	8,760	1,000	0.001	PM, PM_{10}, & $PM_{2.5}$	No	PM PM_{10} $PM_{2.5}$	0.001 0.001 0.0005	TBD	Yes	See regulatory write-up in the application narrative			
BV-318	MSMVA through MSMVF	TBD	Other - Bin Vent Filter	Intermittent	24	8,760	1,000	0.001	PM, PM_{10}, & $PM_{2.5}$	No	PM PM_{10} $PM_{2.5}$	0.001 0.001 0.0005	TBD	Yes	See regulatory write-up in the application narrative			
BV-319	MSMVA through MSMVF	TBD	Other - Bin Vent Filter	Intermittent	24	8,760	1,000	0.001	PM, PM_{10}, & $PM_{2.5}$	No	PM PM_{10} $PM_{2.5}$	0.001 0.001 0.0005	TBD	Yes	See regulatory write-up in the application narrative			
BV-400-BV-427	MSMVA through MSMVF	TBD	Other - Bin Vent Filter	Intermittent	24	8,760	280	0.001	PM, PM_{10}, & $PM_{2.5}$	No	PM PM_{10} $PM_{2.5}$	0.001 0.001 0.0005	TBD	Yes	See regulatory write-up in the application narrative			

Note: Extraneous information unrelated to regulatory requirements and air emissions has been excluded from the application form. Information labeled as "to be determined" (TBD) will be provided once specific equipment vendors have been selected.

NSWV
Attachment M - Air Pollution Control Device Sheet (Flare)

Form Number:		1	2	4	5	6. Dimensions of Stack		7	8	9. Burners		12	13	15. Pilot Lights	19	20
Control Device ID	Emission Point ID	Manufacturer and Model No.	Method	Method of System Used	Maximum Capacity of Flare (scf/hr)	Diameter (ft)	Height (ft)	Control Efficiency	Fuel Used in Burners	Number of Burners	Rated Heat Input Capacity (MMBtu/hr)	Flare Height (ft)	Flare Tip Inside Diameter (ft)	Total Heat Input Capacity for Pilots (MMBtu/hr)	Hours of unit operation per year:	Will steam injection be used?
Vacuum Tank Degasser Flare 1	VTDST1	TBD	Elevated flare	Air-assisted	88,219	0.62	174	>98%	Waste Gas & Natural Gas	TBD	12.36	174	0.62	0.8	8.760 (only one flare will be used at a time)	No
Vacuum Tank Degasser Flare 2	VTDST2	TBD	Elevated flare	Air-assisted	88,219	0.62	174	>98%	Waste Gas & Natural Gas	TBD	12.36	174	0.62	0.8		No

NSWV
Attachment M - Air Pollution Control Device Sheet (Flare)

Form Number:		29. Characteristics of Waste Gas Stream to be Burned			30	31	34	36	37	38	43	44. Proposed Monitoring, Recordkeeping, Reporting, and Testing			
Control Device ID	Emission Point ID	Name	Quantity (lb/hr)	Source of Material	Maximum Combustible to Flare (lb/hr)	Total Flow Rate to Flare Including Material to be Burned, Carrier Gasses, Auxiliary Fuel, etc. (ft^3/hr)	Identify and Describe All Auxiliary Fuels, Including Btu/scf	Flare Gas Flow Rate (scfm)	Flare Gas Heat Content (Btu/scf)	Flare Gas Exit Velocity (fps)	Have you Included Flare Control Device in the Emissions Points Data Summary Sheet?	Monitoring	Recordkeeping	Reporting	Testing
Vacuum Tank Degasser Flare 1	VTDST1	CO from Vacuum Tank Degassers	440	Vacuum Tank Degassers	1,069	100,337	Natural Gas (1,020 Btu/scf)	1,470	22.2	66	Yes	See regulatory write-up in the application narrative			
Vacuum Tank Degasser Flare 2	VTDST2	CO from Vacuum Tank Degassers	440	Vacuum Tank Degassers	1,069	100,337	Natural Gas (1,020 Btu/scf)	1,470	22.2	66	Yes	See regulatory write-up in the application narrative			

Note: Extraneous information unrelated to regulatory requirements and air emissions has been excluded from the application form. Information labeled as "to be determined" (TBD) will be provided once specific equipment vendors have been selected.

NSWV

Attachment M - Air Pollution Control Device Sheet (Wet Collecting System-Scrubber)

Form Number:		1	2	9	10	13	15	22. Gas Stream Temperature	23	24. Particulate Grain Loading	25. Emission Rate of Each Pollutant (Specify)			26	28. Dimensions of Stack		34	35. Proposed Monitoring, Recordkeeping, Reporting, and Testing			
												Outlet									
Control Device ID	Emission Point ID	Manufacturer and Model No.	Method	Pressure Drop at Maximum Flow Rate (in H_2O)	Scrubbing Liquor Composition (Material & wt%)	Pressure Drop Through Scrubber (in H_2O)	Liquor Flow Rates to Scrubber (gpm)	Outlet (°F)	Gas Flow Rate (acfm)	Outlet (gr/scf)	Pollutant	lb/hr	gr/acf	Type of Pollutant(s) Controlled (SO_x, Odor, Particulate [Type], and/or Other)	Height (ft)	Diameter (ft)	Have You Included Wet Collecting (Scrubber) Control Device in the Emissions Points Data Summary Sheet?	Monitoring	Recordkeeping	Reporting	Testing
TCM-ME	TCMST	TBD	TBD	TBD	TBD	TBD	TBD	115	275,175	0.0066	PM PM_{10} $PM_{2.5}$	13.23 13.23 13.23	5.6E-03 5.6E-03 5.6E-03	Particulate	213	8.20	Yes	See regulatory write-up in the application narrative			
STM-ME	STMST	TBD	TBD	TBD	TBD	TBD	TBD	90	26,320	0.0022	PM PM_{10} $PM_{2.5}$	0.44 0.44 0.44	2.0E-03 2.0E-03 2.0E-03	Particulate	115	3.28	Yes	See regulatory write-up in the application narrative			
SPM1-ME	CGL1MVA through CGL1MVE	TBD	TBD	TBD	TBD	TBD	TBD	135	330,000	0.0044	PM PM_{10} $PM_{2.5}$	0.55 0.55 0.53	2.0E-04 2.0E-04 1.9E-04	Particulate	221	19.54	Yes	See regulatory write-up in the application narrative			
SPM2-ME	CGL2MVA through CGL2MVE	TBD	TBD	TBD	TBD	TBD	TBD	135	337,500	0.0044	PM PM_{10} $PM_{2.5}$	0.55 0.55 0.53	1.9E-04 1.9E-04 1.8E-04	Particulate	172	19.54	Yes	See regulatory write-up in the application narrative			
CGL1-ME	CGL1_ST1	TBD	TBD	TBD	TBD	TBD	TBD	190	16,862	0.0044	PM PM_{10} $PM_{2.5}$	0.26 0.26 0.26	1.8E-03 1.8E-03 1.8E-03	Particulate	152	2.00	Yes	See regulatory write-up in the application narrative			
CGL2-ME	CGL2_ST1	TBD	TBD	TBD	TBD	TBD	TBD	190	16,862	0.0044	PM PM_{10} $PM_{2.5}$	0.26 0.26 0.26	1.8E-03 1.8E-03 1.8E-03	Particulate	95	2.00	Yes	See regulatory write-up in the application narrative			
PKL1-SCRB	PLST1	TBD	TBD	TBD	TBD	TBD	TBD	343	24,983	0.0109	PM PM_{10} $PM_{2.5}$ HCl	1.43 1.43 1.43 0.53	6.7E-03 6.7E-03 6.7E-03 2.5E-03	Particulate & HCl	148	2.70	Yes	See regulatory write-up in the application narrative			

Note: Some of the information for this form has been excluded, as it was either deemed unecessary for evaluating regulatory requirements and air emissions. Information labled as "to be determined" (TBD) has not yet been determined by NSWV as the design is being finalized and equipment vendors have not yet been selected.

Attachment N: Supporting Emissions Calculations

NSWV- PTE Calculations
Emissions Calculation Inputs and Assumptions

Electric Arc Furnace and Ladle Metallurgical Furnace

Emission Point ID	Emission Unit ID	Unit	Description	Heat Capacity (MMBtu/hr)	Throughput		Emission Factor[1,2]							
					Hourly (ton stl/hr)	Annual (ton stl/yr)	NQ (lb/ton stl)	CO (lb/ton stl)	SO_2 (lb/ton stl)	VOC (lb/ton stl)	Lead[3] (lb/ton stl)	CO_2[4] (lb/MMBtu)	CH_4[4] (lb/MMBtu)	N_2O[4] (lb/MMBtu)
BHST1	EAF1	Melt Shop	Single Shell DC Electric Arc Furnace 1	60.00	280	1,640,000	0.37	2	0.2	0.093	0.00045	116.98	2.20E-03	2.20E-04
BHST2	EAF2	Melt Shop	Single Shell DC Electric Arc Furnace 2	60.00	280	1,640,000	0.37	2	0.2	0.093	0.00045	116.98	2.20E-03	2.20E-04
BHST1	LMF1	Melt Shop	Ladle Metallurgical Furnace 1	--	280	1,640,000	0.05	0.02	0.04	0.005	--	--	--	--
BHST2	LMF2	Melt Shop	Ladle Metallurgical Furnace 2	--	280	1,640,000	0.05	0.02	0.04	0.005	--	--	--	--

[1] Emission factors of criteria pollutants for electric arc furnace are based on anticipated BACT.
[2] Emission factors of criteria pollutants for ladle metallurgical furnace are based on anticipated BACT.
[3] Controlled lead emission factor for electric arc furnace is based on data collected from the Nucor Gallatin Mill.
[4] Emission factors of GHGs are based on Tables C-1 and C-2 of 40 CFR Part 98.

Electric Arc Furnace Throughputs

Emission Point ID	Emission Unit ID	Unit	Description	Throughput											
				Scrap Substitute		Scrap		Additives		Electrode		Carbon		Slag	
				Hourly (lb/hr)	Annual (tpy)	Hourly (lb/hr)	Annual (tpy)	Hourly (lb/hr)	Annual (tpy)	Hourly (lb/hr)	Annual (tpy)	Hourly (lb/hr)	Annual (tpy)	Hourly (lb/hr)	Annual (tpy)
BHST1	EAF1	Melt Shop	Single Shell DC Electric Arc Furnace 1	283,305	1,240,875	377,740	1,654,500	26,256	115,000	368	1,613	9,759	42,743	56,087	245,660
BHST2	EAF2	Melt Shop	Single Shell DC Electric Arc Furnace 2	283,305	1,240,875	377,740	1,654,500	26,256	115,000	368	1,613	9,759	42,743	56,087	245,660

[1] Throughputs are estimates based on similar facilities.

Electric Arc Furnace Carbon Content

Emission Point ID	Emission Unit ID	Unit	Description	Carbon Content					
				Scrap Substitute (wt. frac.)	Scrap (wt. frac.)	Additives (wt. frac.)	Electrode (wt. frac.)	Carbon (wt. frac.)	Slag (wt. frac.)
BHST1	EAF1	Melt Shop	Single Shell DC Electric Arc Furnace 1	0.028	0.0027	0.012	0.999	0.88	0.0267
BHST2	EAF2	Melt Shop	Single Shell DC Electric Arc Furnace 2	0.028	0.0027	0.012	0.999	0.88	0.0267

[1] Carbon weight percentages are estimates based on similar facilities.

Electric Arc Furnace HAP Speciations

Emission Point ID	Emission Unit ID	Unit	Description	Throughput		Emission Factor[1]							
				Hourly (ton stl/hr)	Annual (ton stl/yr)	Ar (lb/ton stl)	Be (lb/ton stl)	Cd (lb/ton stl)	Cr (lb/ton stl)	Hg (lb/ton stl)	Mn (lb/ton stl)	Ni (lb/ton stl)	F[2] (lb/ton stl)
BHST1	EAF1	Melt Shop	Single Shell DC Electric Arc Furnace 1	280	1,640,000	6.20E-06	2.80E-07	5.00E-06	3.50E-06	1.10E-04	3.00E-04	5.50E-06	0.0035
BHST2	EAF2	Melt Shop	Single Shell DC Electric Arc Furnace 2	280	1,640,000	6.20E-06	2.80E-07	5.00E-06	3.50E-06	1.10E-04	3.00E-04	5.50E-06	0.0035

[1] Emission factors of metal pollutants for electric arc furnace are based on AP-42 Section 12.5.1.
[2] Emission factors for flouride for electric arc furnace are based on Nucor Berkeley Mill emission data.

Melt Shop Baghouses

Emission Point ID	Emission Unit ID	Unit	Description	Flow Rate (m^3/hr)	Flow Rate (dscfm)	Emission Factor[1,2]		
						PM (gr/dscf)	PM_{10} (gr/dscf)	$PM_{2.5}$ (gr/dscf)
BHST1	EAF1/LMF1/CAST1	Melt Shop	Pulse Jet Fabric Filter Baghouse 1	2,753,793	1,620,821	0.0018	0.0052	0.0052
BHST2	EAF2/LMF2/CAST1	Melt Shop	Pulse Jet Fabric Filter Baghouse 2	2,753,793	1,620,821	0.0018	0.0052	0.0052
CUTBH	SCRAP-CUT	Scrap Cutting	Scrap and Coil Cutting Baghouse	169,901	100,000	0.001	0.001	0.001
EAFVF1	EAFVF1	Melt Shop	EAF Baghouse 1 Dust Silo	735	433	0.01	0.01	0.01
EAFVF2	EAFVF2	Melt Shop	EAF Baghouse 2 Dust Silo	735	433	0.01	0.01	0.01

[1] Emission factors based on anticipated BACT.
[2] PM emission factor is filterable PM only. PM_{10} and $PM_{2.5}$ emission factors are filterable and condensable PM combined.

Raw Material Transfer Baghouses[a]

Emission Point ID	Emission Unit ID	Unit	Description	Flow Rate (m^3/hr)	Flow Rate (dscfm)
EXTBH	EXTBH	Misc Outdoors	Raw Material Handling External Baghouse	60,000	25,290
INTBH	INTBH	Melt Shop	Raw Material Handling Internal Baghouse	58,000	24,447

[a] Raw Material Handling Baghouses (Interior and Exterior) are routed to the a common header that vents to Melt Shop Baghouse 1 and 2 (BHST1 and 2).

Baghouse Drop Points

Emission Point ID	Emission Unit ID	Unit	Description	Throughput[1]		Emission Factor[2]			Outdoor/ Indoor?
				Hourly (ton/hr)	Annual (tpy)	PM (lb/ton)	PM_{10} (lb/ton)	$PM_{2.5}$ (lb/ton)	
CUTBHUNL	SCRAP-CUT	Scrap Cutting	Scrap and Coil Cutting Baghouse Dust	0.02	184	3.00E-03	1.10E-03	3.11E-04	Outdoor
VF1UNLD	EAFVF1	Melt Shop	EAF Baghouse 1 Dust Silo Baghouse Dust	1.77	15,505	3.00E-03	1.10E-03	3.11E-04	Outdoor
VF2UNLD	EAFVF2	Melt Shop	EAF Baghouse 2 Dust Silo Baghouse Dust	1.77	15,505	3.00E-03	1.10E-03	3.11E-04	Outdoor
EXBHUNLD	EXBHUNLD	Misc Outdoors	Raw Material Handling External Baghouse Dust	0.005	47	3.00E-03	1.10E-03	3.11E-04	Outdoor
MSMVA through MSMVF	INBHUNLD	Melt Shop	Raw Material Handling Internal Baghouse Dust	0.005	45	3.00E-03	1.10E-03	3.11E-04	Indoor

[1] Throughputs for baghouse dust drop points calculated using baghouse emissions and total dust throughput equal to 98% control of PM at each baghouse.
[2] For all drop points, emission factors based on AP-42 Section 11.19.2. Drop points use the uncontrolled factors for conveyor transfer points.
[3] PM distribution for uncontrolled emission factors assumed to be equivalent to the PM distribution for controlled emission factors presented in AP-42 Section 11.19.2.

Melt Shop Fugitives

Emission Point ID	Emission Unit ID	Unit	Description	Capture Efficiency[1]		Building Enclosure[2] (%)	Percent of Filterable PM[3,4]		Emission Factors[5,6]		
				DEC (%)	Canopy Hood (%)		PM_{10} (%)	$PM_{2.5}$ (%)	PM (lb/ton stl)	PM_{10} (lb/ton stl)	$PM_{2.5}$ (lb/ton stl)
MSMVA through MSMVF	MSFUG	Melt Shop	Uncaptured Electric Arc Furnace Fugitives	95	95	90	58%	43%	11.3	6.6	4.9
MSMVA through MSMVF	CASTFUG	Melt Shop	Uncaptured Casting Fugitives	-	95	90	51%	23%	1.2	0.6	0.3

[1] Capture efficiency of the Electric Arc Furnace Direct Evacuation System (DEC) and capture efficiency of the Canopy Hood are estimates based on BACT for similar facilities.
[2] Emission factor obtained from TCEQ Draft RG 058 Rock Crushing Plants, February 2002, Table 7 for sources enclosed by building.
[3] Percentages from AP-42 Chapter 12.5 Iron and Steel Production Table 12.5-2, EAF uncontrolled.
[4] Percentages from AP-42 Chapter 12.5 Iron and Steel Production Table 12.5-2, blast furnace uncontrolled casthouse emissions.
[5] Emission factor for EAF fugitives obtained from AP-42 Table 12.5.1-1 for EAF uncontrolled melting, refining, charging, tapping , and slagging of alloy steel. Condensable PM emissions are not anticipated for this process.
[6] Emission factor for casting fugitives obtained from AP-42 Table 12.5.1-1 for uncontrolled ladle heating and transfer and continuous casting. Condensable PM emissions are not anticipated for this process.

NSWV - PTE Calculations
Emissions Calculation Inputs and Assumptions

Caster Spray Vents

Emission Point ID	Emission Unit ID	Unit	Description	Caster Processing Rate (ton/hr)	Emissions Allocation %	Exhaust Flow Rate (dscfm)	Emission Factor[1,2]						
							PM (gr/dscf)	PM_{10} (gr/dscf)	$PM_{2.5}$ (gr/dscf)	VOC (lb/hr)	Chlorine (lb/ton)	Hydrogen Fluoride (lb/ton)	Fluoride (lb/ton)
CSP1	CSP1	Melt Shop	Caster Spray Vents	606.00	75%	107,504	1.17E-02	3.97E-03	2.33E-03	1.45	6.17E-04	9.20E-05	6.17E-04
CSP2	CSP2	Melt Shop	Caster Spray Vents		25%	215,008	1.17E-02	3.97E-03	2.33E-03	2.91	6.17E-04	9.20E-05	6.17E-04

[1] PM/PM10/PM2.5 and VOC emission factors based on BACT from Nucor Arkansas facility. Exhaust from one caster will be split between two caster spray vents.

[2] Fluoride, hydrogen fluoride, and chlorine emissions are based on an engineering test conducted at Nucor Steel Berkeley. The concentration is conservative in comparison to likely fluoride concentrations due to fluorspar usage at Berkeley mill.

Natural Gas Combustion

Natural Gas Heating Value	1,020	(Btu/scf)

NG Emission Factors										
NO_X (lb/10 ^{6} scf)	CO (lb/10^6 scf)	SO_2 (lb/10^6 scf)	VOC (lb/10^6 scf)	PM (lb/10^6 scf)	PM_{10} (lb/10^6 scf)	$PM_{2.5}$ (lb/10^6 scf)	CO_2 (lb/10^6 scf)	CH_4 (lb/10^6 scf)	N_2O (lb/10^6 scf)	Lead (lb/10^6 scf)
100	84	0.6	5.5	1.9	0.52	0.43	119,317	2.2	0.2	0.0005

Emission Point ID	Emission Unit ID	Unit	Description	Heat Input		Emission Factor									
				Hourly (MMBtu/hr)	Annual (MMBtu/yr)	NO_x[1] (lb/MMBtu)	CO[2] (lb/MMBtu)	SO_2[3] (lb/MMBtu)	VOC[2] (lb/MMBtu)	PM[4] (lb/MMBtu)	PM_{10}[4] (lb/MMBtu)	$PM_{2.5}$[4] (lb/MMBtu)	CO_2[5] (lb/MMBtu)	CH_4[5] (lb/MMBtu)	N_2O[5] (lb/MMBtu)	Lead[2] (lb/MMBtu)
MSMVA through MSMVF	LD1	Melt Shop	Ladle Dryer #1	15	131,400	0.1	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MSMVA through MSMVF	LD2	Melt Shop	Ladle Dryer #2	15	131,400	0.1	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MSMVA through MSMVF	LD3	Melt Shop	Ladle Dryer #3	15	131,400	0.1	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MSMVA through MSMVF	LPHTR1	Melt Shop	Horizontal Ladle Preheater 1	15	131,400	0.1	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MSMVA through MSMVF	LPHTR2	Melt Shop	Horizontal Ladle Preheater 2	15	131,400	0.1	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MSMVA through MSMVF	LPHTR3	Melt Shop	Horizontal Ladle Preheater 3	15	131,400	0.1	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MSMVA through MSMVF	LPHTR4	Melt Shop	Horizontal Ladle Preheater 4	15	131,400	0.1	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MSMVA through MSMVF	LPHTR5	Melt Shop	Horizontal Ladle Preheater 5	15	131,400	0.1	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MSMVA through MSMVF	LPHTR6	Melt Shop	Vertical Ladle Preheater 6	10	87,600	0.1	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MSMVA through MSMVF	LPHTR7	Melt Shop	Vertical Ladle Preheater 7	10	87,600	0.1	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MSMVA through MSMVF	TD1	Melt Shop	Tundish Dryer 1	6	52,560	0.1	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MSMVA through MSMVF	TD2	Melt Shop	Tundish Dryer 2	6	52,560	0.1	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MSMVA through MSMVF	TPHTR1	Melt Shop	Tundish Preheater 1	9	78,840	0.1	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MSMVA through MSMVF	TPHTR2	Melt Shop	Tundish Preheater 2	9	78,840	0.1	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MSMVA through MSMVF	SENPHTR1	Melt Shop	Subentry Nozzle (SEN) Preheater 1	0.62	5,431	0.1	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MSMVA through MSMVF	SENPHTR2	Melt Shop	Subentry Nozzle (SEN) Preheater 2	0.62	5,431	0.1	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MSMVA through MSMVF	SENPHTR3	Melt Shop	Subentry Nozzle (SEN) Preheater Oven	0.682	5,974	0.1	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
GALVFN1	GALVFN1	Cold Mill	Galvanizing Furnace #1	73.3	642,108	0.07	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
GALVFN2	GALVFN2	Cold Mill	Galvanizing Furnace #2	79.8	699,048	0.07	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
GALVMVA through GALVMVF	BOXANN1	Cold Mill	Box Annealing Furnace #1	5.00	43,800	0.05	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
GALVMVA through GALVMVF	BOXANN2	Cold Mill	Box Annealing Furnace #2	5.00	43,800	0.05	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
GALVMVA through GALVMVF	BOXANN3	Cold Mill	Box Annealing Furnace #3	5.00	43,800	0.05	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
GALVMVA through GALVMVF	BOXANN4	Cold Mill	Box Annealing Furnace #4	5.00	43,800	0.05	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
GALVMVA through GALVMVF	BOXANN5	Cold Mill	Box Annealing Furnace #5	5.00	43,800	0.05	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
GALVMVA through GALVMVF	BOXANN6	Cold Mill	Box Annealing Furnace #6	5.00	43,800	0.05	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
GALVMVA through GALVMVF	BOXANN7	Cold Mill	Box Annealing Furnace #7	5.00	43,800	0.05	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
GALVMVA through GALVMVF	BOXANN8	Cold Mill	Box Annealing Furnace #8	5.00	43,800	0.05	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
GALVMVA through GALVMVF	BOXANN9	Cold Mill	Box Annealing Furnace #9	5.00	43,800	0.05	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
GALVMVA through GALVMVF	BOXANN10	Cold Mill	Box Annealing Furnace #10	5.00	43,800	0.05	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
GALVMVA through GALVMVF	BOXANN11	Cold Mill	Box Annealing Furnace #11	5.00	43,800	0.05	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
GALVMVA through GALVMVF	BOXANN12	Cold Mill	Box Annealing Furnace #12	5.00	43,800	0.05	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
TPST-1	TF1	Hot Mill	Hot Mill Tunnel Furnace 1	250	2,190,000	0.07	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
SCRCUTTING	SCRAP-CUT	Scrap Cutting	Scrap Cutting in Scrap Processing Area	7.2	63,072	0.1	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
ASP	ASP	Air Separation	Water Bath Vaporizer	46.5	407,340	0.100	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MAUWPA through MAUWPF	AMU-1	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	4.0	35,040	0.100	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MAUWPA through MAUWPF	AMU-2	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	4.0	35,040	0.100	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MAUWPA through MAUWPF	AMU-3	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	4.0	35,040	0.100	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MAUWPA through MAUWPF	AMU-4	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	4.0	35,040	0.100	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MAUWPA through MAUWPF	AMU-5	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	4.0	35,040	0.100	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MAUWPA through MAUWPF	AMU-6	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	4.0	35,040	0.100	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MAUWPA through MAUWPF	AMU-7	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	4.0	35,040	0.100	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MAUWPA through MAUWPF	AMU-8	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	4.0	35,040	0.100	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MAUFGA through MAUFGC	AMU-9	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	4.0	35,040	0.100	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MAUFGA through MAUFGC	AMU-10	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	4.0	35,040	0.100	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MAUFGA through MAUFGC	AMU-11	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	4.0	35,040	0.100	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MAUFGA through MAUFGC	AMU-12	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	4.0	35,040	0.100	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MAUFGA through MAUFGC	AMU-13	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	4.0	35,040	0.100	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MAUFGA through MAUFGC	AMU-14	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	4.0	35,040	0.100	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MAUFGA through MAUFGC	AMU-15	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	4.0	35,040	0.100	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MAUFGA through MAUFGC	AMU-16	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	4.0	35,040	0.100	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MAUPLA through MAUPLC	AMU-17	Air Make Up	NG-Fired Makeup Air Unit, PLTCM Bay	4.0	35,040	0.100	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
MAUPLA through MAUPLC	AMU-18	Air Make Up	NG-Fired Makeup Air Unit, PLTCM Bay	4.0	35,040	0.100	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
CGL1-ST1	GALVBOILER1	Galv Line	Galv Line Boiler #1	6.7	58,692	0.05	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
CGL2-ST1	GALVBOILER2	Galv Line	Galv Line Boiler #2	6.7	58,692	0.05	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
PLTCMBLR	PLTCMBOILER1	PLTCM	PLTCM Boiler #1	74.0	648,240	0.05	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07
PLTCMBLR	PLTCMBOILER2	PLTCM	PLTCM Boiler #2	71.6	627,566	0.05	0.082	5.88E-04	5.39E-03	1.86E-03	5.10E-04	4.22E-04	116.98	2.20E-03	2.20E-04	4.90E-07

[1] NOx emission factor based on proposed BACT emission limits.

[2] Emission factor is based on AP-42 Section 1.4. Factor is converted to lb/MMBtu based on natural gas heat value.

[3] SO_2 emission factor is calculated based on AP-42 Section 1.4 emission factor and proposed natural gas sulfur content. Factor is converted to lb/MMBtu based on natural gas heat value.

[4] PM emission factor is based on proposed BACT emission limits. Factor is converted to lb/MMBtu based on natural gas heat value. PM emission factor is filterable PM only.

[5] Emission factors of GHGs are based on Tables C-1 and C-2 of 40 CFR Part 98.

[6] PM10 and PM2.5 factors are based on EPA Region V study using preliminary test data for natural gas-fired industrial boilers (all types) and industrial processes. PM_{10} and $PM_{2.5}$ emission factors are filterable and condensable PM combined.

NSWV - PTE Calculations
Emissions Calculation Inputs and Assumptions

VTD - Vacuum Tank Degasser (Mechanical Pumps Used for VTD Pump Down - Heat Input for Flare Gas-Assist Only)

						Additives Throughput		Uncontrolled CO[2]		Heat Input		Emission Factor[3]									
Emission Point ID	Emission Unit ID	Unit	Description	Total Treatment Time (min)	Control Efficiency[1] (%)	Hourly (ton/hr)	Annual (tpy)	Hourly (lb/hr)	Annual (lb/yr)	Hourly (MMBtu/hr)	Annual (MMBtu/yr)	NO_x (lb/MMBtu)	CO (lb/MMBtu)	Lead (lb/MMBtu)	$PM/PM_{10}/PM_{2.5}$[4] (lb/MMBtu)	VOC (lb/MMBtu)	SO_2 (lb/MMBtu)	CO_2 (lb/MMBtu)	CH_4 (lb/MMBtu)	N_2O (lb/MMBtu)
VTDST1	VTD1	Melt Shop	Vacuum Tank 1	50	98	13	115,000	440.06	1,493,333	12.36	108,274	0.068	0.082	4.90E-07	6.05E-03	1.40E-01	5.88E-04	1.17E+02	2.20E-03	2.20E-04
VTDST2	VTD2	Melt Shop	Vacuum Tank 2	50	98	13	115,000	440.06	1,493,333	12.36	108,274	0.068	0.082	4.90E-07	6.05E-03	1.40E-01	5.88E-04	1.17E+02	2.20E-03	2.20E-04

[1] Flare control efficiency based on BACT.
[2] Emission factor based on engineering estimate of carbon removed in VTD process.
[3] Emission factors for NOx and VOC are based on AP-42 Table 13.5-1 for flare operations. Other emission factors from AP-42 Section 1.4 *Natural Gas Combustion* Table 1.4-1, 1.4-2, 1.4-3,1.4-4. Factor is converted to lb/MMBtu based on natural gas heat value.
[4] PM emissions are controlled by a vacuum bag filter before passing through the mechanical pumps. Emission factor is estimate based on information from similar facilities using total gas flow per treatment and an exit loading rate of 0.0083 gr/scf PM.

Slag Stockpiles[1]

Emission Point ID	Emission Unit ID	Unit	Description[2]	Material	Hourly Throughput (tph)	Max Stockpile Surface Area[2] (ft^2)	Max Stockpile Surface Area[2] (acre)	Silt Content[3] (%)	Days with >0.1 inch of Rainfall[4] (days)	f (time that wind exceeds 5.36 m/s - 12 mph)[5] (%)	Ratio of PM to PM_{10}[6] (%)	Ratio of PM to $PM_{2.5}$[7] (%)	Emission Factor[3,8] PM (lb/acre-d)	Emission Factor[3,8] PM_{10} (lb/acre-d)	Emission Factor[3,8] $PM_{2.5}$ (lb/acre-d)
SLAGMRP	SLGSKP1	Storage Piles	GFH-MA Hopper Pile	Slag	10.0	1,332	0.03	5.30	140	4.73	50%	7.50%	1.81	0.91	0.14
SLAGMRP	SLGSKP2	Storage Piles	CV-MA-RS2 Radial Stacker Pile	Scrap	280.0	24,643	0.57	4.30	140	4.73	50%	7.50%	1.47	0.74	0.11
SLAGMRP	SLGSKP3	Storage Piles	OBM-MA1 Magnet Pile	Scrap	4	533	0.01	4.30	140	4.73	50%	7.50%	1.47	0.74	0.11
SLAGMRP	SLGSKP4	Storage Piles	CV-MA-RS1 Radial Stacker Pile	Slag	185	24,643	0.57	5.30	140	4.73	50%	7.50%	1.81	0.91	0.14
SLAGPORT	SLGSKP5	Storage Piles	SP-OBM1 Magnet Pile	Scrap	9	507	0.01	4.30	140	4.73	50%	7.50%	1.47	0.74	0.11
SLAGPORT	SLGSKP6	Storage Piles	MAG HP Magnet Pile	Scrap	3.0	169	0.00	4.30	140	4.73	50%	7.50%	1.47	0.74	0.11
SLAGPORT	SLGSKP7	Storage Piles	SP-RS1 Radial Stacker Pile Duraberm	Slag	279.0	15,730	0.36	5.30	140	4.73	50%	7.50%	1.81	0.91	0.14
SLAGPORT	SLGSKP8	Storage Piles	SP-RS2 Radial Stacker Pile Durabase	Slag	210.0	15,730	0.36	5.30	140	4.73	50%	7.50%	1.81	0.91	0.14
SLAGPORT	SLGSKP9	Storage Piles	SP-RS1 Radial Stacker Pile 5 Small Chips	Slag	155	15,730	0.36	5.30	140	4.73	50%	7.50%	1.81	0.91	0.14
SLAGPORT	SLGSKP10	Storage Piles	SP-RS2 Radial Stacker Pile 6 Big Chips	Slag	75	15,730	0.36	5.30	140	4.73	50%	7.50%	1.81	0.91	0.14
SLAGPORT	SLGSKP11	Storage Piles	Long-Term Radial Stacker Pile Duraberm	Slag	558	31,459	0.72	5.30	140	4.73	50%	7.50%	1.81	0.91	0.14
SLAGPORT	SLGSKP12	Storage Piles	Long-Term Radial Stacker Pile Durabase	Slag	420	31,459	0.72	5.30	140	4.73	50%	7.50%	1.81	0.91	0.14
SLAGPORT	SLGSKP13	Storage Piles	Long-Term Radial Stacker Pile Small Chips	Slag	310	31,459	0.72	5.30	140	4.73	50%	7.50%	1.81	0.91	0.14
SLAGPORT	SLGSKP14	Storage Piles	Long-Term Radial Stacker Pile Big Chips	Slag	150	31,459	0.72	5.30	140	4.73	50%	7.50%	1.81	0.91	0.14

[1] Stockpile emissions reflect wind erosion only with continuous use. See Bulk Material Transfer for stockpile drop point emissions.
[2] Piles based on Slag Processing Plant and Metal Recovery Plant process design. Assumes Radial Stacker surface area is equivalent to 90° of a half torus and Long-Term Piles are double the size of process piles.
[3] AP-42 Section 13.2.4: Aggregate Handling and Storage Piles, Table 13.2.4-1 Typical Silt and Moisture Contents of Materials at Various Industries - Iron and Steel Production - Pellet Ore or Slag. The mean silt content of pellet ore is assumped equivalent to scrap and fugitive dust is expected to be minimal in scrap piles. Slag silt content is based on the mean value.
[4] AP-42 Section 13.2.1 Paved Roads, Figure 13.2.1-2 Mean number of days with 0.01 inch or more of precipitation in the United States.
[5] Based on 2021-2023 hourly wind speed recordings for Huntington WV (HUNTINGTON TRI STATE AIRPORT, WV US (Station ID: 72425003860)).
[6] PM10 is assumed equal to 50% of TSP based on U.S. EPA Control of Open Fugitive Dust Sources, Research Triangle Park, North Carolina, EPA-450/3-88-008. September 1988.
[7] $PM_{2.5}$ is assumed equal to 7.5 % of TSP U.S. EPA Background Document for Revisions to Fine Fraction Ratios Used for AP-42 Fugitive Dust Emission Factors. November 2006.
[8] Total Suspended Particulate (TSP) emission factor based on U.S. EPA *Control of Open Fugitive Dust Sources*. Research Triangle Park, North Carolina, EPA-450/3-88-008. September 1988, Page 4-17.
[9] Total Suspended Particulate assumed equivalent to PM

$$E = 1.7 \left(\frac{s}{1.5}\right)\left(\frac{365-p}{235}\right)\sqrt{\left(\frac{f}{15}\right)} \text{ lb/day/acre}$$

NSWV - PTE Calculations
Emissions Calculation Inputs and Assumptions

Refractory Brick Recycling

Emission Point ID	Emission Unit ID	Unit	Description	Material	Throughput		Emission Factor[1,2]			Outdoor/ Indoor?	Control Applied	Enclosure
					Hourly (ton/hr)	Annual (tpy)	PM (lb/ton)	PM_{10} (lb/ton)	$PM_{2.5}$ (lb/ton)			
BRCKCRSH	BRCKCRSH	Brick Crushing	Truck unloading to Primary Crusher	Crushed Brick	60	14,400	1.60E-05	1.60E-05	1.60E-05	Outdoor	Water Spray	Open
BRCKCRSH	BRCKCRSH	Brick Crushing	Primary Crusher to Conveyor 1	Crushed Brick	60	14,400	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Open
BRCKCRSH	BRCKCRSH	Brick Crushing	Truck unloading to Surge Pile	Crushed Brick	60	14,400	1.60E-05	1.60E-05	1.60E-05	Outdoor	Water Spray	Open
BRCKCRSH	BRCKCRSH	Brick Crushing	Conveyor 1 to Surge Pile	Crushed Brick	60	14,400	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Open
BRCKCRSH	BRCKCRSH	Brick Crushing	Surge Pile to Conveyor 2	Crushed Brick	60	14,400	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Open
BRCKCRSH	BRCKCRSH	Brick Crushing	Conveyor 2 to Scalping Screener	Crushed Brick	60	14,400	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Open
BRCKCRSH	BRCKCRSH	Brick Crushing	Scalping Screener to Conveyor 3	Crushed Brick	60	14,400	2.20E-03	7.40E-04	5.00E-05	Outdoor	Water Spray	Open
BRCKCRSH	BRCKCRSH	Brick Crushing	Conveyor 3 to Product Pile	Crushed Brick	60	14,400	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Open
BRCKCRSH	BRCKCRSH	Brick Crushing	Scalping Screener to Conveyor 4	Crushed Brick	60	14,400	2.20E-03	7.40E-04	5.00E-05	Outdoor	Water Spray	Open
BRCKCRSH	BRCKCRSH	Brick Crushing	Conveyor 4 to Secondary Crusher	Crushed Brick	60	14,400	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Open
BRCKCRSH	BRCKCRSH	Brick Crushing	Conveyor 4 to Conveyor 5	Crushed Brick	60	14,400	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Open
BRCKCRSH	BRCKCRSH	Brick Crushing	Secondary Crusher to Conveyor 6	Crushed Brick	60	14,400	1.20E-03	5.40E-04	1.00E-04	Outdoor	Water Spray	Open
BRCKCRSH	BRCKCRSH	Brick Crushing	Conveyor 6 to Tertiary Crusher	Crushed Brick	60	14,400	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Open
BRCKCRSH	BRCKCRSH	Brick Crushing	Conveyor 6 to Sizing Screener	Crushed Brick	60	14,400	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Open
BRCKCRSH	BRCKCRSH	Brick Crushing	Tertiary Crusher to Conveyor 7	Crushed Brick	60	14,400	1.20E-03	5.40E-04	1.00E-04	Outdoor	Water Spray	Open
BRCKCRSH	BRCKCRSH	Brick Crushing	Conveyor 7 to Sizing Screener	Crushed Brick	60	14,400	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Open
BRCKCRSH	BRCKCRSH	Brick Crushing	Sizing Screener to Conveyor 8	Crushed Brick	60	14,400	2.20E-03	7.40E-04	5.00E-05	Outdoor	Water Spray	Open
BRCKCRSH	BRCKCRSH	Brick Crushing	Conveyor 8 to Truck	Crushed Brick	60	14,400	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Open

[1] Per AP-42 Table 11.19.2-2.
[2] Assume $PM=PM_{10}=PM_{2.5}$ for truck loading and unloading.

Hot Mill Vent

Emission Point ID	Emission Unit ID	Unit	Description	Steel Throughput		Number of Vents	Exhaust Flow Rate per Vent[1] (m^3/hr)	Exhaust Flow Rate per Vent[1] (dscfm)	Emission Factor[2]		
				Hourly (ton/hr)	Annual (tpy)				PM (lb/ton)	PM_{10} (lb/ton)	$PM_{2.5}$ (lb/ton)
HMMVA through HMMVL	HM	Hot Mill	Hot Mill Matrix Vents	606	3,279,000	12	499,968	294,270	0.0010	0.0010	0.00037

[1] Based on computational fluid dynamics modeling for the Nucor Steel West Virginia Hot Mill
[2] Based on data collected from several Nucor facilities.

Hot Mill

Emission Point ID	Emission Unit ID	Unit	Description	Oil Usage (tpy)	Grease[1]
HMMVA through HMMVL	HM	Hot Mill	Hot Mill Matrix Vents Oil Burn-Off	675	4.63%

[1] Oil and Grease weight percent that will volatize is based on data collected from several Nucor facilities.

Cold Mill Pickling Line - Scrubber

Emission Point ID	Emission Unit ID	Unit	Description	Exhaust Flow Rate (dscfm)	HCl Concentration Breakthrough (ppmv)
PLST1	PKL-1	Cold Mill	Pickling Line #1	15,303	6

[1] Assumed to be under negative pressure

Cold Mill

Emission Point ID	Emission Unit ID	Unit	Description	Exhaust Flow Rate (m^3/hr)	Exhaust Flow Rate (dscfm)	Emission Factor[1,2]			
						PM (mg/Nm^3)	PM_{10} (mg/Nm^3)	$PM_{2.5}$ (mg/Nm^3)	VOC (mg/Nm^3)
PLST1	PKL-1	Cold Mill	Pickling Line #1	26,000	15,303	25	25	25	0
PKLSB	PKLSB	Cold Mill	Pickle Line Scale Breaker	80,000	47,086	7.5	7.5	7.5	0
TCMST	TCM	Cold Mill	Tandem Cold Mill	400,000	235,431	15	15	15	10
STMST	STM	Cold Mill	Standalone Temper Mill	40,000	23,543	5	5	5	10
CGL1MVA through CGL1MVE	SPM1	Cold Mill	Skin Pass Mill #1	23,288	13,707	10	10	10	0
CGL2MVA through CGL2MVE	SPM2	Cold Mill	Skin Pass Mill #2	23,288	13,707	10	10	10	0

[1] Based on BACT limits and control device vendor guarantees with safety factor, as applicable. Units of mg per m^3 at STP.
[2] Assumes $PM = PM_{10} = PM_{2.5}$.

Hot Dip Galvanizing Line

Emission Point ID	Emission Unit ID	Unit	Description	Exhaust Flow Rate (m^3/hr)	Exhaust Flow Rate (dscfm)	Emission Factor[1,2]		
						PM (mg/Nm^3)	PM_{10} (mg/Nm^3)	$PM_{2.5}$ (mg/Nm^3)
CGL1_ST1	CGL1	Cold Mill	CGL1 - Cleaning Section	12,000	6,123	10	10	10
CGL2_ST1	CGL2	Cold Mill	CGL2 - Cleaning Section	12,000	6,123	10	10	10

[1] Based on control device vendor guarantees. Units of mg per m^3 at STP.
[2] Assumes $PM = PM_{10} = PM_{2.5}$. Units of mg per m^3 at STP.

Cooling Tower

Emission Point ID	Emission Unit ID	Unit	Description	Flow Rate[1] (gpm)	Drift Eliminator Efficiency[2] (%)	Total Dissoved Solids Conc.[3] (ppmw)	VOC Air Strippable Concentration[4] (ppmv)	Chloroform Air Strippable Concentration[4] (ppmv)	Methylene Chloride Air Strippable Concentration[4] (ppmv)	Toluene Air Strippable Concentration[4] (ppmv)	Carbon Disulfide Air Strippable Concentration[4] (ppmv)	Chloromethane Air Strippable Concentration[4] (ppmv)	Xylene Air Strippable Concentration[4] (ppmv)	Hexane Air Strippable Concentration[4] (ppmv)
NCT1A through NCT1E	NCT1	Melt Shop	Melt Shop Cooling Tower 1	112,000	0.0005%	1,500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CCT4A through CCT4B	CCT4	Hot Mill	Caster Cooling Tower 2	15,500	0.0005%	2,000	2.37E-03	1.06E-03	1.17E-04	5.66E-04	9.81E-05	3.31E-05	6.33E-05	1.60E-04
NCT5A through NCT5B	NCT5	Hot Mill	Caster Cooling Tower 3	37,200	0.0005%	1,500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CCT6A through CCT6C	CCT6	Hot Mill	Hot Mill Cooling Tower 4	71,000	0.0005%	2,000	2.37E-03	1.06E-03	1.17E-04	5.66E-04	9.81E-05	3.31E-05	6.33E-05	1.60E-04
LCT7A through LCT7C	LCT7	Hot Mill	Hot Mill Cooling Tower 5	56,710	0.0005%	2,000	2.37E-03	1.06E-03	1.17E-04	5.66E-04	9.81E-05	3.31E-05	6.33E-05	1.60E-04
NCT8A through NCT8B	NCT8	Cold Mill	Cold Mill Cooling Tower 6	28,000	0.0005%	1,500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPCTA through ASPCTE	ASPCT	Air Separation Plant	Air Separation Plant Cooling Tower 7	350	0.0005%	1,500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[1] Maximum flowrate conservatively based on worst case operating scenarios.
[2] Drift eliminator efficiency based on proposed BACT.
[3] Conservative assumption based on TDS levels at similar facilities.
[4] Based on emission concentrations from Nucor Arkansas.

NSWV - PTE Calculations
Emissions Calculation Inputs and Assumptions

Natural Gas Engines

Emission Point ID	Emission Unit ID	Unit	Description	Engine Rating (hp)	Max Ann. Op. Hours[1] (hr/yr)	Fuel Use [6] (mmscf/hr)	Emission Factor										Emission Factor									
							NO_x[4,7] (g/hp-hr)	CO[4,7] (g/hp-hr)	SO_2[4] (lb/MMBtu)	VOC[4,7] (g/hp-hr)	PM[2.5] (lb/MMBtu)	PM_{10}[4] (lb/MMBtu)	$PM_{1.0}$[4] (lb/MMBtu)	CO_2[4] (kg CO2/mmBTU)	CH_4[4] (kg CH4/mmBTU)	N_2O[4] (kg N2O/mmBTU)	NO_x[4,7] (lb/hp-hr)	CO[4,7] (lb/hp-hr)	SO_2[4] (lb/hp-hr)	VOC[4,7] (lb/hp-hr)	PM[2.5] (lb/hp-hr)	PM_{10}[4] (lb/hp-hr)	$PM_{1.0}$[4] (lb/hp-hr)	CO_2[4] (lb/MMBtu)	CH_4[4] (lb/MMBtu)	N_2O[4] (lb/MMBtu)
EMGEN1	EMGEN1	Galvanizing Lines	Emergency Generator 1	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN2	EMGEN2	Galvanizing Lines	Emergency Generator 2	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN3	EMGEN3	Galvanizing Lines	Emergency Generator 3	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN4	EMGEN4	Galvanizing Lines	Emergency Generator 4	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN5	EMGEN5	Melt Shop	Emergency Generator 5	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN6	EMGEN6	Melt Shop	Emergency Generator 6	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN7	EMGEN7	Melt Shop	Emergency Generator 7	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN8	EMGEN8	Melt Shop	Emergency Generator 8	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN9	EMGEN9	Caster	Emergency Generator 9	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN10	EMGEN10	Caster	Emergency Generator 10	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN11	EMGEN11	Caster	Emergency Generator 11	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN12	EMGEN12	Caster	Emergency Generator 12	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN13	EMGEN13	Hot Mill	Emergency Generator 13	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN14	EMGEN14	Hot Mill	Emergency Generator 14	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN15	EMGEN15	Hot Mill	Emergency Generator 15	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN16	EMGEN16	Hot Mill	Emergency Generator 16	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN17	EMGEN17	Cold Mill	Emergency Generator 17	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN18	EMGEN18	Cold Mill	Emergency Generator 18	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN19	EMGEN19	Cold Mill	Emergency Generator 19	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN20	EMGEN20	Cold Mill	Emergency Generator 20	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN21	EMGEN21	Galvanizing Lines	Emergency Generator 21	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN22	EMGEN22	Galvanizing Lines	Emergency Generator 22	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN23	EMGEN23	Galvanizing Lines	Emergency Generator 23	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN24	EMGEN24	Galvanizing Lines	Emergency Generator 24	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN25	EMGEN25	Air Separations Unit	Emergency Generator 25	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04
EMGEN26	EMGEN26	IT Engine	Emergency Generator 26	777	100	5.33E-03	1.00	2.00	5.88E-04	0.70	1.94E-02	3.04E-04	1.86E-04	53.06	0.001	0.0001	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06	116.98	2.20E-03	2.20E-04

[1] A maximum of 50 hours of maintenance and maximum of 50 hours of general use are allowed under MACT ZZZZ for emergency engines.
[2] Emission factors for generators from EPA Certificate of Conformity (Certificate Number RGNXB25.0291)
[3] Worst-case emission factor for natural gas-fired reciprocating engines in AP-42 Section 3.2, Tables 3.2-1, 3.2-2, and 3.2-3. Conversion to lb/hp-hr assumes brake-specific fuel consumption of 7000 Btu/hp-hr.
[4] Based on Tables C-1 and C-2 of 40 CFR Part 98.
[5] Includes PM filterable and PM condensable.
[6] Hourly fuel use assumes brake-specific fuel consumption of 7000 Btu/hp-hr and fuel higher heating value of 1020 Btu/scf.
[7] Engines are operated as emergency engines but meet non-emergency engine specifications of 40 CFR 60, Subpart JJJJ
[8] PM10 and PM2.5 factors are based on EPA Region V study using preliminary test data for Industrial IC Natural Gas Engines (all types). PM10 and PM2.5 emission factors are filterable and condensable PM combined. Factor is converted to lb/MMBtu based on natural gas heat value.

NSWV - PTE Calculations
Emissions Calculation Inputs and Assumptions

Fugitive Dust from Paved Roads

Emission Point ID	Emission Unit ID	Unit	Description	Road Length (Trip-In)[1] (mile)	Road Length (Trip-Out)[1] (mile)	Road Length (Round-Trip) (mile)	Number of Vehicles (Avg Vehicles/day)	Vehicle Miles Traveled (VMT/day)	Vehicle Avg. Weight When Full [1] (ton)	Vehicle Avg. Weight When Empty (ton)	Road Surface Silt Loading[2] (g/m^2)	No. of Wet Days[3] (days/yr)	Control Efficiency[4] (%)
ROAD1 through ROAD184	FUGD-PAVED-01P	Site-wide	North Entry to P&O	0.54	0.43	0.97	24	23.30	40	15	3	140	90%
ROAD1 through ROAD184	FUGD-PAVED-02P	Site-wide	North Entry to FG	1.16	1.10	2.26	23	51.89	40	15	3	140	90%
ROAD1 through ROAD184	FUGD-PAVED-03P	Site-wide	North Entry to HB Yard	1.17	1.13	2.29	16	36.69	40	15	3	140	90%
ROAD1 through ROAD184	FUGD-PAVED-04P	Site-wide	North Entry to Scrap Yard	1.84	1.78	3.63	15	54.42	40	15	3	140	90%
ROAD1 through ROAD184	FUGD-PAVED-05P	Site-wide	North Entry to Alloy Storage	1.37	1.31	2.68	26	69.74	40	15	3	140	90%
ROAD1 through ROAD184	FUGD-PAVED-06P	Site-wide	North Entry to EAF Bay	1.74	1.74	3.47	8	27.79	40	15	3	140	90%
ROAD1 through ROAD184	FUGD-PAVED-07P	Site-wide	North Entry to Slag Bay	1.77	1.77	3.53	9	31.77	53.33	20	3	140	90%
ROAD1 through ROAD184	FUGD-PAVED-08P	Site-wide	Scrap Yard to EAF Bay	0.65	0.65	1.29	141	182.36	152.90	57.9	3	140	90%
ROAD1 through ROAD184	FUGD-PAVED-09P	Site-wide	South Port to Scrap Yard	0.44	0.44	0.88	176	154.94	200.75	123.3	3	140	90%
ROAD1 through ROAD184	FUGD-PAVED-10P	Site-wide	South Port to HB Yard	1.34	0.81	2.15	4	8.60	260.24	37.3	3	140	90%
ROAD1 through ROAD184	FUGD-PAVED-11P	Site-wide	South Port to FG	2.29	2.29	4.59	10	45.87	260.24	37.3	3	140	90%
ROAD1 through ROAD184	FUGD-PAVED-12P	Site-wide	South Port to P&O	1.63	1.50	3.13	10	31.33	260.24	37.3	3	140	90%

[1] Design parameters based on anticipated operation and potential mateiral throughputs. Roadway lengths determined based on proposed material haul routes, where lengths were measured using georeferenced aerial photos.

[2] Based on AP-42 Table 13.2.1-2, worst-case silt loading for low ADT (<500) public roadways .

[3] Defined to be at least 0.254 mm (0.01 in) of precipitation based on AP-42 Sections 13.2.1.3 and 13.2.2.2.

[4] From EPA document: Control of Open Fugitive Dust Sources, published September 1988.

Auxiliary Storage Tanks

Emission Point ID	Emission Unit ID	Unit Location	Description	Tank Type	Tank Color	Outdoor/ Indoor	Diameter (ft)	Height/Length (ft)	Capacity (gal)	Material	Throughput		
											Hourly (gal/day)	Annual (gal/yr)	Monthly (gal/month)
T001	T001	Slag/Scrap Processing	Diesel Tank	Horizontal Tank	White	Outdoor	12	18	15,000	Diesel	1,000	120,000	10,000
T002	T002	Melt Shop	Diesel Tank	Horizontal Tank	White	Outdoor	5	8	1,000	Diesel	1,000	120,000	10,000
T003	T003	Hot Mill	Diesel Tank	Horizontal Tank	White	Outdoor	5	8	1,000	Diesel	1,000	120,000	10,000
T004	T004	Cold Mill	Diesel Tank	Horizontal Tank	White	Outdoor	5	8	1,000	Diesel	1,000	120,000	10,000
T005	T005	Shipping	Diesel Tank	Horizontal Tank	White	Outdoor	5	8	1,000	Diesel	1,000	120,000	10,000
T006	T006	Plant	Gasoline Tank	Horizontal Tank	White	Outdoor	5	8	1,000	Unleaded Gasoline	1,000	120,000	10,000
CMTKFUG	T007	Cold Mill Tank Farm Building	HCL Tank #1	Cone	White	Indoor	14	35	40,414	HCl Acid	5,000	600,000	50,000
CMTKFUG	T008	Cold Mill Tank Farm Building	HCL Tank #2	Cone	White	Indoor	14	35	40,414	HCl Acid	5,000	600,000	50,000
CMTKFUG	T009	Cold Mill Tank Farm Building	HCL Tank #3	Cone	White	Indoor	14	35	40,414	HCl Acid	5,000	600,000	50,000
CMTKFUG	T010	Cold Mill Tank Farm Building	HCL Tank #4	Cone	White	Indoor	14	35	40,414	HCl Acid	5,000	600,000	50,000
CMTKFUG	T011	Cold Mill Tank Farm Building	SPL Tank #1	Cone	White	Indoor	14	35	40,414	Spent Pickle Liquor	5,000	600,000	50,000
CMTKFUG	T012	Cold Mill Tank Farm Building	SPL Tank #2	Cone	White	Indoor	14	35	40,414	Spent Pickle Liquor	5,000	600,000	50,000
CMTKFUG	T013	Cold Mill Tank Farm Building	SPL Tank #3	Cone	White	Indoor	14	35	40,414	Spent Pickle Liquor	5,000	600,000	50,000
CMTKFUG	T014	Cold Mill Tank Farm Building	SPL Tank #4	Cone	White	Indoor	14	35	40,414	Spent Pickle Liquor	5,000	600,000	50,000
CMTKFUG	T015	Cold Mill Tank Farm Building	SPL Tank #5	Cone	White	Indoor	14	35	40,414	Spent Pickle Liquor	5,000	600,000	50,000
CMTKFUG	T016	Cold Mill Tank Farm Building	SPL Tank #6	Cone	White	Indoor	14	35	40,414	Spent Pickle Liquor	5,000	600,000	50,000
CMTKFUG	T017	Cold Mill Tank Farm Building	SPL Tank #7	Cone	White	Indoor	14	35	40,414	Spent Pickle Liquor	5,000	600,000	50,000
CMTKFUG	T018	Cold Mill Tank Farm Building	SPL Tank #8	Cone	White	Indoor	14	35	40,414	Spent Pickle Liquor	5,000	600,000	50,000
T019	T019	S900 WTP	WOT9.1	Cone	White	Outside	12	12	10,000	Used Oil	250	30,000	2,500
T020	T020	S600 Settling Basin	COT6.3	Cone	White	Outside	10	14	8,225	Used Oil	250	30,000	2,500
T021	T021	S400 Settling Basin	COT4.3	Cone	White	Outside	10	14	8,225	Used Oil	250	30,000	2,500
T022	T022	S600 Clarifier	COT6.1	Horizontal Tank	White	Outside	5	12	1,750	Used Oil	100	12,000	1,000
T023	T023	S400 Clarifier	COT4.1	Horizontal Tank	White	Outside	5	12	1,750	Used Oil	100	12,000	1,000
HMMVA through HMMVL	T024	Hot Mill	Hydraulic Bulk	Cone	White	Indoor	8	16	6,000	Hydraulic Oil	250	30,000	2,500
HMMVA through HMMVL	T025	Hot Mill	Hydraulic (Morgoil) Bulk	Horizontal Tank	White	Indoor	8	22	8,000	Hydraulic Oil	250	30,000	2,500
HMMVA through HMMVL	T026	Hot Mill	Grease Bulk RM/FM	Cone	White	Indoor	8	12	4,500	Hydraulic Oil	250	30,000	2,500
HMMVA through HMMVL	T027	Hot Mill	Grease Bulk Coilers	Cone	White	Indoor	8	12	4,500	Hydraulic Oil	250	30,000	2,500
HMMVA through HMMVL	T028	Hot Mill	Grease Bulk RM/FM	Cone	White	Indoor	6	8	1,700	Hydraulic Oil	100	12,000	1,000
HMMVA through HMMVL	T029	Hot Mill	Grease Bulk Coilers	Cone	White	Indoor	6	8	1,700	Hydraulic Oil	100	12,000	1,000
HMMVA through HMMVL	T030	Hot Mill	Grease Bulk Roll Shop	Cone	White	Indoor	6	8	1,700	Hydraulic Oil	100	12,000	1,000

NSWV - PTE Calculations
Emissions Calculation Inputs and Assumptions

Parts Washers

Emission Point ID	Emission Unit ID	Unit	Description	Outdoor/ Indoor	Diameter (ft)	Length (ft)	Capacity (gal)	Material	VOC Emission Factor[1] (lb/hr/ft^2)	Throughput	
										Annual (gal/yr)	Monthly (gal/month)
MSMVA through MSMVF	WASH1	Melt Shop	Melt Shop Parts Washer	Indoor	2	3.4	80	Solvent	0.08	960	80
HMMVA through HMMVL	WASH2	Hot Mill	Hot Mill Parts Washer 01	Indoor	2	3.4	80	Solvent	0.08	960	80
HMMVA through HMMVL	WASH3	Hot Mill	Hot Mill Parts Washer 02	Indoor	2	3.4	80	Solvent	0.08	960	80
HMMVA through HMMVL	WASH4	Hot Mill	Hot Mill Parts Washer 03	Indoor	2	3.4	80	Solvent	0.08	960	80
HMMVA through HMMVL	WASH5	Hot Mill	Hot Mill Parts Washer 04	Indoor	2	3.4	80	Solvent	0.08	960	80
CGL1MVA through CGL1MVE	WASH6	Cold Mill	Cold Mill Parts Washer 01	Indoor	2	3.4	80	Solvent	0.08	960	80
CGL1MVA through CGL1MVE	WASH7	Cold Mill	Cold Mill Parts Washer 02	Indoor	2	3.4	80	Solvent	0.08	960	80
MSMVA through MSMVF	WASH8	Caster	Caster Parts Washer	Indoor	2	3.4	80	Solvent	0.08	960	80
MAUFGA through MAUFGC	WASH9	Crane and Mobile Maintenance	Crane and Mobile Maintenance Parts Washer	Indoor	2	3.4	80	Solvent	0.08	960	80

[1] Emission factors based on AP-42 Chapter 4.6, Solvent Degreasing Table 4.6-2, All Degreasing Operations

Scrap Unloading

Emission Point ID	Emission Unit ID	Unit	Description[1]	Throughput			Emission Factor[2]		
				Hourly (ton/hr)	Daily (ton/day)	Annual (tpy)	PM[3] (lb/ton)	PM_{10} (lb/ton)	$PM_{2.5}$ (lb/ton)
SCRPBRGE	SCRAP-RECEIVING1	Scrap Handling	Barge to Hauler	952	9,066	3,309,000	0.0003	0.00015	0.000043
SCRPBRGE	SCRAP-RECEIVING2	Scrap Handling	Rail to Hauler						
SCRPBRGE	SCRAP-RECEIVING3	Scrap Handling	Truck to Hauler						

[1] Assume all scrap emissions are at barge unloading rate. These emissions will be greater by default compared to truck and rail due to the additional drop point.
[2] Emission factors from AP-42 Chapter 12.5 *Iron and Steel Production* Table 12.5-4, lump ore pile formation.
[3] Per AP-42 (Table 13.2.2-2), PM_{30} is assumed equivalent to total PM.

Scrap Handling

Emission Point ID	Emission Unit ID	Unit	Description[1]	Throughput		Moisture Content[2] (%)	Aerodynamic Particle Size Multiplier (k)[3]			Emission Factor[4]		
				Hourly (ton/hr)	Annual (tpy)		<30 µm	<10 µm	<2.5 µm	Filterable PM[3] (lb/ton)	PM_{10} (lb/ton)	$PM_{2.5}$ (lb/ton)
SCRPHNDA through SCRPHNDC	SCRAP-HANDLING1	Scrap Handling	Hauler to Scrap Piles	952	3,309,000	5.4	0.74	0.35	0.053	9.13E-04	4.32E-04	6.54E-05
SCRPHNDA through SCRPHNDC	SCRAP-HANDLING2	Scrap Handling	Transfers Between Scrap Storage Piles	952	3,309,000	5.4	0.74	0.35	0.053	9.13E-04	4.32E-04	6.54E-05
SCRPHNDA through SCRPHNDC	SCRAP-HANDLING3	Scrap Handling	Scrap Piles to Hauler	952	3,309,000	5.4	0.74	0.35	0.053	9.13E-04	4.32E-04	6.54E-05

[1] Assume all scrap emissions are at barge unloading rate. These emissions will be greater by default compared to truck and rail due to the additional drop point.
[2] AP-42 Section 13.2.4: Aggregate Handling and Storage Piles, Table 13.2.4-1 Typical Silt and Moisture Contents of Materials at Various Industries - Iron and Steel Production - Lump Ore.
[3] AP-42 Section 13.2.4: Aggregate Handling and Storage Piles, Aerodynamic Particle Size Multiplier (k) For Equation 1
[4] AP-42 Section 13.2.4: Aggregate Handling and Storage Piles, Equation 1

Scrap Pile Yard

Emission Point ID	Emission Unit ID	Unit	Description	Number of Piles[1]	Silt Content[2] (%)	Height[1] (ft)	Max Stockpile Surface Area[1] (ft^2)	(acre)	Days with >0.1 inch of Rainfall[3] (days)	f (time that wind exceeds 5.36 m/s - 12 mph)[4] (%)	Ratio of PM to PM_{10}[5] (%)	Ratio of PM to $PM_{2.5}$[6] (%)	Emission Factor[7]		
													PM (lb/acre-day)	PM_{10} (lb/acre-day)	$PM_{2.5}$ (lb/acre-day)
SCRPSKPA	SCRAP-PILE1	Scrap Piles	Scrap Yard Stockpiles	30	4.3	30	435,602	10.00	140	4.73	50%	7.50%	1.47	0.74	0.11
SCRPSKPB	SCRAP-PILE2	Scrap Piles	Scrap Yard Stockpiles		4.3	30	435,602	10.00	140	4.73	50%	7.50%	1.47	0.74	0.11
SCRPSKPC	SCRAP-PILE3	Scrap Piles	Scrap Yard Stockpiles		4.3	30	435,602	10.00	140	4.73	50%	7.5%	1.47	0.74	0.11

[1] Pile dimensions and number based on anticipated scrap yard specifications.
[2] AP-42 Section 13.2.4: Aggregate Handling and Storage Piles, Table 13.2.4-1 Typical Silt and Moisture Contents of Materials at Various Industries - Iron and Steel Production - Pellet Ore, Mean Silt Content. Fugitive dust is expected to be minimal in scrap piles.
[3] AP 42 Section 13.2.1 Paved Roads, Figure 13.2.1-2 Mean number of days with 0.01 inch or more of precipitation in the United States.
[4] Based on 2021-2023 hourly wind speed recordings for Huntington WV (HUNTINGTON TRI STATE AIRPORT, WV US (Station ID: 72425003860)
[5] PM10 is assumed equal to 50% of TSP based on U.S. EPA Control of Open Fugitive Dust Sources, Research Triangle Park, North Carolina, EPA-450/3-88-008. September 1988.
[6] $PM_{2.5}$ is assumed equal to 7.5 % of TSP U.S. EPA Background Document for Revisions to Fine Fraction Ratios Used for AP-42 Fugitive Dust Emission Factors. November 2006.
[7] Total Suspended Particulate (TSP) emission factor [assumed equivalent to PM] based on U.S. EPA *Control of Open Fugitive Dust Sources*. Research Triangle Park, North Carolina, EPA-450/3-88-008. September 1988, Page 4-17.

Electrostatic Oilers

Emission Point ID	Emission Unit ID	Unit	Description	Number of Sides	Maximum Metal Width (ft)	Maximum Steel Processing Rate (ft/min)	Maximum Application Rate (mg/ft^2)	Equipment Capture Efficiency (%)	Equpment Transfer Efficiency (%)	Building Enclosure Capture Efficiency[1] (%)	Percent of PM that is PM_{10} (%)	Percent of PM that is $PM_{2.5}$ (%)	VOC Oil Composition (%)
MAUPLA through MAUPLC	PLSTEO	Cold Mill	Pickle Line Electrostatic Oiler	2.0	6.5	656	300	75%	99.5%	90%	100%	50%	1.65%
TMEOMVA and TMEOMVB	STMSTEO	Cold Mill	Temper Mill Electrostatic Oiler	2.0	6.5	1,400	300	75%	99.5%	90%	100%	50%	1.65%
CGL1MVA through CGL1MVE	CGLEO1	Cold Mill	Galvanizing Line 1 Electrostatic Oiler	2.0	6.17	750	250	75%	99.5%	90%	100%	50%	1.65%
CGL2MVA through CGL2MVE	CGLEO2	Cold Mill	Galvanizing Line 2 Electrostatic Oiler	2.0	6.17	750	250	75%	99.5%	90%	100%	50%	1.65%
TMEOMVA and TMEOMVB	RCLEO	Cold Mill	Recoiler Electrostatic Oiler	2.0	6.5	700	300	75%	99.5%	90%	100%	50%	1.65%

[1] Emission factor obtained from TCEQ Draft RG 058 Rock Crushing Plants, February 2002, Table 7 for sources enclosed by building.

Galvanizing Line Passivation Rollcoater

Emission Point ID	Emission Unit ID	Unit	Description	Annual Throughput (gal/yr)	Relative Density[1]	Evaporation Loss[2] (%)	Methanol Content[2] (%)	Ethanol Content[2] (%)
CGL1MVA through CGL1MVE	CGL1	Cold Mill	Galvanizing Line 1 Passivation Roll Coater	14235	1.42	100%	3	3
CGL2MVA through CGL2MVE	CGL2	Cold Mill	Galvanizing Line 2 Passivation Roll Coater	14235	1.42	100%	3	3

[1] Per Primecoat HC 360 SDS
[2] Per Primecoat Z 838-4 SDS
[3] Roll coating assumes 100% transfer efficiency, therefore no particulate emissions are expected.

Galvanizing Line Stenciling

Emission Point ID	Emission Unit ID	Unit	Description	Annual Throughput (gal/yr)	VOC Content[1] (lb/gal)
CGL1MVA through CGL1MVE	CGL1	Cold Mill	Galvanizing Line 1 Stenciling	820	7.21
CGL2MVA through CGL2MVE	CGL2	Cold Mill	Galvanizing Line 2 Stenciling	820	7.21

[1] Per SCP-411A Black QD Ink SDS

NSWV - PTE Calculations
Emissions Calculation Inputs and Assumptions

Wastewater Treatment

Oil/Water Separator	
Max Flow Rate	gpm
Concentration of Oil	ppm
Surface Area	ft^2
Depth	ft
SS Removal Efficiency	%
Oil Removal Efficiency	%
Oil Recover Flow Rate	gpm
Weir Waterfall Length	ft
Weir Waterfall Height	ft
Covered?	Y/N
DAF	
Surface Area	ft^2
Depth	ft
Process Air Flow Rate	acfm
Flow Rate of Float Stream	gpm
SS Removal Efficiency	%
Oil Removal Efficiency	%
Sludge SS Concentration	ppm
Weir Waterfall Length	ft
Weir Waterfall Height	ft
Covered?	Y/N
Neutralization Tank	
Surface Area	ft^2
Depth	ft
Covered?	Y/N

CO_2e Potential

Global Warming Potentials (GWPs)[1]		
CO_2	CH_4	N_2O
1	28	265

[1] EPA GHG MRR rule (40 CFR 98, dated September 22, 2009), Table A-1. Updated GWP finalized on April 25, 2024.

Material Properties

Product	Density (lb/gal)	Molecular Weight (lb/lbmol)	Heat of Combustion (Btu/lb)	Maximum Liquid Surface Temperature[1] (°F)	Maximum Liquid Surface Temperature (Rankine)	Maximum Liquid Surface Temperature (°C)	Antoine Coefficients (°C, mmHg)			Vapor Pressure at Maximum Liquid Surface Temperature (mmHg)	Vapor Pressure at Maximum Liquid Surface Temperature (psia)	
							A	B	C			
Diesel	7.1	130	19,300	104	563.67	40.00	3.799147	686.2581	144.9182	1.22	0.0237	
Unleaded Gasoline	5.6	62	19,437	104	563.67	40.00	6.765	1209.965	273.111	796.05	15.3929	
Hydraulic Oil	7.26	226.45		104	563.67	40.00	7.59	2071.6	185.27	0.02	0.0005	
HCl Acid	9.83	36.46		104	563.67	40.00	7.25303	764.837	259.931	0.52	0.0100	Assumed 18% HCL and 40C using Perry's Table 2-10
Spent Pickle Liquor	9.83	36.46		104	563.67	40.00	7.25303	764.837	259.931	0.52	0.0100	Assumed 18% HCL and 40C using Perry's Table 2-10
Used Oil	7.26	226.45		104	563.67	40.00	7.59	2071.6	185.27	0.02	0.0005	
Solvent	6.7	130		104	563.67	40.00				1.00	0.0193	

[1] If product is stored at ambient temperture, for calculation purposes, maximum liquid surface temperature is assumed to be 104 °F to be conservative.

Huntington, West Virginia Ambient Temperature

Parameter	January (°F)	February (°F)	March (°F)	April (°F)	May (°F)	June (°F)	July (°F)	August (°F)	September (°F)	October (°F)	November (°F)	December (°F)
AP-42 Average Daily Minimum	23.2	26.1	35.5	43.8	52.4	60.4	65	63.9	57.1	45	37	28.4
AP-42 Average Daily Maximum	40.7	44.2	56.5	66.8	75.2	81.3	84.3	83.1	78	67.2	55.9	45.3
Adjusted Daily Average	31.95	35.15	46	55.3	63.8	70.85	74.65	73.5	67.55	56.1	46.45	36.85

Meteorological Conditions

Site Location	Average Wind Speed[1] (mph)
Huntington, WV	7

[1] https://www.ncdc.noaa.gov/sites/default/files/attachments/wind1996.pdf

Site Parameters

Hours of Operation
8760

NSWV – PTE Calculations
Summary of Hourly and Annual Emissions

Emission Point ID	Emission Unit ID	Emission Source	NO_x		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$		Lead		Total HAPs		Fluoride		CO_2		CH_4		N_2O		CO_2e	
			(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Emissions Group 1: Meltshop Sources: EAFs																														
BHST1	EAF1/LMF1/CAST1	Pulse Jet Fabric Filter Baghouse 1	111.720	327.180	537.320	1,574	63.840	186.960	26.068	76.342	25.007	109.530	72.242	316.421	72.242	316.421	0.12	0.35	0.23	0.69	0.93	2.73	64,928	284,385	0.13	0.55	0.01	0.06	64,935	284,415
BHST2	EAF2/LMF2/CAST1	Pulse Jet Fabric Filter Baghouse 2	111.720	327.180	537.320	1,574	63.840	186.960	26.068	76.342	25.007	109.530	72.242	316.421	72.242	316.421	0.12	0.35	0.23	0.69	0.93	2.73	64,928	284,385	0.13	0.55	0.01	0.06	64,935	284,415
MSMVA through MSMVF	MSFUG	Uncaptured Electric Arc Furnace Fugitives	11.760	34.440	56.560	165.640	6.720	19.680	2.744	8.036	2.650	7.761	1.537	4.501	1.140	3.337	0.01	0.04	0.02	0.07	0.10	0.29	6,835	29,935	0.01	0.06	1.32E-03	5.79E-03	6,835	29,938
MSMVA through MSMVF	CASTFUG	Uncaptured Casting Fugitives	--	--	--	--	--	--	--	--	3.360	9.840	1.714	5.018	0.773	2.263	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EAFVF1	EAFVF1	EAF Baghouse 1 Dust Silo	--	--	--	--	--	--	--	--	0.037	0.162	0.037	0.162	0.037	0.162	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EAFVF2	EAFVF2	EAF Baghouse 2 Dust Silo	--	--	--	--	--	--	--	--	0.037	0.162	0.037	0.162	0.037	0.162	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VF1UNLD	EAFVF1	EAF Baghouse 1 Dust Silo Baghouse Dust	--	--	--	--	--	--	--	--	5.31E-03	0.023	1.95E-03	8.53E-03	5.50E-04	2.41E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VF2UNLD	EAFVF2	EAF Baghouse 2 Dust Silo Baghouse Dust	--	--	--	--	--	--	--	--	5.31E-03	0.023	1.95E-03	8.53E-03	5.50E-04	2.41E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emissions Group 2: Meltshop Sources: Preheaters and Dryers																														
MSMVA through MSMVF	LD1	Ladle Dryer #1	1.500	6.570	1.235	5.411	8.82E-03	0.039	0.081	0.354	0.028	0.122	7.65E-03	0.033	6.32E-03	0.028	7.35E-06	3.22E-05	0.03	0.12	--	--	1,755	7,685	0.03	0.14	3.31E-03	0.01	1,756	7,693
MSMVA through MSMVF	LD2	Ladle Dryer #2	1.500	6.570	1.235	5.411	8.82E-03	0.039	0.081	0.354	0.028	0.122	7.65E-03	0.033	6.32E-03	0.028	7.35E-06	3.22E-05	0.03	0.12	--	--	1,755	7,685	0.03	0.14	3.31E-03	0.01	1,756	7,693
MSMVA through MSMVF	LD3	Ladle Dryer #3	1.500	6.570	1.235	5.411	8.82E-03	0.039	0.081	0.354	0.028	0.122	7.65E-03	0.033	6.32E-03	0.028	7.35E-06	3.22E-05	0.03	0.12	--	--	1,755	7,685	0.03	0.14	3.31E-03	0.01	1,756	7,693
MSMVA through MSMVF	LPHTR1	Horizontal Ladle Preheater 1	1.500	6.570	1.235	5.411	8.82E-03	0.039	0.081	0.354	0.028	0.122	7.65E-03	0.033	6.32E-03	0.028	7.35E-06	3.22E-05	0.03	0.12	--	--	1,755	7,685	0.03	0.14	3.31E-03	0.01	1,756	7,693
MSMVA through MSMVF	LPHTR2	Horizontal Ladle Preheater 2	1.500	6.570	1.235	5.411	8.82E-03	0.039	0.081	0.354	0.028	0.122	7.65E-03	0.033	6.32E-03	0.028	7.35E-06	3.22E-05	0.03	0.12	--	--	1,755	7,685	0.03	0.14	3.31E-03	0.01	1,756	7,693
MSMVA through MSMVF	LPHTR3	Horizontal Ladle Preheater 3	1.500	6.570	1.235	5.411	8.82E-03	0.039	0.081	0.354	0.028	0.122	7.65E-03	0.033	6.32E-03	0.028	7.35E-06	3.22E-05	0.03	0.12	--	--	1,755	7,685	0.03	0.14	3.31E-03	0.01	1,756	7,693
MSMVA through MSMVF	LPHTR4	Horizontal Ladle Preheater 4	1.500	6.570	1.235	5.411	8.82E-03	0.039	0.081	0.354	0.028	0.122	7.65E-03	0.033	6.32E-03	0.028	7.35E-06	3.22E-05	0.03	0.12	--	--	1,755	7,685	0.03	0.14	3.31E-03	0.01	1,756	7,693
MSMVA through MSMVF	LPHTR5	Horizontal Ladle Preheater 5	1.500	6.570	1.235	5.411	8.82E-03	0.039	0.081	0.354	0.028	0.122	7.65E-03	0.033	6.32E-03	0.028	7.35E-06	3.22E-05	0.03	0.12	--	--	1,755	7,685	0.03	0.14	3.31E-03	0.01	1,756	7,693
MSMVA through MSMVF	LPHTR6	Vertical Ladle Preheater 6	1.000	4.380	0.824	3.607	5.88E-03	0.026	0.054	0.236	0.019	0.082	5.10E-03	0.022	4.22E-03	0.018	4.90E-06	2.15E-05	0.02	0.08	--	--	1,170	5,124	0.02	0.10	2.20E-03	9.66E-03	1,171	5,129
MSMVA through MSMVF	LPHTR7	Vertical Ladle Preheater 7	1.000	4.380	0.824	3.607	5.88E-03	0.026	0.054	0.236	0.019	0.082	5.10E-03	0.022	4.22E-03	0.018	4.90E-06	2.15E-05	0.02	0.08	--	--	1,170	5,124	0.02	0.10	2.20E-03	9.66E-03	1,171	5,129
MSMVA through MSMVF	TD1	Tundish Dryer 1	0.600	2.628	0.494	2.164	3.53E-03	0.015	0.032	0.142	0.011	0.049	3.06E-03	0.013	2.53E-03	0.011	2.94E-06	1.29E-05	0.01	0.05	--	--	701.86	3,074	0.01	0.06	1.32E-03	5.79E-03	702.58	3,077
MSMVA through MSMVF	TD2	Tundish Dryer 2	0.600	2.628	0.494	2.164	3.53E-03	0.015	0.032	0.142	0.011	0.049	3.06E-03	0.013	2.53E-03	0.011	2.94E-06	1.29E-05	0.01	0.05	--	--	701.86	3,074	0.01	0.06	1.32E-03	5.79E-03	702.58	3,077
MSMVA through MSMVF	TPHTR1	Tundish Preheater 1	0.900	3.942	0.741	3.246	5.29E-03	0.023	0.049	0.213	0.017	0.073	4.59E-03	0.020	3.79E-03	0.017	4.41E-06	1.93E-05	0.02	0.07	--	--	1,053	4,611	0.02	0.09	1.98E-03	8.69E-03	1,054	4,616
MSMVA through MSMVF	TPHTR2	Tundish Preheater 2	0.900	3.942	0.741	3.246	5.29E-03	0.023	0.049	0.213	0.017	0.073	4.59E-03	0.020	3.79E-03	0.017	4.41E-06	1.93E-05	0.02	0.07	--	--	1,053	4,611	0.02	0.09	1.98E-03	8.69E-03	1,054	4,616
MSMVA through MSMVF	SENPHTR1	Subentry Nozzle (SEN) Preheater 1	0.062	0.272	0.051	0.224	3.65E-04	1.60E-03	3.34E-03	0.015	1.15E-03	5.06E-03	3.16E-04	1.38E-03	2.61E-04	1.14E-03	3.04E-07	1.33E-06	1.15E-03	5.03E-03	--	--	72.53	317.66	1.37E-03	5.99E-03	1.37E-04	5.99E-04	72.60	317.99
MSMVA through MSMVF	SENPHTR2	Subentry Nozzle (SEN) Preheater 2	0.062	0.272	0.051	0.224	3.65E-04	1.60E-03	3.34E-03	0.015	1.15E-03	5.06E-03	3.16E-04	1.38E-03	2.61E-04	1.14E-03	3.04E-07	1.33E-06	1.15E-03	5.03E-03	--	--	72.53	317.66	1.37E-03	5.99E-03	1.37E-04	5.99E-04	72.60	317.99
MSMVA through MSMVF	SENPHTR3	Subentry Nozzle (SEN) Preheater Oven	0.068	0.299	0.056	0.246	4.01E-04	1.76E-03	3.68E-03	0.016	1.27E-03	5.56E-03	3.48E-04	1.52E-03	2.88E-04	1.26E-03	3.34E-07	1.46E-06	1.26E-03	5.53E-03	--	--	79.78	349.43	1.50E-03	6.59E-03	1.50E-04	6.59E-04	79.86	349.79
Emissions Group 3: Meltshop Sources: Vacuum Tank Degassers																														
VTDST1	VTD1	Vacuum Tank 1	0.840	3.681	9.819	19.392	7.27E-03	0.032	1.730	7.579	0.075	0.328	0.075	0.328	0.075	0.328	6.06E-06	2.65E-05	0.02	0.10	--	--	2,123	10,353	0.03	0.12	2.72E-03	0.01	2,125	10,360
VTDST2	VTD2	Vacuum Tank 2	0.840	3.681	9.819	19.392	7.27E-03	0.032	1.730	7.579	0.075	0.328	0.075	0.328	0.075	0.328	6.06E-06	2.65E-05	0.02	0.10	--	--	2,123	10,353	0.03	0.12	2.72E-03	0.01	2,125	10,360
Emissions Group 4: Hot Mill : Furnaces																														
TFST-1	TF1	Hot Mill Tunnel Furnace 1	17.500	76.650	20.588	90.176	0.147	0.644	1.348	5.904	0.466	2.040	0.127	0.558	0.105	0.462	1.23E-04	5.37E-04	0.46	2.03	--	--	29,244	128,090	0.55	2.41	0.06	0.24	29,274	128,222
Emissions Group 5: Hot Mill : Misc.																														
HMMVA through HMMVL	HM	Hot Mill Matrix Vents	--	--	--	--	--	--	7.135	31.253	7.567	20.472	7.567	20.472	2.724	7.370	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emissions Group 6: Cold Mill : Pickling Lines																														
PLST1	PKL-1	Pickling Line #1	--	--	--	--	--	--	--	--	1.433	6.277	1.433	6.277	1.433	6.277	--	--	0.53	2.32	--	--	--	--	--	--	--	--	--	--
PKLSB	PKLSB	Pickle Line Scale Breaker	--	--	--	--	--	--	--	--	1.323	5.794	1.323	5.794	1.323	5.794	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emissions Group 7: Cold Mill : Mills																														
TCMST	TCM	Tandem Cold Mill	--	--	--	--	--	--	8.819	38.625	13.228	57.938	13.228	57.938	13.228	57.938	--	--	--	--	--	--	--	--	--	--	--	--	--	--
STMST	STM	Standalone Temper Mill	--	--	--	--	--	--	0.882	3.863	0.441	1.931	0.441	1.931	0.441	1.931	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CGL1MVA through CGL1MVE	SPM1	Skin Pass Mill #1	--	--	--	--	--	--	--	--	0.513	2.249	0.513	2.249	0.513	2.249	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CGL2MVA through CGL2MVE	SPM2	Skin Pass Mill #2	--	--	--	--	--	--	--	--	0.513	2.249	0.513	2.249	0.513	2.249	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emissions Group 8: Cold Mill : Galvanizing Lines																														
CGL1_ST1	CGL1	CGL1 - Cleaning Section	--	--	--	--	--	--	--	--	0.265	1.159	0.265	1.159	0.265	1.159	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CGL2_ST1	CGL2	CGL2 - Cleaning Section	--	--	--	--	--	--	--	--	0.265	1.159	0.265	1.159	0.265	1.159	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emissions Group 9: Cold Mill : Galvanizing Line Furnaces																														
GALVFN1	GALVFN1	Galvanizing Furnace #1	5.131	22.474	6.036	26.440	0.043	0.189	0.395	1.731	0.137	0.598	0.037	0.164	0.031	0.135	3.59E-05	1.57E-04	0.14	0.59	--	--	8,574	37,556	0.16	0.71	0.02	0.07	8,583	37,595
GALVFN2	GALVFN2	Galvanizing Furnace #2	5.586	24.467	6.572	28.784	0.047	0.206	0.430	1.885	0.149	0.651	0.041	0.178	0.034	0.147	3.91E-05	1.71E-04	0.15	0.65	--	--	9,335	40,886	0.18	0.77	0.02	0.08	9,344	40,928
Emissions Group 10: Cold Mill : Annealing Furnaces																														
GALVMVA through GALVMVF	BOXANN1	Box Annealing Furnace #1	0.250	1.095	0.412	1.804	2.94E-03	0.013	0.027	0.118	9.31E-03	0.041	2.55E-03	0.011	2.11E-03	9.23E-03	2.45E-06	1.07E-05	9.26E-03	0.04	--	--	584.89	2,562	0.01	0.05	1.10E-03	4.83E-03	585.49	2,564
GALVMVA through GALVMVF	BOXANN2	Box Annealing Furnace #2	0.250	1.095	0.412	1.804	2.94E-03	0.013	0.027	0.118	9.31E-03	0.041	2.55E-03	0.011	2.11E-03	9.23E-03	2.45E-06	1.07E-05	9.26E-03	0.04	--	--	584.89	2,562	0.01	0.05	1.10E-03	4.83E-03	585.49	2,564
GALVMVA through GALVMVF	BOXANN3	Box Annealing Furnace #3	0.250	1.095	0.412	1.804	2.94E-03	0.013	0.027	0.118	9.31E-03	0.041	2.55E-03	0.011	2.11E-03	9.23E-03	2.45E-06	1.07E-05	9.26E-03	0.04	--	--	584.89	2,562	0.01	0.05	1.10E-03	4.83E-03	585.49	2,564
GALVMVA through GALVMVF	BOXANN4	Box Annealing Furnace #4	0.250	1.095	0.412	1.804	2.94E-03	0.013	0.027	0.118	9.31E-03	0.041	2.55E-03	0.011	2.11E-03	9.23E-03	2.45E-06	1.07E-05	9.26E-03	0.04	--	--	584.89	2,562	0.01	0.05	1.10E-03	4.83E-03	585.49	2,564
GALVMVA through GALVMVF	BOXANN5	Box Annealing Furnace #5	0.250	1.095	0.412	1.804	2.94E-03	0.013	0.027	0.118	9.31E-03	0.041	2.55E-03	0.011	2.11E-03	9.23E-03	2.45E-06	1.07E-05	9.26E-03	0.04	--	--	584.89	2,562	0.01	0.05	1.10E-03	4.83E-03	585.49	2,564
GALVMVA through GALVMVF	BOXANN6	Box Annealing Furnace #6	0.250	1.095	0.412	1.804	2.94E-03	0.013	0.027	0.118	9.31E-03	0.041	2.55E-03	0.011	2.11E-03	9.23E-03	2.45E-06	1.07E-05	9.26E-03	0.04	--	--	584.89	2,562	0.01	0.05	1.10E-03	4.83E-03	585.49	2,564
GALVMVA through GALVMVF	BOXANN7	Box Annealing Furnace #7	0.250	1.095	0.412	1.804	2.94E-03	0.013	0.027	0.118	9.31E-03	0.041	2.55E-03	0.011	2.11E-03	9.23E-03	2.45E-06	1.07E-05	9.26E-03	0.04	--	--	584.89	2,562	0.01	0.05	1.10E-03	4.83E-03	585.49	2,564
GALVMVA through GALVMVF	BOXANN8	Box Annealing Furnace #8	0.250	1.095	0.412	1.804	2.94E-03	0.013	0.027	0.118	9.31E-03	0.041	2.55E-03	0.011	2.11E-03	9.23E-03	2.45E-06	1.07E-05	9.26E-03	0.04	--	--	584.89	2,562	0.01	0.05	1.10E-03	4.83E-03	585.49	2,564
GALVMVA through GALVMVF	BOXANN9	Box Annealing Furnace #9	0.250	1.095	0.412	1.804	2.94E-03	0.013	0.027	0.118	9.31E-03	0.041	2.55E-03	0.011	2.11E-03	9.23E-03	2.45E-06	1.07E-05	9.26E-03	0.04	--	--	584.89	2,562	0.01	0.05	1.10E-03	4.83E-03	585.49	2,564
GALVMVA through GALVMVF	BOXANN10	Box Annealing Furnace #10	0.250	1.095	0.412	1.804	2.94E-03	0.013	0.027	0.118	9.31E-03	0.041	2.55E-03	0.011	2.11E-03	9.23E-03	2.45E-06	1.07E-05	9.26E-03	0.04	--	--	584.89	2,562	0.01	0.05	1.10E-03	4.83E-03	585.49	2,564
GALVMVA through GALVMVF	BOXANN11	Box Annealing Furnace #11	0.250	1.095	0.412	1.804	2.94E-03	0.013	0.027	0.118	9.31E-03	0.041	2.55E-03	0.011	2.11E-03	9.23E-03	2.45E-06	1.07E-05	9.26E-03	0.04	--	--	584.89	2,562	0.01	0.05	1.10E-03	4.83E-03	585.49	2,564
GALVMVA through GALVMVF	BOXANN12	Box Annealing Furnace #12	0.250	1.095	0.412	1.804	2.94E-03	0.013	0.027	0.118	9.31E-03	0.041	2.55E-03	0.011	2.11E-03	9.23E-03	2.45E-06	1.07E-05	9.26E-03	0.04	--	--	584.89	2,562	0.01	0.05	1.10E-03	4.83E-03	585.49	2,564
Emissions Group 11: Cold Mill : Galvanizing Line Boilers																														
CGL1-ST1	GALVBOILER1	Galv Line Boiler #1	0.335	1.467	0.552	2.417	3.94E-03	0.017	0.036	0.158	0.012	0.055	3.42E-03	0.015	2.82E-03	0.012	3.28E-06	1.44E-05	0.01	0.05	--	--	783.75	3,433	0.01	0.06	1.48E-03	6.47E-03	784.55	3,436
CGL2-ST1	GALVBOILER2	Galv Line Boiler #2	0.335	1.467	0.552	2.417	3.94E-03	0.017	0.036	0.158	0.012	0.055	3.42E-03	0.015	2.82E-03	0.012	3.28E-06	1.44E-05	0.01	0.05	--	--	783.75	3,433	0.01	0.06	1.48E-03	6.47E-03	784.55	3,436
PLTCMBLR	PLTCMBOILER1	PLTCM Boiler #1	3.700	16.206	6.094	26.692	0.044	0.191	0.399	1.748	0.138	0.604	0.038	0.165	0.031	0.137	3.63E-05	1.59E-04	0.14	0.60	--	--	8,656	37,915	0.16	0.71	0.02	0.07	8,665	37,954
PLTCMBLR	PLTCMBOILER2	PLTCM Boiler #2	3.582	15.689	5.900	25.841	0.042	0.185	0.386	1.692	0.133	0.584	0.037	0.160	0.030	0.132	3.51E-05	1.54E-04	0.13	0.58	--	--	8,380	36,706	0.16	0.69	0.02	0.07	8,389	36,743

NSWV – PTE Calculations
Summary of Hourly and Annual Emissions

Emission Point ID	Emission Unit ID	Emission Source	NO_x		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$		Lead		Total HAPs		Fluoride		CO_2		CH_4		N_2O		CO_2e	
			(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Emissions Group 12: Cold Mill : Miscellaneous Units																														
MAUWIPA through MAUWIPE	AMU-1	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0.400	1.752	0.329	1.443	2.35E-03	0.010	0.022	0.094	7.45E-03	0.033	2.04E-03	8.93E-03	1.69E-03	7.39E-03	1.96E-06	8.59E-06	7.41E-03	0.03	--	--	467.91	2,049	8.82E-03	0.04	8.82E-04	3.86E-03	468.39	2,052
MAUWIPA through MAUWIPE	AMU-2	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0.400	1.752	0.329	1.443	2.35E-03	0.010	0.022	0.094	7.45E-03	0.033	2.04E-03	8.93E-03	1.69E-03	7.39E-03	1.96E-06	8.59E-06	7.41E-03	0.03	--	--	467.91	2,049	8.82E-03	0.04	8.82E-04	3.86E-03	468.39	2,052
MAUWIPA through MAUWIPE	AMU-3	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0.400	1.752	0.329	1.443	2.35E-03	0.010	0.022	0.094	7.45E-03	0.033	2.04E-03	8.93E-03	1.69E-03	7.39E-03	1.96E-06	8.59E-06	7.41E-03	0.03	--	--	467.91	2,049	8.82E-03	0.04	8.82E-04	3.86E-03	468.39	2,052
MAUWIPA through MAUWIPE	AMU-4	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0.400	1.752	0.329	1.443	2.35E-03	0.010	0.022	0.094	7.45E-03	0.033	2.04E-03	8.93E-03	1.69E-03	7.39E-03	1.96E-06	8.59E-06	7.41E-03	0.03	--	--	467.91	2,049	8.82E-03	0.04	8.82E-04	3.86E-03	468.39	2,052
MAUWIPA through MAUWIPE	AMU-5	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0.400	1.752	0.329	1.443	2.35E-03	0.010	0.022	0.094	7.45E-03	0.033	2.04E-03	8.93E-03	1.69E-03	7.39E-03	1.96E-06	8.59E-06	7.41E-03	0.03	--	--	467.91	2,049	8.82E-03	0.04	8.82E-04	3.86E-03	468.39	2,052
MAUWIPA through MAUWIPE	AMU-6	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0.400	1.752	0.329	1.443	2.35E-03	0.010	0.022	0.094	7.45E-03	0.033	2.04E-03	8.93E-03	1.69E-03	7.39E-03	1.96E-06	8.59E-06	7.41E-03	0.03	--	--	467.91	2,049	8.82E-03	0.04	8.82E-04	3.86E-03	468.39	2,052
MAUWIPA through MAUWIPE	AMU-7	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0.400	1.752	0.329	1.443	2.35E-03	0.010	0.022	0.094	7.45E-03	0.033	2.04E-03	8.93E-03	1.69E-03	7.39E-03	1.96E-06	8.59E-06	7.41E-03	0.03	--	--	467.91	2,049	8.82E-03	0.04	8.82E-04	3.86E-03	468.39	2,052
MAUWIPA through MAUWIPE	AMU-8	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0.400	1.752	0.329	1.443	2.35E-03	0.010	0.022	0.094	7.45E-03	0.033	2.04E-03	8.93E-03	1.69E-03	7.39E-03	1.96E-06	8.59E-06	7.41E-03	0.03	--	--	467.91	2,049	8.82E-03	0.04	8.82E-04	3.86E-03	468.39	2,052
MAUFGA through MAUFGC	AMU-9	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0.400	1.752	0.329	1.443	2.35E-03	0.010	0.022	0.094	7.45E-03	0.033	2.04E-03	8.93E-03	1.69E-03	7.39E-03	1.96E-06	8.59E-06	7.41E-03	0.03	--	--	467.91	2,049	8.82E-03	0.04	8.82E-04	3.86E-03	468.39	2,052
MAUFGA through MAUFGC	AMU-10	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0.400	1.752	0.329	1.443	2.35E-03	0.010	0.022	0.094	7.45E-03	0.033	2.04E-03	8.93E-03	1.69E-03	7.39E-03	1.96E-06	8.59E-06	7.41E-03	0.03	--	--	467.91	2,049	8.82E-03	0.04	8.82E-04	3.86E-03	468.39	2,052
MAUFGA through MAUFGC	AMU-11	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0.400	1.752	0.329	1.443	2.35E-03	0.010	0.022	0.094	7.45E-03	0.033	2.04E-03	8.93E-03	1.69E-03	7.39E-03	1.96E-06	8.59E-06	7.41E-03	0.03	--	--	467.91	2,049	8.82E-03	0.04	8.82E-04	3.86E-03	468.39	2,052
MAUFGA through MAUFGC	AMU-12	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0.400	1.752	0.329	1.443	2.35E-03	0.010	0.022	0.094	7.45E-03	0.033	2.04E-03	8.93E-03	1.69E-03	7.39E-03	1.96E-06	8.59E-06	7.41E-03	0.03	--	--	467.91	2,049	8.82E-03	0.04	8.82E-04	3.86E-03	468.39	2,052
MAUFGA through MAUFGC	AMU-13	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0.400	1.752	0.329	1.443	2.35E-03	0.010	0.022	0.094	7.45E-03	0.033	2.04E-03	8.93E-03	1.69E-03	7.39E-03	1.96E-06	8.59E-06	7.41E-03	0.03	--	--	467.91	2,049	8.82E-03	0.04	8.82E-04	3.86E-03	468.39	2,052
MAUFGA through MAUFGC	AMU-14	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0.400	1.752	0.329	1.443	2.35E-03	0.010	0.022	0.094	7.45E-03	0.033	2.04E-03	8.93E-03	1.69E-03	7.39E-03	1.96E-06	8.59E-06	7.41E-03	0.03	--	--	467.91	2,049	8.82E-03	0.04	8.82E-04	3.86E-03	468.39	2,052
MAUFGA through MAUFGC	AMU-15	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0.400	1.752	0.329	1.443	2.35E-03	0.010	0.022	0.094	7.45E-03	0.033	2.04E-03	8.93E-03	1.69E-03	7.39E-03	1.96E-06	8.59E-06	7.41E-03	0.03	--	--	467.91	2,049	8.82E-03	0.04	8.82E-04	3.86E-03	468.39	2,052
MAUFGA through MAUFGC	AMU-16	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0.400	1.752	0.329	1.443	2.35E-03	0.010	0.022	0.094	7.45E-03	0.033	2.04E-03	8.93E-03	1.69E-03	7.39E-03	1.96E-06	8.59E-06	7.41E-03	0.03	--	--	467.91	2,049	8.82E-03	0.04	8.82E-04	3.86E-03	468.39	2,052
MAUPLA through MAUPLC	AMU-17	NG-Fired Makeup Air Unit, PLTCM Bay	0.400	1.752	0.329	1.443	2.35E-03	0.010	0.022	0.094	7.45E-03	0.033	2.04E-03	8.93E-03	1.69E-03	7.39E-03	1.96E-06	8.59E-06	7.41E-03	0.03	--	--	467.91	2,049	8.82E-03	0.04	8.82E-04	3.86E-03	468.39	2,052
MAUPLA through MAUPLC	AMU-18	NG-Fired Makeup Air Unit, PLTCM Bay	0.400	1.752	0.329	1.443	2.35E-03	0.010	0.022	0.094	7.45E-03	0.033	2.04E-03	8.93E-03	1.69E-03	7.39E-03	1.96E-06	8.59E-06	7.41E-03	0.03	--	--	467.91	2,049	8.82E-03	0.04	8.82E-04	3.86E-03	468.39	2,052
Emissions Group 13: Material Handling System																														
MSMVA through MSMVF	EAF-FEED7-25	Uncaptured Electric Arc Furnace Fugitives - Raw Material Transfer in Melt Shop	--	--	--	--	--	--	--	--	4.24E-02	4.93E-02	1.55E-02	1.81E-02	4.39E-03	5.11E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MSMVA through MSMVF	LMF-FEED6-51	Uncaptured Ladle Metallurgy Furnace Fugitives - Raw Material Transfer in Melt Shop	--	--	--	--	--	--	--	--	1.25E-02	5.49E-02	4.60E-03	2.01E-02	1.30E-03	5.69E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MSMVA through MSMVF	SUBS-FEED6-7	Uncaptured Scrap Substitute Fugitives - Raw Material Transfer in Melt Shop	--	--	--	--	--	--	--	--	8.50E-02	3.72E-01	3.12E-02	1.36E-01	8.81E-03	3.86E-02	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SUBSUNL	RAW-FEED1	Uncaptured Unloading Fugitives - Raw Material Transfer	--	--	--	--	--	--	--	--	3.41E-01	9.31E-01	1.25E-01	3.41E-01	3.54E-02	9.64E-02	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BULKMH	RAW-FEED3-8	Uncaptured Lime/Carbon/Alloy Unloading Fugitives - Raw Material Transfer	--	--	--	--	--	--	--	--	7.20E-02	2.34E-02	2.64E-02	8.57E-03	7.46E-03	2.42E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BULKMH	EAF-FEED1-6		--	--	--	--	--	--	--	--	1.44E-01	8.56E-02	5.28E-02	3.14E-02	1.49E-02	8.87E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BULKMH	LMF-FEED1-5	Uncaptured LMF Unloading Fugitives - Raw Material Transfer	--	--	--	--	--	--	--	--	2.24E-03	9.81E-03	8.21E-04	3.60E-03	2.32E-04	1.02E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SUBSILOF	SUBS-FEED1-2, RAW-FEED2	Uncaptured Scrap Substitute Unloading Fugitives - Raw Material Transfer	--	--	--	--	--	--	--	--	4.78E-01	1.53E+00	1.75E-01	5.60E-01	4.95E-02	1.58E-01	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SUBSFUG	SUBS-FEED3-5	Uncaptured Scrap Substitute Day Bin Fugitives - Raw Material Transfer	--	--	--	--	--	--	--	--	1.27E-01	5.58E-01	4.67E-02	2.05E-01	1.32E-02	5.79E-02	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EXBHUNLD	EXBHUNLD	Raw Material Handling External Baghouse Dust	--	--	--	--	--	--	--	--	1.59E-05	6.98E-05	5.84E-06	2.56E-05	1.65E-06	7.23E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MSMVA through MSMVF	INBHUNLD	Raw Material Handling Internal Baghouse Dust	--	--	--	--	--	--	--	--	1.54E-05	6.75E-05	5.65E-06	2.47E-05	1.60E-06	6.99E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SUBSDCK1-6	BV-0011-0016	Crane Unloading Transfers to Dock Scrap Substitute Bin	--	--	--	--	--	--	--	--	0.014	0.063	0.014	0.063	7.20E-03	0.032	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BV-003	BV-003	Dock Scrap Substitute Bin to NBC01 normal belt conveyor	--	--	--	--	--	--	--	--	8.57E-03	0.038	8.57E-03	0.038	4.29E-03	0.019	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MSMVA through MSMVF	BV-111-BV-126 BV-318-BV-319 BV-400-BV-427	Melt Shop Bin Vents	--	--	--	--	--	--	--	--	0.221	0.970	0.221	0.970	0.111	0.485	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SUBSILO1-4	BV-301-BV-304	Scrap Substitute Day Bin Vents	--	--	--	--	--	--	--	--	0.034	0.150	0.034	0.150	0.017	0.075	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BV-305-BV-317	BV-305-BV-308 BV-309-BV-313 BV-314-BV-315 BV-316-BV-317	Scrap Substitute Bin Extraction	--	--	--	--	--	--	--	--	0.111	0.488	0.111	0.488	0.056	0.244	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emissions Group 14: Slag Processing																														
SLAGPORT	SLAG-BULK1-24	Slag Handling	--	--	--	--	--	--	--	--	2.273	1.791	0.789	0.664	0.123	0.123	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SLAGMRP	SLAG-BULK25-47	Slag Handling	--	--	--	--	--	--	--	--	1.282	1.071	0.426	0.356	0.073	0.062	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SLAGDROP	SLAG-BULK48-52	Slag Handling	--	--	--	--	--	--	--	--	3.06E-03	0.013	1.28E-03	5.51E-03	2.64E-04	1.16E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emissions Group 15: Scrap Handling																														
SCRPBRGE	SCRAP-RECEIVING1	Scrap Handling	--	--	--	--	--	--	--	--							--	--	--	--	--	--	--	--	--	--	--	--	--	--
SCRPBRGE	SCRAP-RECEIVING2	Scrap Handling	--	--	--	--	--	--	--	--	0.286	0.496	0.143	0.248	0.041	0.071	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SCRPBRGE	SCRAP-RECEIVING3	Scrap Handling	--	--	--	--	--	--	--	--							--	--	--	--	--	--	--	--	--	--	--	--	--	--
SCRPHNDA through SCRPHNDC	SCRAP-HANDLING1-3	Scrap Handling	--	--	--	--	--	--	--	--	2.607	4.531	1.233	2.143	0.187	0.325	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SCRPSKPA-C	SCRAP-PILE1-3	Scrap Yard Stockpiles	--	--	--	--	--	--	--	--	1.840	8.059	0.920	4.030	0.138	0.604	--	--	--	--	--	--	--	--	--	--	--	--	--	--

NSWV – PTE Calculations
Summary of Hourly and Annual Emissions

Emission Point ID	Emission Unit ID	Emission Source	NO_x		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$		Lead		Total HAPs		Fluoride		CO_2		CH_4		N_2O		CO_2e	
			(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Emissions Group 16: Storage Piles																														
SLAGMRP	SLGSKP1	GFH-MA Hopper Pile	--	--	--	--	--	--	--	--	2.31E-03	0.010	1.16E-03	5.06E-03	1.73E-04	7.59E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SLAGMRP	SLGSKP2	CV-MA-RS2 Radial Stacker Pile	--	--	--	--	--	--	--	--	0.035	0.152	0.017	0.076	2.60E-03	0.011	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SLAGMRP	SLGSKP3	OBM-MA1 Magnet Pile	--	--	--	--	--	--	--	--	7.50E-04	3.29E-03	3.75E-04	1.64E-03	5.63E-05	2.46E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SLAGMRP	SLGSKP4	CV-MA-RS1 Radial Stacker Pile	--	--	--	--	--	--	--	--	0.043	0.187	0.021	0.094	3.21E-03	0.014	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SLAGPORT	SLGSKP5	SP-OBM1 Magnet Pile	--	--	--	--	--	--	--	--	7.14E-04	3.13E-03	3.57E-04	1.56E-03	5.36E-05	2.35E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SLAGPORT	SLGSKP6	MAG HP Magnet Pile	--	--	--	--	--	--	--	--	2.38E-04	1.04E-03	1.19E-04	5.22E-04	1.79E-05	7.82E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SLAGPORT	SLGSKP7	SP-RS1 Radial Stacker Pile Duraberm	--	--	--	--	--	--	--	--	0.027	0.120	0.014	0.060	2.05E-03	8.97E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SLAGPORT	SLGSKP8	SP-RS2 Radial Stacker Pile Durabase	--	--	--	--	--	--	--	--	0.027	0.120	0.014	0.060	2.05E-03	8.97E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SLAGPORT	SLGSKP9	SP-RS1 Radial Stacker Pile 5 Small Chips	--	--	--	--	--	--	--	--	0.027	0.120	0.014	0.060	2.05E-03	8.97E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SLAGPORT	SLGSKP10	SP-RS2 Radial Stacker Pile 6 Big Chips	--	--	--	--	--	--	--	--	0.027	0.120	0.014	0.060	2.05E-03	8.97E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SLAGPORT	SLGSKP11	Long-Term Radial Stacker Pile Duraberm	--	--	--	--	--	--	--	--	0.055	0.239	0.027	0.120	4.09E-03	0.018	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SLAGPORT	SLGSKP12	Long-Term Radial Stacker Pile Durabase	--	--	--	--	--	--	--	--	0.055	0.239	0.027	0.120	4.09E-03	0.018	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SLAGPORT	SLGSKP13	Long-Term Radial Stacker Pile Small Chips									0.055	0.239	0.027	0.120	4.09E-03	0.018					--	--	--	--	--	--	--	--	--	--
SLAGPORT	SLGSKP14	Long-Term Radial Stacker Pile Big Chips	--	--	--	--	--	--	--	--	0.055	0.239	0.027	0.120	4.09E-03	0.018	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emissions Group 17: Refractory Brick Recycling																														
BRCKCRSH	BRCKCRSH	Brick Crushing	--	--	--	--	--	--	--	--	0.634	0.076	0.230	0.028	0.032	3.78E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emissions Group 18: Scrap and Slag Cutting																														
SCRCUTNG	SCRAP-CUT	Scrap Cutting in Scrap Processing Area	0.720	3.154	0.593	2.597	4.24E-03	0.019	0.039	0.170	0.013	0.059	3.67E-03	0.016	3.04E-03	0.013	3.53E-06	1.55E-05	0.01	0.06	--	--	842.24	3,689	0.02	0.07	1.59E-03	6.95E-03	843.10	3,693
CUTBH	SCRAP-CUT	Scrap and Coil Cutting Baghouse	--	--	--	--	--	--	--	--	0.857	3.754	0.857	3.754	0.857	3.754	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CUTBHUNL	SCRAP-CUT	Scrap and Coil Cutting Baghouse Dust	--	--	--	--	--	--	--	--	6.30E-05	2.76E-04	2.31E-05	1.01E-04	6.53E-06	2.86E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emissions Group 19: Air Separation Plant																														
ASP	ASP	Water Bath Vaporizer	4.650	20.367	3.829	16.773	0.027	0.120	0.251	1.098	0.087	0.379	0.024	0.104	0.020	0.086	2.28E-05	9.98E-05	0.09	0.38	--	--	5,439	23,825	0.10	0.45	0.01	0.04	5,445	23,849
Emissions Group 20: Cooling Towers																														
NCT1A through NCT1E	NCT1	Melt Shop Cooling Tower 1	--	--	--	--	--	--	--	--	0.420	1.841	0.129	0.566	0.129	0.566	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CCT4A through CCT4B	CCT4	Caster Cooling Tower 2	--	--	--	--	--	--	0.018	0.081	0.078	0.340	0.024	0.104	0.024	0.104	--	--	0.02	0.07	--	--	--	--	--	--	--	--	--	--
NCT5A through NCT5B	NCT5	Caster Cooling Tower 3	--	--	--	--	--	--	--	--	0.140	0.611	0.043	0.188	0.043	0.188	--	--	-	-	--	--	--	--	--	--	--	--	--	--
CCT6A through CCT6C	CCT6	Hot Mill Cooling Tower 4	--	--	--	--	--	--	0.084	0.369	0.355	1.556	0.109	0.478	0.109	0.478	--	--	0.07	0.33	--	--	--	--	--	--	--	--	--	--
LCT7A through LCT7C	LCT7	Hot Mill Cooling Tower 5	--	--	--	--	--	--	0.067	0.295	0.284	1.243	0.087	0.382	0.087	0.382	--	--	0.06	0.26	--	--	--	--	--	--	--	--	--	--
NCT8A through NCT8B	NCT8	Cold Mill Cooling Tower 6	--	--	--	--	--	--	--	--	0.105	0.460	0.032	0.141	0.032	0.141	--	--	-	-	--	--	--	--	--	--	--	--	--	--
ASPCTA through ASPCTE	ASPCT	Air Separation Plant Cooling Tower 7	--	--	--	--	--	--	--	--	1.31E-03	5.75E-03	4.04E-04	1.77E-03	4.04E-04	1.77E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emissions Group 21: Emergency Engines																														
EMGEN1	EMGEN1	Emergency Generator 1	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN2	EMGEN2	Emergency Generator 2	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN3	EMGEN3	Emergency Generator 3	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN4	EMGEN4	Emergency Generator 4	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN5	EMGEN5	Emergency Generator 5	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN6	EMGEN6	Emergency Generator 6	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN7	EMGEN7	Emergency Generator 7	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN8	EMGEN8	Emergency Generator 8	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN9	EMGEN9	Emergency Generator 9	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN10	EMGEN10	Emergency Generator 10	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN11	EMGEN11	Emergency Generator 11	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN12	EMGEN12	Emergency Generator 12	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN13	EMGEN13	Emergency Generator 13	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN14	EMGEN14	Emergency Generator 14	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN15	EMGEN15	Emergency Generator 15	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN16	EMGEN16	Emergency Generator 16	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN17	EMGEN17	Emergency Generator 17	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN18	EMGEN18	Emergency Generator 18	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN19	EMGEN19	Emergency Generator 19	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN20	EMGEN20	Emergency Generator 20	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN21	EMGEN21	Emergency Generator 21	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN22	EMGEN22	Emergency Generator 22	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN23	EMGEN23	Emergency Generator 23	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN24	EMGEN24	Emergency Generator 24	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN25	EMGEN25	Emergency Generator 25	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
EMGEN26	EMGEN26	Emergency Generator 26	1.713	0.086	3.426	0.171	3.20E-03	1.60E-04	1.499	0.075	0.106	5.28E-03	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	0.44	0.02	--	--	636.24	31.81	0.01	6.00E-04	1.20E-03	6.00E-05	636.89	31.84
Emissions Group 22: Roadways																														
ROAD1 through ROAD184	FUGD-PAVED-01P	North Entry to P&O	--	--	--	--	--	--	--	--	0.081	0.321	0.016	0.064	3.98E-03	0.016	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ROAD1 through ROAD184	FUGD-PAVED-02P	North Entry to FG	--	--	--	--	--	--	--	--	0.188	0.743	0.038	0.149	9.21E-03	0.036	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ROAD1 through ROAD184	FUGD-PAVED-03P	North Entry to HB Yard	--	--	--	--	--	--	--	--	0.133	0.527	0.027	0.105	6.53E-03	0.026	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ROAD1 through ROAD184	FUGD-PAVED-04P	North Entry to Scrap Yard	--	--	--	--	--	--	--	--	0.201	0.795	0.040	0.159	9.85E-03	0.039	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ROAD1 through ROAD184	FUGD-PAVED-05P	North Entry to Alloy Storage	--	--	--	--	--	--	--	--	0.258	1.021	0.052	0.204	0.013	0.050	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ROAD1 through ROAD184	FUGD-PAVED-06P	North Entry to EAF Bay	--	--	--	--	--	--	--	--	0.102	0.403	0.020	0.081	4.99E-03	0.020	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ROAD1 through ROAD184	FUGD-PAVED-07P	North Entry to Slag Bay	--	--	--	--	--	--	--	--	0.156	0.618	0.031	0.124	7.66E-03	0.030	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ROAD1 through ROAD184	FUGD-PAVED-08P	Scrap Yard to EAF Bay	--	--	--	--	--	--	--	--	2.627	10.405	0.525	2.081	0.129	0.511	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ROAD1 through ROAD184	FUGD-PAVED-09P	South Port to Scrap Yard	--	--	--	--	--	--	--	--	3.461	13.706	0.692	2.741	0.170	0.673	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ROAD1 through ROAD184	FUGD-PAVED-10P	South Port to HB Yard	--	--	--	--	--	--	--	--	0.143	0.566	0.029	0.113	7.01E-03	0.028	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ROAD1 through ROAD184	FUGD-PAVED-11P	South Port to FG	--	--	--	--	--	--	--	--	0.939	3.720	0.188	0.744	0.046	0.183	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ROAD1 through ROAD184	FUGD-PAVED-12P	South Port to P&O	--	--	--	--	--	--	--	--	0.621	2.458	0.124	0.492	0.030	0.121	--	--	--	--	--	--	--	--	--	--	--	--	--	--

NSWV – PTE Calculations
Summary of Hourly and Annual Emissions

Emission Point ID	Emission Unit ID	Emission Source	NO_x		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$		Lead		Total HAPs		Fluoride		CO_2		CH_4		N_2O		CO_2e	
			(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Emissions Group 23: Miscellaneous Tanks																														
T001	T001	Diesel Tank	--	--	--	--	--	--	5.14E-04	2.25E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T002	T002	Diesel Tank	--	--	--	--	--	--	5.14E-04	2.25E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T003	T003	Diesel Tank	--	--	--	--	--	--	5.14E-04	2.25E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T004	T004	Diesel Tank	--	--	--	--	--	--	5.14E-04	2.25E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T005	T005	Diesel Tank	--	--	--	--	--	--	5.14E-04	2.25E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T006	T006	Gasoline Tank	--	--	--	--	--	--	0.105	0.458	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CMTKFUG	T007	HCL Tank #1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.92E-04	2.59E-03	--	--	--	--	--	--	--	--	--	--
CMTKFUG	T008	HCL Tank #2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.92E-04	2.59E-03	--	--	--	--	--	--	--	--	--	--
CMTKFUG	T009	HCL Tank #3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.92E-04	2.59E-03	--	--	--	--	--	--	--	--	--	--
CMTKFUG	T010	HCL Tank #4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.92E-04	2.59E-03	--	--	--	--	--	--	--	--	--	--
CMTKFUG	T011	SPL Tank #1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.92E-04	2.59E-03	--	--	--	--	--	--	--	--	--	--
CMTKFUG	T012	SPL Tank #2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.92E-04	2.59E-03	--	--	--	--	--	--	--	--	--	--
CMTKFUG	T013	SPL Tank #3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.92E-04	2.59E-03	--	--	--	--	--	--	--	--	--	--
CMTKFUG	T014	SPL Tank #4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.92E-04	2.59E-03	--	--	--	--	--	--	--	--	--	--
CMTKFUG	T015	SPL Tank #5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.92E-04	2.59E-03	--	--	--	--	--	--	--	--	--	--
CMTKFUG	T016	SPL Tank #6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.92E-04	2.59E-03	--	--	--	--	--	--	--	--	--	--
CMTKFUG	T017	SPL Tank #7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.92E-04	2.59E-03	--	--	--	--	--	--	--	--	--	--
CMTKFUG	T018	SPL Tank #8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.92E-04	2.59E-03	--	--	--	--	--	--	--	--	--	--
T019	T019	WOT9.1	--	--	--	--	--	--	2.83E-06	1.24E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T020	T020	COT6.3	--	--	--	--	--	--	2.83E-06	1.24E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T021	T021	COT4.3	--	--	--	--	--	--	2.83E-06	1.24E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T022	T022	COT6.1	--	--	--	--	--	--	6.66E-07	2.92E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T023	T023	COT4.1	--	--	--	--	--	--	6.66E-07	2.92E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMMVA through HMMVL	T024	Hydraulic Bulk	--	--	--	--	--	--	8.04E-07	3.52E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMMVA through HMMVL	T025	Hydraulic (Morgoil) Bulk	--	--	--	--	--	--	8.04E-07	3.52E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMMVA through HMMVL	T026	Grease Bulk RM/FM	--	--	--	--	--	--	8.04E-07	3.52E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMMVA through HMMVL	T027	Grease Bulk Coilers	--	--	--	--	--	--	8.04E-07	3.52E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMMVA through HMMVL	T028	Grease Bulk RM/FM	--	--	--	--	--	--	8.04E-07	3.52E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMMVA through HMMVL	T029	Grease Bulk Coilers	--	--	--	--	--	--	8.04E-07	3.52E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMMVA through HMMVL	T030	Grease Bulk Roll Shop	--	--	--	--	--	--	8.04E-07	3.52E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emissions Group 24: Electrostatic Oilers																														
MAUPLA through MAUPLC	PLSTEO	Pickle Line Electrostatic Oiler	--	--	--	--	--	--	6.98E-03	0.031	0.042	0.185	0.042	0.185	0.021	0.093	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TMEOMVA and TMEOMVB	STMSTEO	Temper Mill Electrostatic Oiler	--	--	--	--	--	--	0.015	0.065	0.090	0.395	0.090	0.395	0.045	0.198	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CGL1MVA through CGL1MVE	CGLEO1	Galvanizing Line 1 Electrostatic Oiler	--	--	--	--	--	--	6.31E-03	0.028	0.038	0.167	0.038	0.167	0.019	0.084	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CGL2MVA through CGL2MVE	CGLEO2	Galvanizing Line 2 Electrostatic Oiler	--	--	--	--	--	--	6.31E-03	0.028	0.038	0.167	0.038	0.167	0.019	0.084	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TMEOMVA and TMEOMVB	RCLEO	Recoiler Electrostatic Oiler	--	--	--	--	--	--	7.45E-03	0.033	0.045	0.198	0.045	0.198	0.023	0.099	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emissions Group 25: Galvanizing Line Passivation Roll Coater																														
CGL1MVA through CGL1MVE	CGL1	Galvanizing Line 1 Passivation Roll Coater	--	--	--	--	--	--	1.155	5.061	--	--	--	--	--	--	--	--	0.578	2.530	--	--	--	--	--	--	--	--	--	--
CGL2MVA through CGL2MVE	CGL2	Galvanizing Line 2 Passivation Roll Coater	--	--	--	--	--	--	1.155	5.061	--	--	--	--	--	--	--	--	0.58	2.53	--	--	--	--	--	--	--	--	--	--
Emissions Group 26: Galvanizing Line Stenciling																														
CGL1MVA through CGL1MVE	CGL1	Galvanizing Line 1 Stenciling	--	--	--	--	--	--	0.675	2.956	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CGL2MVA through CGL2MVE	CGL2	Galvanizing Line 2 Stenciling	--	--	--	--	--	--	0.675	2.956	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emissions Group 27: Caster Spray Vents																														
CSP1	CSP1	Caster Spray Vents	--	--	--	--	--	--	1.453	6.366	10.781	47.221	3.658	16.023	2.147	9.404	--	--	0.322	1.411	0.280	1.228	--	--	--	--	--	--	--	--
CSP2	CSP2	Caster Spray Vents	--	--	--	--	--	--	2.907	12.731	21.562	94.442	7.316	32.046	4.294	18.808	--	--	0.107	0.470	0.093	0.409	--	--	--	--	--	--	--	--
Emissions Group 28: Parts Washers																														
MSMVA through MSMVF	WASH1	Melt Shop Parts Washer	--	--	--	--	--	--	0.545	0.350	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMMVA through HMMVL	WASH2	Hot Mill Parts Washer 01	--	--	--	--	--	--	0.545	0.350	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMMVA through HMMVL	WASH3	Hot Mill Parts Washer 02	--	--	--	--	--	--	0.545	0.350	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMMVA through HMMVL	WASH4	Hot Mill Parts Washer 03	--	--	--	--	--	--	0.545	0.350	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HMMVA through HMMVL	WASH5	Hot Mill Parts Washer 04	--	--	--	--	--	--	0.545	0.350	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CGL1MVA through CGL1MVE	WASH6	Cold Mill Parts Washer 01	--	--	--	--	--	--	0.545	0.350	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CGL1MVA through CGL1MVE	WASH7	Cold Mill Parts Washer 02	--	--	--	--	--	--	0.545	0.350	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MSMVA through MSMVF	WASH8	Caster Parts Washer	--	--	--	--	--	--	0.545	0.350	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAUFGA through MAUFGC	WASH9	Crane and Mobile Maintenance Parts Washer	--	--	--	--	--	--	0.545	0.350	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		TOTAL:	**350.35**	**1,000**	**1,316**	**3,688**	**135.04**	**396.04**	**132.36**	**312.97**	**141.04**	**555.58**	**193.13**	**817.90**	**176.98**	**765.92**	**0.25**	**0.74**	**16.06**	**19.63**	**2.33**	**7.38**	**265,071**	**1,091,488**	**2.66**	**10.29**	**0.27**	**1.03**	**265,216**	**1,092,049**
		Original Project PTE:	**212.32**	**701.59**	**852.49**	**3,263**	**82.47**	**361.48**	**88.26**	**178.36**	**97.94**	**395.74**	**146.67**	**617.54**	**134.53**	**570.10**	**0.15**	**0.68**	**9.04**	**7.50**	--	--	**178,236**	**673,522**	**1.54**	**5.96**	**0.15**	**0.60**	**178,320**	**673,848**
		Changes in Emissions:	**138.03**	**298.72**	**463.17**	**425.19**	**52.57**	**34.56**	**44.10**	**134.61**	**43.10**	**159.84**	**46.46**	**200.36**	**42.45**	**195.82**	**0.10**	**0.06**	**7.02**	**12.13**	--	--	**86,835**	**417,966**	**1.12**	**4.33**	**0.12**	**0.43**	**86,896**	**418,200**
		PSD Major Source Thresholds:	**-**	**100**	**-**	**100**	**-**	**100**	**-**	**100**	**-**	**100**	**-**	**100**	**-**	**100**	**-**	**100**	**-**	**-**			**-**	**-**	**-**	**-**	**-**	**-**	**-**	**100,000**
		Major Source?	**-**	**Yes**	**-**	**Yes**	**-**	**Yes**	**-**	**Yes**	**-**	**Yes**	**-**	**Yes**	**-**	**Yes**	**-**	**-**	**-**	**-**			**-**	**-**	**-**	**-**	**-**	**-**	**-**	**Yes**
		PSD Major Source SER:	**-**	**40**	**-**	**100**	**-**	**40**	**-**	**40**	**-**	**25**	**-**	**15**	**-**	**10**	**-**	**0.6**	**-**	**-**			**-**	**-**	**-**	**-**	**-**	**-**	**-**	**75,000**
		Major Source Modification?	**-**	**Yes**	**-**	**Yes**	**-**	**No**	**-**	**Yes**	**-**	**Yes**	**-**	**Yes**	**-**	**Yes**	**-**	**No**	**-**	**-**			**-**	**-**	**-**	**-**	**-**	**-**	**-**	**Yes**

NSWV - PTE Calculations
45CSR7-4.1 - Emission Limit Determination based on Process Weight Rate

Emission Point ID	Emission Unit ID	Emission Source	PM (lb/hr)	PM (lb/yr)	PM (tpy)	Exempt?	Weight Rate (lb/hr)	Type	Emission Limit (lb/hr)
BHST1	EAF1/LMF1/CAST1	Pulse Jet Fabric Filter Baghouse 1	25.01	219060.97	109.53		560,000	b	58.40
BHST2	EAF2/LMF2/CAST1	Pulse Jet Fabric Filter Baghouse 2	25.01	219060.97	109.53		560,000	b	58.40
MSMVA through MSMVF	MSFUG	Uncaptured Electric Arc Furnace Fugitives	2.65	23214.44	7.76		1,120,000	b	109.51
MSMVA through MSMVF	CASTFUG	Uncaptured Casting Fugitives	3.36	29433.60	9.84		1,120,000	b	109.51
EAFVF1	EAFVF1	EAF Baghouse 1 Dust Silo	0.04	324.93	0.16		2,476	a	2.97
EAFVF2	EAFVF2	EAF Baghouse 2 Dust Silo	0.04	324.93	0.16		2,476	a	2.97
VF1UNLD	EAFVF1	EAF Baghouse 1 Dust Silo Baghouse Dust	0.04	324.93	0.16	Yes - Emission Rate	N/A	N/A	N/A
VF2UNLD	EAFVF2	EAF Baghouse 2 Dust Silo Baghouse Dust	0.04	324.93	0.16	Yes - Emission Rate	N/A	N/A	N/A
MSMVA through MSMVF	LD1	Ladle Dryer #1	0.03	244.76	0.12	Yes - NG Combustion Only	N/A	N/A	N/A
MSMVA through MSMVF	LD2	Ladle Dryer #2	0.03	244.76	0.12	Yes - NG Combustion Only	N/A	N/A	N/A
MSMVA through MSMVF	LD3	Ladle Dryer #3	0.03	244.76	0.12	Yes - NG Combustion Only	N/A	N/A	N/A
MSMVA through MSMVF	LPHTR1	Horizontal Ladle Preheater 1	0.03	244.76	0.12	Yes - NG Combustion Only	N/A	N/A	N/A
MSMVA through MSMVF	LPHTR2	Horizontal Ladle Preheater 2	0.03	244.76	0.12	Yes - NG Combustion Only	N/A	N/A	N/A
MSMVA through MSMVF	LPHTR3	Horizontal Ladle Preheater 3	0.03	244.76	0.12	Yes - NG Combustion Only	N/A	N/A	N/A
MSMVA through MSMVF	LPHTR4	Horizontal Ladle Preheater 4	0.03	244.76	0.12	Yes - NG Combustion Only	N/A	N/A	N/A
MSMVA through MSMVF	LPHTR5	Horizontal Ladle Preheater 5	0.03	244.76	0.12	Yes - NG Combustion Only	N/A	N/A	N/A
MSMVA through MSMVF	LPHTR6	Vertical Ladle Preheater 6	0.02	163.18	0.08	Yes - NG Combustion Only	N/A	N/A	N/A
MSMVA through MSMVF	LPHTR7	Vertical Ladle Preheater 7	0.02	163.18	0.08	Yes - NG Combustion Only	N/A	N/A	N/A
MSMVA through MSMVF	TD1	Tundish Dryer 1	0.01	97.91	0.05	Yes - NG Combustion Only	N/A	N/A	N/A
MSMVA through MSMVF	TD2	Tundish Dryer 2	0.01	97.91	0.05	Yes - NG Combustion Only	N/A	N/A	N/A
MSMVA through MSMVF	TPHTR1	Tundish Preheater 1	0.02	146.86	0.07	Yes - NG Combustion Only	N/A	N/A	N/A
MSMVA through MSMVF	TPHTR2	Tundish Preheater 2	0.02	146.86	0.07	Yes - NG Combustion Only	N/A	N/A	N/A
MSMVA through MSMVF	SENPHTR1	Subentry Nozzle (SEN) Preheater 1	0.00	10.12	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
MSMVA through MSMVF	SENPHTR2	Subentry Nozzle (SEN) Preheater 2	0.00	10.12	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
MSMVA through MSMVF	SENPHTR3	Subentry Nozzle (SEN) Preheater Oven	0.00	11.13	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
VTDST1	VTD1	Vacuum Tank 1	0.07	655.06	0.33		560,000	b	58.40
VTDST2	VTD2	Vacuum Tank 2	0.07	655.06	0.33		560,000	b	58.40
TFST-1	TF1	Hot Mill Tunnel Furnace 1	0.47	4079.41	2.04	Yes - NG Combustion Only	N/A	N/A	N/A
HMMVA through HMMVL	HM	Hot Mill Matrix Vents	7.57	66286.50	20.47		1,212,000	b	118.51
PLST1	PKL-1	Pickling Line #1	1.43	12553.19	6.28		1,120,000	b	109.51
PKLSB	PKLSB	Pickle Line Scale Breaker	1.32	11587.56	5.79		1,120,000	b	109.51
TCMST	TCM	Tandem Cold Mill	13.23	115875.57	57.94		1,120,000	b	109.51
STMST	STM	Standalone Temper Mill	0.44	3862.52	1.93		1,120,000	b	109.51
CGL1MVA through CGL1MVE	SPM1	Skin Pass Mill #1	0.51	4497.58	2.25		560,000	b	58.40
CGL2MVA through CGL2MVE	SPM2	Skin Pass Mill #2	0.51	4497.58	2.25		560,000	b	58.40
CGL1_ST1	CGL1	CGL1 - Cleaning Section	0.26	2317.51	1.16		560,000	b	58.40
CGL2_ST1	CGL2	CGL2 - Cleaning Section	0.26	2317.51	1.16		560,000	b	58.40
GALVFN1	GALVFN1	Galvanizing Furnace #1	0.14	1196.08	0.60	Yes - NG Combustion Only	N/A	N/A	N/A
GALVFN2	GALVFN2	Galvanizing Furnace #2	0.15	1302.15	0.65	Yes - NG Combustion Only	N/A	N/A	N/A

NSWV - PTE Calculations
45CSR7-4.1 - Emission Limit Determination based on Process Weight Rate

Emission Point ID	Emission Unit ID	Emission Source	PM (lb/hr)	PM (lb/yr)	PM (tpy)	Exempt?	Weight Rate (lb/hr)	Type	Emission Limit (lb/hr)
GALVMVA through GALVMVF	BOXANN1	Box Annealing Furnace #1	0.01	81.59	0.04	Yes - NG Combustion Only	N/A	N/A	N/A
GALVMVA through GALVMVF	BOXANN2	Box Annealing Furnace #2	0.01	81.59	0.04	Yes - NG Combustion Only	N/A	N/A	N/A
GALVMVA through GALVMVF	BOXANN3	Box Annealing Furnace #3	0.01	81.59	0.04	Yes - NG Combustion Only	N/A	N/A	N/A
GALVMVA through GALVMVF	BOXANN4	Box Annealing Furnace #4	0.01	81.59	0.04	Yes - NG Combustion Only	N/A	N/A	N/A
GALVMVA through GALVMVF	BOXANN5	Box Annealing Furnace #5	0.01	81.59	0.04	Yes - NG Combustion Only	N/A	N/A	N/A
GALVMVA through GALVMVF	BOXANN6	Box Annealing Furnace #6	0.01	81.59	0.04	Yes - NG Combustion Only	N/A	N/A	N/A
GALVMVA through GALVMVF	BOXANN7	Box Annealing Furnace #7	0.01	81.59	0.04	Yes - NG Combustion Only	N/A	N/A	N/A
GALVMVA through GALVMVF	BOXANN8	Box Annealing Furnace #8	0.01	81.59	0.04	Yes - NG Combustion Only	N/A	N/A	N/A
GALVMVA through GALVMVF	BOXANN9	Box Annealing Furnace #9	0.01	81.59	0.04	Yes - NG Combustion Only	N/A	N/A	N/A
GALVMVA through GALVMVF	BOXANN10	Box Annealing Furnace #10	0.01	81.59	0.04	Yes - NG Combustion Only	N/A	N/A	N/A
GALVMVA through GALVMVF	BOXANN11	Box Annealing Furnace #11	0.01	81.59	0.04	Yes - NG Combustion Only	N/A	N/A	N/A
GALVMVA through GALVMVF	BOXANN12	Box Annealing Furnace #12	0.01	81.59	0.04	Yes - NG Combustion Only	N/A	N/A	N/A
CGL1-ST1	GALVBOILER1	Galv Line Boiler #1	0.01	109.33	0.05	Yes - regulated by 45CSR2	N/A	N/A	N/A
CGL2-ST1	GALVBOILER2	Galv Line Boiler #2	0.01	109.33	0.05	Yes - regulated by 45CSR2	N/A	N/A	N/A
PLTCMBLR	PLTCMBOILER1	PLTCM Boiler #1	0.14	1207.51	0.60	Yes - regulated by 45CSR2	N/A	N/A	N/A
PLTCMBLR	PLTCMBOILER2	PLTCM Boiler #2	0.13	1169.00	0.58	Yes - regulated by 45CSR2	N/A	N/A	N/A
MAUWIPA through MAUWIPE	AMU-1	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0.01	65.27	0.03	Yes - NG Combustion Only	N/A	N/A	N/A
MAUWIPA through MAUWIPE	AMU-2	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0.01	65.27	0.03	Yes - NG Combustion Only	N/A	N/A	N/A
MAUWIPA through MAUWIPE	AMU-3	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0.01	65.27	0.03	Yes - NG Combustion Only	N/A	N/A	N/A
MAUWIPA through MAUWIPE	AMU-4	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0.01	65.27	0.03	Yes - NG Combustion Only	N/A	N/A	N/A
MAUWIPA through MAUWIPE	AMU-5	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0.01	65.27	0.03	Yes - NG Combustion Only	N/A	N/A	N/A
MAUWIPA through MAUWIPE	AMU-6	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0.01	65.27	0.03	Yes - NG Combustion Only	N/A	N/A	N/A
MAUWIPA through MAUWIPE	AMU-7	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0.007	65.271	0.03	Yes - NG Combustion Only	N/A	N/A	N/A
MAUWIPA through MAUWIPE	AMU-8	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0.007	65.271	0.03	Yes - NG Combustion Only	N/A	N/A	N/A
MAUFGA through MAUFGC	AMU-9	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0.007	65.271	0.033	Yes - NG Combustion Only	N/A	N/A	N/A
MAUFGA through MAUFGC	AMU-10	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0.01	65.27	0.03	Yes - NG Combustion Only	N/A	N/A	N/A
MAUFGA through MAUFGC	AMU-11	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0.01	65.27	0.03	Yes - NG Combustion Only	N/A	N/A	N/A
MAUFGA through MAUFGC	AMU-12	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0.01	65.27	0.03	Yes - NG Combustion Only	N/A	N/A	N/A
MAUFGA through MAUFGC	AMU-13	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0.01	65.27	0.03	Yes - NG Combustion Only	N/A	N/A	N/A
MAUFGA through MAUFGC	AMU-14	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0.01	65.27	0.03	Yes - NG Combustion Only	N/A	N/A	N/A
MAUFGA through MAUFGC	AMU-15	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0.01	65.27	0.03	Yes - NG Combustion Only	N/A	N/A	N/A
MAUFGA through MAUFGC	AMU-16	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0.01	65.27	0.03	Yes - NG Combustion Only	N/A	N/A	N/A
MAUPLA through MAUPLC	AMU-17	NG-Fired Makeup Air Unit, PLTCM Bay	0.01	65.27	0.03	Yes - NG Combustion Only	N/A	N/A	N/A
MAUPLA through MAUPLC	AMU-18	NG-Fired Makeup Air Unit, PLTCM Bay	0.01	65.27	0.03	Yes - NG Combustion Only	N/A	N/A	N/A
-	Slag Handling	Slag Handling	3.56	31170.01	2.88		1,134,000	a	50.00
-	Lime/Alloy/Carbon Handling	Lime/Alloy/Carbon Handling	0.27	6.56	0.22		480,000	a	46.20
-	Scrap Substitute Handling	Scrap Substitute Handling	1.03	4.57	3.39		910,000	a	50.00
SCRPBRGE	SCRAP-RECEIVING1	Scrap Handling	0.29	2501.86	0.50		1,904,000	b	176.00
SCRPHNDA through SCRPHNDC	SCRAP-HANDLING1-3	Scrap Handling	2.61	22840.27	4.53		1,904,000	b	176.00

NSWV - PTE Calculations
45CSR7-4.1 - Emission Limit Determination based on Process Weight Rate

Emission Point ID	Emission Unit ID	Emission Source	PM (lb/hr)	PM (lb/yr)	PM (tpy)	Exempt?	Weight Rate (lb/hr)	Type	Emission Limit (lb/hr)
SCRPSKPA-C	SCRAP-PILE1-3	Scrap Yard Stockpiles	1.84	16118.70	8.06	Yes - not a mfg process	N/A	N/A	N/A
SLAGMRP	SLGSKP1	GFH-MA Hopper Pile	0.00	20.25	0.01	Yes - not a mfg process	N/A	N/A	N/A
SLAGMRP	SLGSKP2	CV-MA-RS2 Radial Stacker Pile	0.03	303.96	0.15	Yes - not a mfg process	N/A	N/A	N/A
SLAGMRP	SLGSKP3	OBM-MA1 Magnet Pile	0.00	6.57	0.00	Yes - not a mfg process	N/A	N/A	N/A
SLAGMRP	SLGSKP4	CV-MA-RS1 Radial Stacker Pile	0.04	374.65	0.19	Yes - not a mfg process	N/A	N/A	N/A
SLAGPORT	SLGSKP5	SP-OBM1 Magnet Pile	0.00	6.26	0.00	Yes - not a mfg process	N/A	N/A	N/A
SLAGPORT	SLGSKP6	MAG HP Magnet Pile	0.00	2.09	0.00	Yes - not a mfg process	N/A	N/A	N/A
SLAGPORT	SLGSKP7	SP-RS1 Radial Stacker Pile Duraberm	0.03	239.14	0.12	Yes - not a mfg process	N/A	N/A	N/A
SLAGPORT	SLGSKP8	SP-RS2 Radial Stacker Pile Durabase	0.03	239.14	0.12	Yes - not a mfg process	N/A	N/A	N/A
SLAGPORT	SLGSKP9	SP-RS1 Radial Stacker Pile 5 Small Chips	0.03	239.14	0.12	Yes - not a mfg process	N/A	N/A	N/A
SLAGPORT	SLGSKP10	SP-RS2 Radial Stacker Pile 6 Big Chips	0.03	239.14	0.12	Yes - not a mfg process	N/A	N/A	N/A
SLAGPORT	SLGSKP11	Long-Term Radial Stacker Pile Duraberm	0.05	478.28	0.24	Yes - not a mfg process	N/A	N/A	N/A
SLAGPORT	SLGSKP12	Long-Term Radial Stacker Pile Durabase	0.05	478.28	0.24	Yes - not a mfg process	N/A	N/A	N/A
SLAGPORT	SLGSKP13	Long-Term Radial Stacker Pile Small Chips	0.05	478.28	0.24	Yes - not a mfg process	N/A	N/A	N/A
SLAGPORT	SLGSKP14	Long-Term Radial Stacker Pile Big Chips	0.05	478.28	0.24	Yes - not a mfg process	N/A	N/A	N/A
BRCKCRSH	BRCKCRSH	Brick Crushing	0.63	5556.64	0.08		120,000	b	33.80
SCRCUTNG	SCRAP-CUT	Scrap Cutting in Scrap Processing Area	0.01	117.49	0.06	Yes - NG Combustion Only	N/A	N/A	N/A
CUTBH	SCRAP-CUT	Scrap and Coil Cutting Baghouse	0.01	117.49	0.06		60,274	a	31.41
CUTBHUNL	SCRAP-CUT	Scrap and Coil Cutting Baghouse	0.01	117.49	0.06	Yes - Emission Rate	N/A	N/A	N/A
ASP	ASP	Water Bath Vaporizer	0.09	758.77	0.38	Yes - 45CSR2	N/A	N/A	N/A
NCT1A through NCT1E	NCT1	Melt Shop Cooling Tower 1	0.42	3682.14	1.84		56,044,800	a	50.00
CCT4A through CCT4B	CCT4	Caster Cooling Tower 2	0.08	679.44	0.34		7,756,200	a	50.00
NCT5A through NCT5B	NCT5	Caster Cooling Tower 3	0.14	1223.00	0.61		18,614,880	a	50.00
CCT6A through CCT6C	CCT6	Hot Mill Cooling Tower 4	0.36	3112.29	1.56		35,528,400	a	50.00
LCT7A through LCT7C	LCT7	Hot Mill Cooling Tower 5	0.28	2485.89	1.24		28,377,684	a	50.00
NCT8A through NCT8B	NCT8	Cold Mill Cooling Tower 6	0.11	920.54	0.46		14,011,200	a	50.00
ASPCTA through ASPCTE	ASPCT	Air Separation Plant Cooling Tower 7	0.00	11.51	0.01		175,140	a	36.01
EMGEN1	EMGEN1	Emergency Generator 1	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN2	EMGEN2	Emergency Generator 2	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN3	EMGEN3	Emergency Generator 3	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN4	EMGEN4	Emergency Generator 4	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN5	EMGEN5	Emergency Generator 5	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A

NSWV - PTE Calculations
45CSR7-4.1 - Emission Limit Determination based on Process Weight Rate

Emission Point ID	Emission Unit ID	Emission Source	PM (lb/hr)	PM (lb/yr)	PM (tpy)	Exempt?	Weight Rate (lb/hr)	Type	Emission Limit (lb/hr)
EMGEN6	EMGEN6	Emergency Generator 6	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN7	EMGEN7	Emergency Generator 7	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN8	EMGEN8	Emergency Generator 8	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN9	EMGEN9	Emergency Generator 9	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN10	EMGEN10	Emergency Generator 10	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN11	EMGEN11	Emergency Generator 11	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN12	EMGEN12	Emergency Generator 12	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN13	EMGEN13	Emergency Generator 13	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN14	EMGEN14	Emergency Generator 14	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN15	EMGEN15	Emergency Generator 15	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN16	EMGEN16	Emergency Generator 16	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN17	EMGEN17	Emergency Generator 17	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN18	EMGEN18	Emergency Generator 18	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN19	EMGEN19	Emergency Generator 19	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN20	EMGEN20	Emergency Generator 20	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN21	EMGEN21	Emergency Generator 21	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN22	EMGEN22	Emergency Generator 22	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN23	EMGEN23	Emergency Generator 23	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN24	EMGEN24	Emergency Generator 24	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN25	EMGEN25	Emergency Generator 25	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
EMGEN26	EMGEN26	Emergency Generator 26	0.11	924.80	0.01	Yes - NG Combustion Only	N/A	N/A	N/A
ROAD1 through ROAD184	FUGD-PAVED-01P	North Entry to P&O	0.08	710.90	0.32	Only subject to 45-7-5.2	N/A	N/A	N/A
ROAD1 through ROAD184	FUGD-PAVED-02P	North Entry to FG	0.19	1643.70	0.74	Only subject to 45-7-5.2	N/A	N/A	N/A
ROAD1 through ROAD184	FUGD-PAVED-03P	North Entry to HB Yard	0.13	1166.09	0.53	Only subject to 45-7-5.2	N/A	N/A	N/A
ROAD1 through ROAD184	FUGD-PAVED-04P	North Entry to Scrap Yard	0.20	1757.81	0.79	Only subject to 45-7-5.2	N/A	N/A	N/A
ROAD1 through ROAD184	FUGD-PAVED-05P	North Entry to Alloy Storage	0.26	2258.44	1.02	Only subject to 45-7-5.2	N/A	N/A	N/A
ROAD1 through ROAD184	FUGD-PAVED-06P	North Entry to EAF Bay	0.10	890.92	0.40	Only subject to 45-7-5.2	N/A	N/A	N/A
ROAD1 through ROAD184	FUGD-PAVED-07P	North Entry to Slag Bay	0.16	1366.08	0.62	Only subject to 45-7-5.2	N/A	N/A	N/A
ROAD1 through ROAD184	FUGD-PAVED-08P	Scrap Yard to EAF Bay	2.63	23016.20	10.40	Only subject to 45-7-5.2	N/A	N/A	N/A
ROAD1 through ROAD184	FUGD-PAVED-09P	South Port to Scrap Yard	3.46	30320.35	13.71	Only subject to 45-7-5.2	N/A	N/A	N/A
ROAD1 through ROAD184	FUGD-PAVED-10P	South Port to HB Yard	0.14	1251.55	0.57	Only subject to 45-7-5.2	N/A	N/A	N/A
ROAD1 through ROAD184	FUGD-PAVED-11P	South Port to FG	0.94	8229.59	3.72	Only subject to 45-7-5.2	N/A	N/A	N/A
ROAD1 through ROAD184	FUGD-PAVED-12P	South Port to P&O	0.62	5436.48	2.46	Only subject to 45-7-5.2	N/A	N/A	N/A
MAUPLA through MAUPLC	PLSTEO	Pickle Line Electrostatic Oiler	0.04	370.56	0.19		169	b	0.20
TMEOMVA and TMEOMVB	STMSTEO	Temper Mill Electrostatic Oiler	0.09	790.83	0.40		361	b	0.43
CGL1MVA through CGL1MVE	CGLEO1	Galvanizing Line 1 Electrostatic Oiler	0.04	334.95	0.17		153	b	0.18
CGL2MVA through CGL2MVE	CGLEO2	Galvanizing Line 2 Electrostatic Oiler	0.04	334.95	0.17		153	b	0.18
TMEOMVA and TMEOMVB	RCLEO	Recoiler Electrostatic Oiler	0.05	395.42	0.20		180	b	0.22
CSP1	CSP1	Caster Spray Vents	10.78	94442.39	47.22		1,212,000	b	118.51
CSP2	CSP2	Caster Spray Vents	21.56	188884.85	94.44		1,212,000	b	118.51

NSWV - PTE Calculations HAP
Emission Summary

			Natural Gas		Emergency Engines		EAF		Cold Mill Sources and Tanks		Cooling Towers		Vacuum Tank Degassers		Caster Spray Vents	
Pollutant	Hourly Emissions (lb/hr)	Annual Emissions (tpy)	Hourly Emissions (lb/hr)	Annual Emissions (tpy)	Hourly Emissions (lb/hr)	Annual Emissions (tpy)	Hourly Emissions (lb/hr)	Annual Emissions (tpy)	Hourly Emissions (lb/hr)	Annual Emissions (tpy)	Hourly Emissions (lb/hr)	Annual Emissions (tpy)	Hourly Emissions (lb/hr)	Annual Emissions (tpy)	Hourly Emissions (lb/hr)	Annual Emissions (tpy)
1,2-Ethanediol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,1,2,2-Tetrachloroethane	9.38E-03	4.69E-04	0	0	9.38E-03	4.69E-04	0	0	0	0	0	0	0	0	0	0
1,1,2-Trichloroethane	7.45E-03	3.73E-04	0	0	7.45E-03	3.73E-04	0	0	0	0	0	0	0	0	0	0
1,3-Butadiene	0.12	5.80E-03	0	0	0.12	5.80E-03	0	0	0	0	0	0	0	0	0	0
1,3-Dichloropropene	6.19E-03	3.10E-04	0	0	6.19E-03	3.10E-04	0	0	0	0	0	0	0	0	0	0
2,2,4-Trimethylpentane	0.12	5.98E-03	0	0	0.12	5.98E-03	0	0	0	0	0	0	0	0	0	0
2-Methylnaphthalene	4.69E-03	2.35E-04	0	0	4.69E-03	2.35E-04	0	0	0	0	0	0	0	0	0	0
Acenaphthene	1.88E-04	9.40E-06	0	0	1.88E-04	9.40E-06	0	0	0	0	0	0	0	0	0	0
Acenaphthylene	7.82E-04	3.91E-05	0	0	7.82E-04	3.91E-05	0	0	0	0	0	0	0	0	0	0
Acetaldehyde	1.18	0.06	0	0	1.18	0.06	0	0	0	0	0	0	0	0	0	0
Acrolein	1.10	0.06	0	0	1.10	0.06	0	0	0	0	0	0	0	0	0	0
Anthracene	1.02E-04	5.08E-06	0	0	1.02E-04	5.08E-06	0	0	0	0	0	0	0	0	0	0
Argon	3.47E-03	0.01	0	0	0	0	3.47E-03	0.01	0	0	0	0	0	0	0	0
Benzene	0.28	0.02	1.89E-03	8.29E-03	0.27	0.01	0	0	0	0	0	0	5.09E-05	2.23E-04	0	0
Benz(a)anthracene	4.75E-05	2.38E-06	0	0	4.75E-05	2.38E-06	0	0	0	0	0	0	0	0	0	0
Benzo(a)pyrene	8.03E-07	4.02E-08	0	0	8.03E-07	4.02E-08	0	0	0	0	0	0	0	0	0	0
Benzo(b)fluoranthene	2.35E-05	1.17E-06	0	0	2.35E-05	1.17E-06	0	0	0	0	0	0	0	0	0	0
Benzo(e)pyrene	5.87E-05	2.93E-06	0	0	5.87E-05	2.93E-06	0	0	0	0	0	0	0	0	0	0
Benzo(g,h,i)perylene	5.85E-05	2.93E-06	0	0	5.85E-05	2.93E-06	0	0	0	0	0	0	0	0	0	0
Benzo(k)fluoranthene	6.02E-07	3.01E-08	0	0	6.02E-07	3.01E-08	0	0	0	0	0	0	0	0	0	0
Beryllium	1.57E-04	4.59E-04	0	0	0	0	1.57E-04	4.59E-04	0	0	0	0	0	0	0	0
Biphenyl	0.03	1.50E-03	0	0	0.03	1.50E-03	0	0	0	0	0	0	0	0	0	0
Cadmium	2.80E-03	8.20E-03	0	0	0	0	2.80E-03	8.20E-03	0	0	0	0	0	0	0	0
Carbon Disulfide	7.03E-03	0.03	0	0	0	0	0	0	0	0	7.03E-03	0.03	0	0	0	0
Carbon Tetrachloride	8.58E-03	4.29E-04	0	0	8.58E-03	4.29E-04	0	0	0	0	0	0	0	0	0	0
Chlorine	0.37	1.64	0	0	0	0	0	0	0	0	0	0	0	0	0.37	1.64
Chlorobenzene	6.28E-03	3.14E-04	0	0	6.28E-03	3.14E-04	0	0	0	0	0	0	0	0	0	0
Chloroform	0.08	0.33	0	0	6.66E-03	3.33E-04	0	0	0	0	0.08	0.33	0	0	0	0
Chloromethane	2.37E-03	0.01	0	0	0	0	0	0	0	0	2.37E-03	0.01	0	0	0	0
Chromium	1.96E-03	5.74E-03	0	0	0	0	1.96E-03	5.74E-03	0	0	0	0	0	0	0	0
Chrysene	9.80E-05	4.90E-06	0	0	9.80E-05	4.90E-06	0	0	0	0	0	0	0	0	0	0
Dichlorobenzene	1.08E-03	4.74E-03	1.08E-03	4.74E-03	0	0	0	0	0	0	0	0	2.91E-05	1.27E-04	0	0
Ethyl Benzene	0.02	7.64E-04	0	0	0.02	7.64E-04	0	0	0	0	0	0	0	0	0	0
Ethylene Dibromide	0.01	5.19E-04	0	0	0.01	5.19E-04	0	0	0	0	0	0	0	0	0	0
Fluoranthene	1.57E-04	7.85E-06	0	0	1.57E-04	7.85E-06	0	0	0	0	0	0	0	0	0	0
Fluorene	8.02E-04	4.01E-05	0	0	8.02E-04	4.01E-05	0	0	0	0	0	0	0	0	0	0
Formaldehyde	7.87	0.69	0.07	0.30	7.81	0.39	0	0	0	0	0	0	1.82E-03	7.96E-03	0	0
Hydrogen Chloride	0.54	2.35	0	0	0	0	0	0	0.54	2.35	0	0	0	0	0	0
Hydrogen Fluoride	0.06	0.24	0	0	0	0	0	0	0	0	0	0	0	0	0.06	0.24
Indeno(1,2,3-c,d)pyrene	1.40E-06	7.02E-08	0	0	1.40E-06	7.02E-08	0	0	0	0	0	0	0	0	0	0
Lead	0.25	0.74	0	0	0	0	0.25	0.74	0	0	0	0	0	0	0	0
Manganese Compounds	0.17	0.49	0	0	0	0	0.17	0.49	0	0	0	0	0	0	0	0
Mercury	0.06	0.18	0	0	0	0	0.06	0.18	0	0	0	0	6.30E-06	2.76E-05	0	0
Methanol	1.59	5.08	0	0	0.43	0.02	0	0	1.16	5.06	0	0	0	0	0	0
Methylene Chloride	0.03	0.04	0	0	0.02	1.04E-03	0	0	0	0	8.38E-03	0.04	0	0	0	0
Naphthalene	0.01	3.10E-03	5.50E-04	2.41E-03	0.01	6.87E-04	0	0	0	0	0	0	1.48E-05	6.48E-05	0	0
N-Hexane	1.79	7.17	1.62	7.11	0.16	7.85E-03	0	0	0	0	0.01	0.05	0.04	0.19	0	0
Nickel	3.08E-03	9.02E-03	0	0	0	0	3.08E-03	9.02E-03	0	0	0	0	0	0	0	0
PAHs	0.02	1.35E-03	7.95E-05	3.48E-04	0.02	9.97E-04	0	0	0	0	0	0	2.10E-09	9.18E-09	0	0
Perylene	7.03E-07	3.51E-08	0	0	7.03E-07	3.51E-08	0	0	0	0	0	0	0	0	0	0
Phenanthrene	1.47E-03	7.35E-05	0	0	1.47E-03	7.35E-05	0	0	0	0	0	0	0	0	0	0
Phenol	5.95E-03	2.98E-04	0	0	5.95E-03	2.98E-04	0	0	0	0	0	0	0	0	0	0
Pyrene	1.92E-04	9.62E-06	0	0	1.92E-04	9.62E-06	0	0	0	0	0	0	0	0	0	0
Styrene	7.75E-03	3.87E-04	0	0	7.75E-03	3.87E-04	0	0	0	0	0	0	0	0	0	0
Tetrachloroethane	3.51E-04	1.75E-05	0	0	3.51E-04	1.75E-05	0	0	0	0	0	0	0	0	0	0
Toluene	0.18	0.20	3.07E-03	0.01	0.14	6.81E-03	0	0	0	0	0.04	0.18	8.24E-05	3.61E-04	0	0
Vinyl Chloride	3.49E-03	1.75E-04	0	0	3.49E-03	1.75E-04	0	0	0	0	0	0	0	0	0	0
Xylene, mixed (Dimethylbenzene)	0.04	0.02	0	0	0.04	1.89E-03	0	0	0	0	4.54E-03	0.02	0	0	0	0
Total	**16.06**	**19.63**	**1.70**	**7.46**	**11.54**	**0.58**	**0.49**	**1.44**	**1.69**	**7.41**	**0.15**	**0.66**	**0.046**	**0.200**	**0.43**	**1.88**

NSWV - PTE Calculations
FLM - Class I Q/d Calculation

Class I Area	Distance to Proposed Site	Facility Wide Emission Rates				FLAG 2010
	(km)	SO_2 (tpy)[1]	NO_X (tpy)[1]	PM_{10} (tpy)[1]	Q (tpy)[2]	Q/d
Otter Creek Wilderness	220	396.04	1000.31	817.90	2,214.25	10.06
Dolly Sods Wilderness	240	396.04	1000.31	817.90	2,214.25	9.23
James River Face Wilderness	262	396.04	1000.31	817.90	2,214.25	8.45
Shenandoah National Park	302	396.04	1000.31	817.90	2,214.25	7.33

[1] Includes emissions for 100 hours of emergency generator maintenance and testing authorized under NSPS JJJJ.

[2] Sum of all SO_2, NO_X, and PM_{10} emitting equipment based on hourly emission rates, in consideration of batch operations which are inherently restricted and cannot routinely achieve peak hourly emission rates on a daily basis.

NSWV - PTE Calculations
Electric Arc Furnace Emissions Calculation

Electric Arc Furnace Emission Factors

Emission Point ID	Unit	Description	DEC Capture Efficiency[1] (%)	Oxy-fuel Burner Heat Capacity (MMBtu/hr)	Throughput		Emission Factor[2]							
					Hourly (ton stl/hr)	Annual (ton stl/yr)	NO_x (lb/ton stl)	CO (lb/ton stl)	SO_2 (lb/ton stl)	VOC (lb/ton stl)	Lead[3] (lb/ton stl)	CO_2[4] (lb/MMBtu)	CH_4[4] (lb/MMBtu)	N_2O[4] (lb/MMBtu)
BHST1	Melt Shop	Single Shell DC Electric Arc Furnace 1	95	60	280	1,640,000	0.37	2	0.20	0.093	4.50E-04	116.98	2.20E-03	2.20E-04
BHST2	Melt Shop	Single Shell DC Electric Arc Furnace 2	95	60	280	1,640,000	0.37	2	0.20	0.093	4.50E-04	116.98	2.20E-03	2.20E-04

[1] Per vendor guarantee, 99% of emissions are captured by the stacks and 1% are released into the Melt Shop Area as Melt Shop fugitives (EPN MSFUG).

[2] Emission factors of criteria pollutants for electric arc furnace are based on proposed BACT.

[3] Controlled lead emission factor for electric arc furnace is based on data collected from the Nucor Gallatin Mill. Lead emissions are in the form of elemental lead.

[4] Emission factors of GHGs are based on Tables C-1 and C-2 of 40 CFR Part 98.

CO_2e Potential

Global Warming Potentials (GWPs)[1]		
CO_2	CH_4	N_2O
1	28	265

[1] EPA GHG MRR rule (40 CFR 98, dated September 22, 2009), Table A-1. Updated GWP finalized on April 25, 2024.

Electric Arc Furnace Hourly Emissions

Emission Point ID	Unit	Description	Hourly Emissions[1,2]								
			NO_x (lb/hr)	CO (lb/hr)	SO_2 (lb/hr)	VOC (lb/hr)	Lead (lb/hr)	CO_2 (lb/hr)	CH_4 (lb/hr)	N_2O (lb/hr)	CO_2e (lb/hr)
BHST1	Melt Shop	Single Shell DC Electric Arc Furnace 1	98.42	532.00	53.20	24.74	0.12	6,668	0.13	0.01	6,675
BHST2	Melt Shop	Single Shell DC Electric Arc Furnace 2	98.42	532.00	53.20	24.74	0.12	6,668	0.13	0.01	6,675
MSMVA through MSMVF	Melt Shop	Uncaptured Electric Arc Furnace Fugitives	10.36	56.00	5.60	2.60	1.26E-02	702	1.32E-02	1.32E-03	703

[1] Hourly Emissions (lb/hr) = Hourly Throughput (ton stl/hr) x Emission Factor (lb/ton stl) x Capture Efficiency (%)

$$NO_x \text{ Hourly Emissions (lb/hr)} = \frac{280 \text{ ton stl}}{\text{hr}} \times \frac{0.37 \text{ lb}}{\text{ton stl}} \times 95\ \% = 98.42 \text{ lb/hr}$$

[2] Hourly Emissions (lb/hr) = Heat Capacity (MMBtu/hr) x Emission Factor (lb/MMBtu) x Capture Efficiency (%)

$$CO_2 \text{ Hourly Emissions (lb/hr)} = \frac{60 \text{ MMBtu}}{\text{hr}} \times \frac{116.98 \text{ lb}}{\text{MMBtu}} \times 95\ \% = 6{,}667.70 \text{ lb/hr}$$

NSWV - PTE Calculations
Electric Arc Furnace Emissions Calculation

Electric Arc Furnace Annual Emissions

Emission Point ID	Unit	Description	Annual Emissions[1,2]								
			NO_X (tpy)	CO (tpy)	SO_2 (tpy)	VOC (tpy)	Lead (tpy)	CO_2 (tpy)	CH_4 (tpy)	N_2O (tpy)	CO_2e (tpy)
BHST1	Melt Shop	Single Shell DC Electric Arc Furnace 1	288.23	1558.00	155.80	72.45	0.35	29,205	0.55	0.06	29,235
BHST2	Melt Shop	Single Shell DC Electric Arc Furnace 2	288.23	1558.00	155.80	72.45	0.35	29,205	0.55	0.06	29,235
MSMVA through MSMVF	Melt Shop	Uncaptured Electric Arc Furnace Fugitives	30.34	164.00	16.40	7.63	3.69E-02	3,074.16	5.79E-02	5.79E-03	3,077

[1] Annual Emissions (tpy) = Annual Throughput (ton stl/yr) x Emission Factor (lb/ton stl) / 2000 (lb/ton) x Capture Efficiency (%)

NO_x Annual Emissions (tpy) = $\frac{1{,}640{,}000 \text{ ton stl}}{\text{yr}} \times \frac{0.37 \text{ lb}}{\text{ton stl}} \times \frac{\text{ton}}{2{,}000 \text{ lb}} \times 95\ \% = 288.23$ tpy

[2] Annual Emissions (tpy) = Heat Capacity (MMBtu/hr) x Emission Factor (lb/MMBtu) / Hours of Operation (hr/yr) / 2000 (lb/ton) x Capture Efficiency (%)

CO_2 Annual Emissions (tpy) = $\frac{60 \text{ MMBtu}}{\text{hr}} \times \frac{116.98 \text{ lb}}{\text{MMBtu}} \times \frac{8760 \text{ hr}}{\text{yr}} \times \frac{\text{ton}}{2{,}000 \text{ lb}} \times 95\ \% = 29{,}205$ tpy

Electric Arc Furnace Speciations

Emission Point ID	Unit	Description	Speciated Emission Factors[1,2]							
			Ar (lb/ton stl)	Be (lb/ton stl)	Cd (lb/ton stl)	Cr (lb/ton stl)	Hg (lb/ton stl)	Mn (lb/ton stl)	Ni (lb/ton stl)	F- (lb/ton stl)
BHST1	Melt Shop	Single Shell DC Electric Arc Furnace 1	6.20E-06	2.80E-07	5.00E-06	3.50E-06	1.10E-04	3.00E-04	5.50E-06	3.50E-03
BHST2	Melt Shop	Single Shell DC Electric Arc Furnace 2	6.20E-06	2.80E-07	5.00E-06	3.50E-06	1.10E-04	3.00E-04	5.50E-06	3.50E-03

[1] Emission factors of hazardous air pollutants for electric arc furnace are based on AP-42 Section 12.5.1.

[2] Emission factors for flouride for electric arc furnace are based on Nucor Berkeley Mill emission data.

Electric Arc Furnace Speciated Hourly Emissions

Emission Point ID	Unit	Description	Speciated Hourly Emissions[1]							
			Ar (lb/hr)	Be (lb/hr)	Cd (lb/hr)	Cr (lb/hr)	Hg (lb/hr)	Mn (lb/hr)	Ni (lb/hr)	F- (lb/hr)
BHST1	Melt Shop	Single Shell DC Electric Arc Furnace 1	1.65E-03	7.45E-05	1.33E-03	9.31E-04	2.93E-02	0.08	1.46E-03	9.31E-01
BHST2	Melt Shop	Single Shell DC Electric Arc Furnace 2	1.65E-03	7.45E-05	1.33E-03	9.31E-04	2.93E-02	0.08	1.46E-03	9.31E-01
MSMVA through MSMVF	Melt Shop	Uncaptured Electric Arc Furnace Fugitives	1.74E-04	7.84E-06	1.40E-04	9.80E-05	3.08E-03	8.40E-03	1.54E-04	9.80E-02

[1] Speciated Hourly Emissions (lb/hr) = Hourly Throughput (ton stl/hr) x Speciated Emission Factor (lb/ton stl) x Capture Efficiency (%)

Ar Hourly Emissions (lb/hr) = $\frac{280 \text{ ton stl}}{\text{hr}} \times \frac{6.20\text{E-}06 \text{ lb}}{\text{ton stl}} \times 95\ \% = 1.65\text{E-}03$ lb/hr

NSWV - PTE Calculations
Electric Arc Furnace Emissions Calculation

Electric Arc Furnace Speciated Annual Emissions

Emission Point ID	Unit	Description	Speciated Annual Emissions[1]							
			Ar (tpy)	Be (tpy)	Cd (tpy)	Cr (tpy)	Hg (tpy)	Mn (tpy)	Ni (tpy)	F- (tpy)
BHST1	Melt Shop	Single Shell DC Electric Arc Furnace 1	4.83E-03	2.18E-04	3.90E-03	2.73E-03	8.57E-02	2.34E-01	4.28E-03	2.73E+00
BHST2	Melt Shop	Single Shell DC Electric Arc Furnace 2	4.83E-03	2.18E-04	3.90E-03	2.73E-03	8.57E-02	2.34E-01	4.28E-03	2.73E+00
MSMVA through MSMVF	Melt Shop	Uncaptured Electric Arc Furnace Fugitives	5.08E-04	2.30E-05	4.10E-04	2.87E-04	9.02E-03	2.46E-02	4.51E-04	2.87E-01

[1] Speciated Annual Emissions (tpy) = Annual Throughput (ton stl/yr) x Speciated Emission Factor (lb/ton stl) / 2000 (lb/ton) x Capture Efficiency (%)

$$\text{Ar Annual Emissions (tpy)} = \frac{1{,}640{,}000 \text{ ton stl}}{\text{yr}} \times \frac{6.20\text{E-}06 \text{ lb}}{\text{ton stl}} \times \frac{\text{ton}}{2{,}000 \text{ lb}} \times 95\ \% = 4.83\text{E-}03 \text{ tpy}$$

NSWV - PTE Calculations
Ladle Metallurgical Furnace Emissions Calculation

Ladle Metallurgical Furnace Emission Factors

Emission Point ID	Unit	Description	Canopy Hood Capture Efficiency[1] (%)	Throughput		Emission Factor[2]			
				Hourly (ton stl/hr)	Annual (ton stl/yr)	NO_X (lb/ton stl)	CO (lb/ton stl)	SO_2 (lb/ton stl)	VOC (lb/ton stl)
BHST1	Melt Shop	Ladle Metallurgical Furnace 1	95	280	1,640,000	0.05	0.02	0.04	0.005
BHST2	Melt Shop	Ladle Metallurgical Furnace 2	95	280	1,640,000	0.05	0.02	0.04	0.005

[1] Per vendor guarantee, 95% of emissions are captured by the canopy hood and 5% are released into the Melt Shop Area as Melt Shop fugitives (EPN MSFUG).

[2] Emission factors of criteria pollutants for ladle metallurgical furnace are based on anticipated BACT.

Ladle Metallurgical Furnace Hourly Emissions

Emission Point ID	Unit	Description	Hourly Emissions[1,2]			
			NO_X (lb/hr)	CO (lb/hr)	SO_2 (lb/hr)	VOC (lb/hr)
BHST1	Melt Shop	Ladle Metallurgical Furnace 1	13.30	5.32	10.64	1.33
BHST2	Melt Shop	Ladle Metallurgical Furnace 2	13.30	5.32	10.64	1.33
MSMVA through MSMVF	Melt Shop	Uncaptured Electric Arc Furnace Fugitives	1.40	0.56	1.12	0.14

[1] Hourly Emissions (lb/hr) = Hourly Throughput (ton stl/hr) x Emission Factor (lb/ton stl) x Capture Efficiency (%)

$$NO_x \text{ Hourly Emissions (lb/hr)} = \frac{280 \text{ ton stl}}{\text{hr}} \times \frac{0.05 \text{ lb}}{\text{ton stl}} \times 95\ \% = 13.30 \text{ lb/hr}$$

Ladle Metallurgical Furnace Annual Emissions

Emission Point ID	Unit	Description	Annual Emissions[1,2]			
			NO_X (tpy)	CO (tpy)	SO_2 (tpy)	VOC (tpy)
BHST1	Melt Shop	Ladle Metallurgical Furnace 1	38.95	15.58	31.16	3.90
BHST2	Melt Shop	Ladle Metallurgical Furnace 2	38.95	15.58	31.16	3.90
MSMVA through MSMVF	Melt Shop	Uncaptured Electric Arc Furnace Fugitives	4.10	1.64	3.28	0.41

[1] Annual Emissions (tpy) = Annual Throughput (ton stl/yr) x Emission Factor (lb/ton stl) / 2000 (lb/ton) x Capture Efficiency (%)

$$NO_x \text{ Annual Emissions (tpy)} = \frac{1{,}640{,}000 \text{ ton stl}}{\text{yr}} \times \frac{0.05 \text{ lb}}{\text{ton stl}} \times \frac{\text{ton}}{2{,}000 \text{ lb}} \times 95\ \% = 38.95 \text{ tpy}$$

NSWV - PTE Calculations
Vacuum Tank Degasser Emissions Calculation

Vacuum Tank Degasser Waste Gas and Natural Gas Combustion

Emission Point ID	Unit	Description	Treatment Time (min)	Control Efficiency[1] (%)	Additives Throughput Hourly (ton/hr)	Additives Throughput Annual (tpy)	Uncontrolled CO[2] Hourly (lb/hr)	Uncontrolled CO[2] Annual (lb/yr)	Heat Input Hourly (MMBtu/hr)	Heat Input Annual (MMBtu/yr)	Emission Factor[3] NO_X (lb/MMBtu)	CO (lb/MMBtu)	Lead (lb/MMBtu)	$PM/PM_{10}/PM_{2.5}$[4] (lb/MMBtu)	VOC (lb/MMBtu)	SO_2 (lb/MMBtu)	Total HAP (lb/MMBtu)	Highest Single HAP (lb/MMBtu)	CO_2 (lb/MMBtu)	CH_4 (lb/MMBtu)	N_2O (lb/MMBtu)
VTDST1	Melt Shop	Vacuum Tank 1	50	98	13.13	115000	440.06	1,493,333	12.36	108,274	0.068	0.082	4.90E-07	6.05E-03	1.40E-01	5.88E-04	1.85E-03	1.76E-03	116.9773	2.20E-03	2.20E-04
VTDST2	Melt Shop	Vacuum Tank 2	50	98	13.13	115000	440.06	1,493,333	12.36	108,274	0.068	0.082	4.90E-07	6.05E-03	1.40E-01	5.88E-04	1.85E-03	1.76E-03	116.9773	2.20E-03	2.20E-04

[1] Flare control efficiency based on BACT.

[2] Emission factor based on engineering estimate of carbon removed in VTD process.

[3] Emission factors for NOx and VOC are based on AP-42 Table 13.5-1 for flare operations. Other emission factors from AP-42 Section 1.4 *Natural Gas Combustion* Table 1.4-1, 1.4-2, 1.4-3,1.4-4. Factor is converted to lb/MMBtu based on natural gas heat value.

[4] PM emissions are controlled by a vacuum bag filter before passing through the mechanical pumps. Emission factor is estimate based on information from similar facilities using total gas flow per treatment and an exit loading rate of 0.0083 gr/scf PM.

CO_2e Potential

Global Warming Potentials (GWPs)[1]		
CO_2	CH_4	N_2O
1	28	265

[1] EPA GHG MRR rule (40 CFR 98, dated September 22, 2009), Table A-1. Updated GWP finalized on November 29, 2013.

Hourly Emissions Calculation

Emission Point ID	Unit	Description	Hourly Emissions NO_X[1] (lb/hr)	CO[2] (lb/hr)	Lead[1] (lb/hr)	$PM/PM_{10}/PM_{2.5}$[1] (lb/hr)	VOC[1] (lb/hr)	SO_2[1] (lb/hr)	Total HAP[1] (lb/hr)	Highest Single HAP[1] (lb/hr)	CO_2[3] (lb/hr)	CH_4[1] (lb/hr)	N_2O[1] (lb/hr)	CO_2e[4] (lb/hr)
VTDST1	Melt Shop	Vacuum Tank 1	0.84	9.82	6.06E-06	0.075	1.730	0.007	2.29E-02	2.18E-02	2123.442	0.027	0.003	2124.93
VTDST2	Melt Shop	Vacuum Tank 2	0.84	9.82	6.06E-06	0.075	1.730	0.007	2.29E-02	2.18E-02	2123.442	0.027	0.003	2124.93

[1] Hourly Emissions NO_x ,VOC, SO_2, Lead, PM/PM10/PM2.5, HAP, CH_4, N_2O (lb/hr) = Heat Input (MMBtu/hr) x Emission Factor (lb/MMBtu)

NO_x Hourly Emissions (lb/hr) = 12.36 MMBtu/hr × 0.068 lb/MMBtu = 0.84 lb/hr

[2] Hourly Emissions CO (lb/hr) = CO Throughput (lb/hr) x (1 - Control Efficiency)[%] + Heat Input (MMBtu/hr) x Emission Factor (lb/MMBtu)

CO Hourly Emissions (lb/hr) = 440.1 lb/hr × 2 % + 12.36 MMBtu/hr × 0.082 lb/MMBtu = 9.82 lb/hr

[3] Hourly Emissions CO_2 (lb/hr) = Heat Input (MMBtu/hr) x Emission Factor (lb/MMBtu) + CO Throughput (lb/hr) x Control Efficiency (%) / 28.01 lb/lb-mol CO x 44.01 lb/lb-mol CO_2

CO_2 Hourly Emissions (lb/hr) = 12.36 MMBtu/hr × 116.977 lb/MMBtu + 440.1 lb/hr × 98 % × 44.01 lb/lb-mol CO_2 / 28.01 lb/lb-mol CO = 2123 lb/hr

[4] Hourly Emissions CO_2e (lb/hr) = CO_2 Emissions (lb/hr) x CO_2 GWP + CH_4 Emissions (lb/hr) x CH_4 GWP + N_2O Emissions (lb/hr) x N_2O GWP

Annual Emissions Calculation

Emission Point ID	Unit	Description	Annual Emissions NO_X[1] (tpy)	CO[2] (tpy)	Lead[1] (tpy)	$PM/PM_{10}/PM_{2.5}$[1] (tpy)	VOC[1] (tpy)	SO_2[1] (tpy)	Total HAP[1] (tpy)	Highest Single HAP[1] (tpy)	CO_2[3] (tpy)	CH_4[1] (tpy)	N_2O[1] (tpy)	CO_2e[4] (tpy)
VTDST1	Melt Shop	Vacuum Tank 1	3.68	19.39	2.65E-05	0.33	7.579	0.032	0.10	0.10	10353.2	0.119	0.012	10359.70
VTDST2	Melt Shop	Vacuum Tank 2	3.68	19.39	2.65E-05	0.33	7.579	0.032	0.10	0.10	10353.2	0.119	0.012	10359.70

[1] Annual Emissions NOx ,VOC, SO2, Lead, PM/PM10/PM2.5, HAP, CH4, N2O (tpy) = Heat Input (MMBtu/yr) x Emission Factor (lb/MMBtu) / 2,000 (lb/ton)

NO_x Hourly Emissions (tpy) = 108,274 MMBtu/yr × 0.068 lb/MMBtu × ton/2,000 lb = 3.68 tpy

[2] Annual Emissions CO (tpy) = CO Throughput (lb/yr) x (1 - Control Efficiency)[%] / 2000 lb/ton + Heat Input (MMBtu/hr) x Emission Factor (lb/MMBtu) / 2,000 (lb/ton)

CO Annual Emissions (tpy) = 1,493,333 lb/yr × 2 % × ton/2,000 lb + 108,274 MMBtu/hr × 0.082 lb/MMBtu × ton/2,000 lb = 19.39 tpy

[3] Annual Emissions CO_2 (tpy) = Heat Input (MMBtu/yr) x Emission Factor (lb/MMBtu) / 2000 lb/ton + CO Throughput (lb/hr) x Control Efficiency (%) / 28.01 lb/lb-mol CO x 44.01 lb/lb-mol CO_2 / 2000 lb/ton

CO_2 Annual Emissions (tpy) = 108,274 MMBtu/yr × 116.977 lb/MMBtu × ton/2,000 lb + 1,493,333 lb/yr × 98 % × 44.01 lb/lb-mol CO_2 / 28.01 lb/lb-mol CO × ton/2,000 lb = 10,353 tpy

[4] Annual Emissions CO_2e (tpy) = CO_2 Emissions (tpy) x CO_2 GWP + CH_4 Emissions (tpy) x CH_4 GWP + N_2O Emissions (tpy) x N_2O GWP

NSWV - PTE Calculations
Caster Spray Vents Emissions Calculation

Caster Spray Vents Vent Assumptions and Inputs

Emission Point ID	Emission Unit ID	Unit	Description	Caster Processing Rate (ton/hr)	Emissions Allocation %	Exhaust Flow Rate (dscfm)	Emission Factor[1,2]						
							PM (gr/dscf)	PM_{10} (gr/dscf)	$PM_{2.5}$ (gr/dscf)	VOC (lb/hr)	Chlorine (lb/ton)	HF (lb/ton)	Fluoride (lb/ton)
CSP1	CSP1	Melt Shop	Caster Spray Vents	606.0	75%	107,504	1.17E-02	3.97E-03	2.33E-03	1.45	6.17E-04	9.20E-05	6.17E-04
CSP2	CSP2	Melt Shop	Caster Spray Vents		25%	215,008	1.17E-02	3.97E-03	2.33E-03	2.91	6.17E-04	9.20E-05	6.17E-04

[1] PM/PM10/PM2.5 and VOC emission factors based on BACT from Nucor Arkansas facility

[2] Fluoride, hydrogen fluoride, and chlorine emissions are based on an engineering test conducted at Nucor Steel Berkeley. The concentration is conservative in comparison to likely fluoride concentrations due to fluorspar usage at Berkeley mill.

Caster Spray Vents - Emission Calculation

Emission Point ID	Emission Unit ID	Description	PM Emissions[1,3]		PM_{10} Emissions[1,3]		$PM_{2.5}$ Emissions[1,3]		VOC Emissions[4]		Chlorine Emissions[2,5]		HF Emissions[2,5]		Fluoride Emissions[2,5]	
			PM (lb/hr)	PM (tpy)	PM_{10} (lb/hr)	PM_{10} (tpy)	$PM_{2.5}$ (lb/hr)	$PM_{2.5}$ (tpy)	VOC (lb/hr)	VOC (tpy)	Chlorine (lb/hr)	Chlorine (tpy)	HF (lb/hr)	HF (tpy)	Fluoride (lb/hr)	Fluoride (tpy)
CSP1	Melt Shop	Caster Spray Vents	10.78	47.22	3.66	16.02	2.15	9.40	1.45	6.37	0.28	1.23	0.04	0.18	0.28	1.23
CSP2	Melt Shop	Caster Spray Vents	21.56	94.44	7.32	32.05	4.29	18.81	2.91	12.73	0.09	0.41	0.01	0.06	0.09	0.41

[1] Hourly PM Emissions (lb/hr) = Exhaust Flow Rate (dscfm) x Emission Factor (dscfm) x 60 (min/hr) / 7,000 (gr/dscf)

Example PM Emission Rate (lb/hr) = 107504 dscf × 1.17E-02 gr / dscf × 60 min / hr × lb / 7,000 gr = 10.78 lb/hr

[2] Hourly Chlorine, Hydrogen Fluoride Emissions (lb/hr) = Caster Processing Rate (ton/hr) x Emissions Allocation per Spray Vent (%) x Emission Factor (lb/ton)

Example HAP Emission Rate (lb/hr) = 606 ton / hr × 75% × 6.17E-04 lb / ton = 0.28 lb/hr

[3] Annual PM Emissions (tpy) = Exhaust Flow Rate (dscfm) x Emission Factor (dscfm) x 60 (min/hr) x 8,760 (hr/yr) / 7,000 (gr/dscf) / 2,000 (lb/ton)

Example PM Emission Rate (tpy) = 107504 dscf × 1.17E-02 gr / dscf × 60 min / hr × lb / 7,000 gr × 8,760 hr / yr × ton / 2,000 lb = 47.22 tpy

[4] Annual VOC Emissions (tpy) = Emission Factor (lb/hr) / 2,000 (lb/ton) x 8,760 (hr/yr)

Example VOC Emission Rate (tpy) = 1.45 lb/hr × 8,760 hr / yr × ton / 2,000 lb = 6.37 tpy

[5] Annual Chlorine, Hydrogen Fluoride Emissions (tpy) = Caster Processing Rate (ton/hr) x Emissions Allocation per Spray Vent (%) x Emission Factor (lb/ton) x 8,760 (hr/yr) / 2,000 (lb/ton)

Example HAP Emission Rate (tpy) = 606 ton / hr × 75% × 6.17E-04 lb / ton × 8,760 hr / yr × ton / 2,000 lb = 1.23 tpy

NSWV - PTE Calculations
Baghouse/Fugitives PM Emissions Calculation

Baghouse Emissions

Emission Point ID	Unit	Description	Flow Rate (dscfm)	Emission Factor[1,2]			Hourly Emissions[3]			Annual Emissions[4]		
				PM (gr/dscf)	PM_{10} (gr/dscf)	$PM_{2.5}$ (gr/dscf)	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
BHST1	Melt Shop	Pulse Jet Fabric Filter Baghouse 1	1,620,821	0.0018	0.0052	0.0052	25.01	72.24	72.24	109.53	316.42	316.42
BHST2	Melt Shop	Pulse Jet Fabric Filter Baghouse 2	1,620,821	0.0018	0.0052	0.0052	25.01	72.24	72.24	109.53	316.42	316.42
CUTBH	Scrap Cutting	Scrap and Coil Cutting Baghouse	100,000	0.001	0.001	0.001	0.86	0.86	0.86	3.75	3.75	3.75
EAFVF1	Melt Shop	EAF Baghouse 1 Dust Silo	433	0.01	0.01	0.01	0.04	0.04	0.04	0.16	0.16	0.16
EAFVF2	Melt Shop	EAF Baghouse 2 Dust Silo	433	0.01	0.01	0.01	0.04	0.04	0.04	0.16	0.16	0.16

[1] Exit loading rate in grain per dry standard cubic feet (gr/dscf) obtained from vendor's guarantee.

[2] PM emission factor is filterable PM only. PM_{10} and $PM_{2.5}$ emission factors are filterable and condensable PM combined.

[3] Hourly Emissions (lb/hr) = Flow Rate (dscfm) x Emission Factor (gr/dscf) x 60 (min/hr) / 7,000 (gr/dscf)

Example PM Emission Rate (lb/hr) = $\frac{1{,}620{,}821 \text{ dscfm} \times 0.0018 \text{ gr/dscf} \times 60 \text{ min/hr}}{7{,}000 \text{ gr/lb}} = 25.01 \text{ lb/hr}$

[4] Annual Emissions (tpy) = Flow Rate (dscfm) x Emission Factor (gr/dscf) x 60 (min/hr) x 8,760 (hr/yr) / 7,000 (gr/dscf) / 2,000 (lb/ton)

Example PM Emission Rate (tpy) = $\frac{1{,}620{,}821 \text{ dscfm} \times 0.0018 \text{ gr/dscf} \times 60 \text{ min/hr} \times 8{,}760 \text{ hr/yr}}{7{,}000 \text{ gr/lb} \times 2000 \text{ lb/ton}} = 109.53 \text{ lb/hr}$

Baghouse Transfer Point Emissions

Emission Point ID	Unit	Description	Throughput[1]		Emission Factor[2]			Hourly Emissions[4]			Annual Emissions[5]		
			Hourly (ton/hr)	Annual (tpy)	PM (lb/ton)	PM_{10} (lb/ton)	$PM_{2.5}$ (lb/ton)[3]	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
CUTBHUNL	Scrap Cutting	Scrap and Coil Cutting Baghouse Dust	0.021	184	3.00E-03	1.10E-03	3.11E-04	6.30E-05	2.31E-05	6.53E-06	2.76E-04	1.01E-04	2.86E-05
VF1UNLD	Melt Shop	EAF Baghouse 1 Dust Silo Baghouse Dust	1.770	15,505	3.00E-03	1.10E-03	3.11E-04	5.31E-03	1.95E-03	5.50E-04	2.33E-02	8.53E-03	2.41E-03
VF2UNLD	Melt Shop	EAF Baghouse 2 Dust Silo Baghouse Dust	1.770	15,505	3.00E-03	1.10E-03	3.11E-04	5.31E-03	1.95E-03	5.50E-04	2.33E-02	8.53E-03	2.41E-03
EXBHUNLD	Misc Outdoors	Raw Material Handling External Baghouse Dust	0.005	47	3.00E-03	1.10E-03	3.11E-04	1.59E-05	5.84E-06	1.65E-06	6.98E-05	2.56E-05	7.23E-06
MSMVA through MSMVF	Melt Shop	Raw Material Handling Internal Baghouse Dust	0.005	45	3.00E-03	1.10E-03	3.11E-04	1.54E-05	5.65E-06	1.60E-06	6.75E-05	2.47E-05	6.99E-06

[1] Throughputs for baghouse dust drop points calculated using baghouse emissions and total dust throughput equal to 98% control of PM at each baghouse.

[2] For all drop points, emission factors based on AP-42 Section 11.19.2. Drop points use the uncontrolled factors for conveyor transfer points.

[3] PM distribution for uncontrolled emission factors assumed to be equivalent to the PM distribution for controlled emission factors presented in AP-42 Section 11.19.2.

[4] Hourly Emissions (lb/hr) = Hourly Throughput (ton/hr) x Emission Factor (lb/ton)

Example PM Emission Rate (lb/hr) = $\frac{0.02 \text{ ton/hr} \times 0.003 \text{ lb/ton}}{} = 0.0001 \text{ lb/hr}$

[5] Annual Emissions (tpy) = Annual Throughput (tpy) x Emission Factor (lb/ton) / 2000 (lb/ton)

Example PM Emission Rate (tpy) = $\frac{184 \text{ tpy} \times 0.003 \text{ lb/ton}}{2000 \text{ lb/ton}} = 0.0003 \text{ tpy}$

NSWV - PTE Calculations
Baghouse/Fugitives PM Emissions Calculation

Uncaptured Melt Shop Fugitives from EAF/LMF

Emission Point ID	Unit	Description	Throughput		Capture Efficiency[1]		Building Enclosure[2] (%)	Emissions Allocation[3] (%)	Emission Factors[3,4]		
			Hourly (ton stl/hr)	Annual (ton stl/yr)	DEC (%)	Canopy Hood (%)			PM (lb/ton stl)	PM_{10} (lb/ton stl)	$PM_{2.5}$ (lb/ton stl)
MSMVA through MSMVF	Melt Shop	Uncaptured Electric Arc Furnace Fugitives - Melting and Refining	560	3,280,000	95	95	90	96%	11.3	6.6	4.9
MSMVA through MSMVF	Melt Shop	Uncaptured Electric Arc Furnace Fugitives - Charging Tapping and Slagging	560	3,280,000	-	95	90	4%	11.3	6.6	4.9
MSMVA through MSMVF	Melt Shop	Uncaptured Casting Fugitives	560	3,280,000	-	95	90	-	1.2	0.6	0.3

[1] Capture efficiency of the Electric Arc Furnace Direct Evacuation System (DEC) and capture efficiency of the Canopy Hood are based on vendor's design specification.

[2] Emission factor obtained from TCEQ Draft RG 058 Rock Crushing Plants, February 2002, Table 7 for sources enclosed by building.

[3] Emission factor for EAF fugitives obtained from AP-42 Table 12.5.1-1 for EAF uncontrolled melting, refining, charging, tapping , and slagging of alloy steel. Condensable PM emissions are not anticipated for this process.
Emissions allocations determined via ratios of uncontrolled melting and refining emission factor (38 lb/ton) and charging, tapping, slagging emission factor (1.4 lb/ton).

[4] Emission factor for casting fugitives obtained from AP-42 Table 12.5.1-1 for uncontrolled ladle heating and transfer and continuous casting. Condensable PM emissions are not anticipated for this process.

Uncaptured Melt Shop Fugitives from EAF/LMF - Emission Calculation

Emission Point ID	Unit	Description	Hourly Emissions[1]			Annual Emissions[2]		
			PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
MSMVA through MSMVF	Melt Shop	Uncaptured Electric Arc Furnace Fugitives - Melting and Refining	1.53	0.88	0.66	4.47	2.59	1.92
MSMVA through MSMVF	Melt Shop	Uncaptured Electric Arc Furnace Fugitives - Charging Tapping and Slagging	1.12	0.65	0.48	3.29	1.91	1.42
MSMVA through MSMVF	Melt Shop	Uncaptured Casting Fugitives	3.36	1.71	0.77	9.84	5.02	2.26

[1] MSFUG Hourly Emissions (lb/hr) = Hourly Throughput (ton stl/hr) x Emission Factor (lb/ton stl) x Emissions Allocation (%) x [1 - DEC Capture Efficiency (%)] x [1 - Canopy Hood Capture Efficiency (%)] x [1 - Building Enclosure (%)]

PM Hourly Emissions (lb/hr) = 560 ton stl/hr × 11.30 lb/ton stl × 5 % × 5 % × 10 % × 96 % = 1.53 lb/hr

CASTFUG Hourly Emissions (lb/hr) = Hourly Throughput (ton stl/hr) x Emission Factor (lb/ton stl) x [1 - Building Enclosure (%)] x [1 - Canopy Hood Capture Efficiency (%)]

PM Hourly Emissions (lb/hr) = 560 ton stl/hr × 1.20 lb/ton stl × 5 % × 10 % = 3.36 lb/hr

[2] MSFUG Annual Emissions (tpy) = Annual Throughput (ton stl/yr) x Emission Factor (lb/ton stl) x Emissions Allocation (%) / 2000 (lb/ton) x [1 - DEC Capture Efficiency (%)] x [1 - Canopy Hood Capture Efficiency (%)] x [1 - Building Enclosure (%)]

PM Annual Emissions (tpy) = 3,280,000 ton stl/yr × 11.30 lb/ton stl × ton/2,000 lb × 5 % × 5 % × 10 % × 96 % = 4.47 tpy

CASTFUG Annual Emissions (tpy) = Annual Throughput (ton stl/yr) x Emission Factor (lb/ton stl) / 2000 (lb/ton) x [1 - Building Enclosure (%)] x [1 - Canopy Hood Capture Efficiency (%)]

PM Annual Emissions (tpy) = 3,280,000 ton stl/yr × 1.20 lb/ton stl × ton/2,000 lb × 5 % × 10 % = 9.84 tpy

NSWV - PTE Calculations
Electric Arc Furnace GHG Emissions Calculation

Electric Arc Furnace Emission Factors

Emission Point ID	Unit	Description	Capture Efficiency[1] (%)	Throughput											
				Scrap Substitute		Scrap		Additives		Electrode		Carbon		Slag	
				Hourly (lb/hr)	Annual (tpy)	Hourly (lb/hr)	Annual (tpy)	Hourly (lb/hr)	Annual (tpy)	Hourly (lb/hr)	Annual (tpy)	Hourly (lb/hr)	Annual (tpy)	Hourly (lb/hr)	Annual (tpy)
BHST1	Melt Shop	Single Shell DC Electric Arc Furnace 1	95	283,305	1,240,875	377,740	1,654,500	26,256	115,000	368	1,613	9,759	42,743	56,087	245,660
BHST2	Melt Shop	Single Shell DC Electric Arc Furnace 2	95	283,305	1,240,875	377,740	1,654,500	26,256	115,000	368	1,613	9,759	42,743	56,087	245,660

[1] Per vendor guarantee, 95% of emissions are captured by the DEC and 5% are released into the Melt Shop Area as Melt Shop fugitives (EPN MSFUG).

Electric Arc Furnace GHG Emissions

Emission Point ID	Unit	Description	Carbon Content						CO_2 Emissions[1]	
			Scrap Substitute (wt. frac.)	Scrap (wt. frac.)	Additives (wt. frac.)	Electrode (wt. frac.)	Carbon (wt. frac.)	Slag (wt. frac.)	Hourly (lb/hr)	Annual (tpy)
BHST1	Melt Shop	Single Shell DC Electric Arc Furnace 1	0.028	0.0027	0.012	0.999	0.88	0.0267	58,260	255,180
BHST2	Melt Shop	Single Shell DC Electric Arc Furnace 2	0.028	0.0027	0.012	0.999	0.88	0.0267	58,260	255,180
MSMVA through MSMVF	Melt Shop	Uncaptured Electric Arc Furnace Fugitives	0.028	0.0027	0.012	0.999	0.88	0.0267	6,133	26,861

[1] Total emissions of GHGs are estimated according to Equation Q-5 of 40 CFR 98, Subpart Q, adapted as follows:

$CO_2 = 44/12 * [(\text{Scrap Substitute}) *(C_{\text{Scrap Substitute}}) + (\text{Scrap}) * (C_{\text{Scrap}}) + (\text{Flux}) * (C_{\text{flux}}) + (\text{Electrode}) * (C_{\text{Electrode}}) + (\text{Carbon}) * (C_{\text{Carbon}}) - (\text{Slag}) * (C_{\text{Slag}}) - (R) * (C_{\text{Residue}})] * \text{Capture Efficiency (\%)}$

NSWV - PTE Calculations
Hot Mill Emissions Calculation

Hot Mill Vent Assumptions and Inputs

Emission Point ID	Emission Unit ID	Unit	Description	Steel Throughput Hourly (ton/hr)	Steel Throughput Annual (tpy)	Number of Vents	Exhaust Flow Rate per Vent[1] (m^3/hr)	Exhaust Flow Rate per Vent[1] (dscfm)	Emission Factor[2,3] PM (lb/ton)	Emission Factor[2,3] PM_{10} (lb/ton)	Emission Factor[2,3] $PM_{2.5}$ (lb/ton)
HMMVA through HMMVL	HM	Hot Mill	Hot Mill Matrix Vents	606	3279000	12	499,968	294,270	0.0010	0.0010	0.00037

[1] Based on computational fluid dynamics modeling for the Nucor Steel West Virginia Hot Mill

[2] Based on data collected from several Nucor facilities.

[3] Emission Factor (lb/ton) = Emission Factor (gr/dscf) x Exhaust Flow Rate (dscfm) x 60 (min/hr) / 7,000 (gr/lb) / Steel Throughput (ton/hr)

Example PM Emission Factor (lb/ton) = (0.00025 gr / dscf) x (294,270 dscf / min) x (60 min / hr) x (lb / 7,000 gr) x (hr / 606 ton) = 0.0010 lb/ton

Hot Mill Oil Burn-Off

Emission Point ID	Emission Unit ID	Unit	Description	Oil Usage (tpy)	Wt% of Oil & Grease[1]
HMMVA through HMMVL	HM	Hot Mill	Hot Mill Matrix Vents Oil Burn-Off	675	4.63%

[1] Oil and Grease weight percent that will volatize is based on data collected from several Nucor facilities.

Hot Mill Matrix Vents - Emission Calculation

Emission Point ID	Emission Unit ID	Description	Hourly Emissions[1] PM (lb/hr)	Hourly Emissions[1] PM_{10} (lb/hr)	Hourly Emissions[1] $PM_{2.5}$ (lb/hr)	Annual Emissions[2] PM (tpy)	Annual Emissions[2] PM_{10} (tpy)	Annual Emissions[2] $PM_{2.5}$ (tpy)
HMMVA through HMMVL	Hot Mill	Hot Mill Matrix Vents	7.57	7.57	2.72	20.47	20.47	7.37

[1] Hourly Emissions (lb/hr) = Hourly Throughput (ton/hr) x Emission Factor (lb/ton) x 12 Matrix Vents

Example PM Emission Rate (lb/hr) = (606 ton / hr) x (0.0010 lb / ton) x (12 Matrix Vents) = 7.57 lb/hr

[2] Annual Emissions (tpy) = Annual Throughput (tpy) x Emission Factor (lb/ton) x 12 Matrix Vents / 2000 (lb/ton)

Example PM Emission Rate (tpy) = (3279000 tpy) x (0.0010 lb / ton) x (ton / 2000 lb) x (12 Matrix Vents) = 20.47 ton/yr

Hot Mill Matrix Vents - Emission Calculation

Emission Point ID	Unit	Description	Hourly Emissions[1] VOC (lb/hr)	Annual Emissions[2] VOC (tpy)
HMMVA through HMMVL	HM	Hot Mill	7.14	31.25

[1] Hourly Emissions (lb/hr) = Oil Usage (tpy) x Oil Wt% x 2,000 (lb/ton) / 8,760 (hr/yr)

Example VOC Emission Rate (lb/hr) = (675 tpy) x (4.63%) x (2,000 lb / ton) x (yr / 8,760 hr) = 7.14 lb/hr

[2] Annual Emissions (tpy) = Oil Usage (tpy) x Oil Wt%

Example VOC Emission Rate (tpy) = (675 tpy) x (4.63%) = 31.25 tpy

NSWV - PTE Calculations
Natural Gas Combustion Emissions Calculation

Heat Input and Emission Factor

Emission Point ID	Unit	Description	Particulate Capture Efficiency (%)	Heat Input		Emission Factor										
				Hourly	Annual	NO_x[1]	CO[2]	SO_2[3]	VOC[2]	PM[4]	PM_{10}[4]	$PM_{2.5}$[4]	Lead[2]	CO_2[5]	CH_4[5]	N_2O[5]
				(MMBtu/hr)	(MMBtu/yr)	(lb/MMBtu)	(lb/MMBtu)	(lb/MMBtu)	(lb/MMBtu)	(lb/MMBtu)	(lb/MMBtu)	(lb/MMBtu)	(lb/MMBtu)	(lb/MMBtu)	(lb/MMBtu)	(lb/MMBtu)
MSMVA through MSMVF	Melt Shop	Ladle Dryer #1	0%	15	131400	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MSMVA through MSMVF	Melt Shop	Ladle Dryer #2	0%	15	131400	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MSMVA through MSMVF	Melt Shop	Ladle Dryer #3	0%	15	131400	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 1	0%	15	131400	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 2	0%	15	131400	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 3	0%	15	131400	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 4	0%	15	131400	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 5	0%	15	131400	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MSMVA through MSMVF	Melt Shop	Vertical Ladle Preheater 6	0%	10	87600	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MSMVA through MSMVF	Melt Shop	Vertical Ladle Preheater 7	0%	10	87600	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MSMVA through MSMVF	Melt Shop	Tundish Dryer 1	0%	6	52560	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MSMVA through MSMVF	Melt Shop	Tundish Dryer 2	0%	6	52560	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MSMVA through MSMVF	Melt Shop	Tundish Preheater 1	0%	9	78840	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MSMVA through MSMVF	Melt Shop	Tundish Preheater 2	0%	9	78840	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MSMVA through MSMVF	Melt Shop	Subentry Nozzle (SEN) Preheater 1	0%	0.62	5431.2	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MSMVA through MSMVF	Melt Shop	Subentry Nozzle (SEN) Preheater 2	0%	0.62	5431.2	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MSMVA through MSMVF	Melt Shop	Subentry Nozzle (SEN) Preheater Oven	0%	0.682	5974.32	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
GALVFN1	Cold Mill	Galvanizing Furnace #1	0%	73.3	642108	0.070	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
GALVFN2	Cold Mill	Galvanizing Furnace #2	0%	79.8	699048	0.070	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #1	0%	5	43800	0.050	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #2	0%	5	43800	0.050	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #3	0%	5	43800	0.050	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #4	0%	5	43800	0.050	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #5	0%	5	43800	0.050	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #6	0%	5	43800	0.050	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #7	0%	5	43800	0.050	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #8	0%	5	43800	0.050	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #9	0%	5	43800	0.050	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #10	0%	5	43800	0.050	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #11	0%	5	43800	0.050	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #12	0%	5	43800	0.050	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
TFST-1	Hot Mill	Hot Mill Tunnel Furnace 1	0%	250	2190000	0.070	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
SCRCUTNG	Scrap Cutting	Scrap Cutting in Scrap Processing Area	0%	7.2	63072	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
ASP	Air Separation	Water Bath Vaporizer	0%	46.5	407340	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0%	4	35040	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0%	4	35040	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0%	4	35040	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0%	4	35040	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0%	4	35040	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0%	4	35040	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0%	4	35040	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0%	4	35040	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0%	4	35040	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0%	4	35040	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0%	4	35040	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0%	4	35040	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0%	4	35040	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MAUPLA through MAUPLC	Air Make Up	NG-Fired Makeup Air Unit, PLTCM Bay	0%	4	35040	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
MAUPLA through MAUPLC	Air Make Up	NG-Fired Makeup Air Unit, PLTCM Bay	0%	4	35040	0.100	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
CGL1-ST1	Galv Line	Galv Line Boiler #1	0%	6.7	58692	0.050	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
CGL2-ST1	Galv Line	Galv Line Boiler #2	0%	6.7	58692	0.050	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
PLTCMBLR	PLTCM	PLTCM Boiler #1	0%	74	648240	0.050	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04
PLTCMBLR	PLTCM	PLTCM Boiler #2	0%	71.64	627566.4	0.050	0.082	0.00059	0.005	0.002	0.001	4.22E-04	4.90E-07	116.977	0.002	2.20E-04

[1] NOx emission factor based on proposed BACT emission limits.

[2] Emission factor is based on AP-42 Section 1.4. Factor is converted to lb/MMBtu based on natural gas heat value.

[3] SO_2 emission factor is calculated based on AP-42 Section 1.4 emission factor and proposed natural gas sulfur content. Factor is converted to lb/MMBtu based on natural gas heat value.

[4] PM emission factor is based on proposed BACT emission limits. Factor is converted to lb/MMBtu based on natural gas heat value. PM emission factor is filterable PM only. PM10 and PM2.5 factors are based on EPA Region V study using preliminary test data for natural gas-fired industrial boilers (all types) and industrial processes. PM_{10} and $PM_{2.5}$ emission factors are filterable and condensable PM combined.

[5] Emission factors of GHGs are based on Tables C-1 and C-2 of 40 CFR Part 98.

NSWV - PTE Calculations
Natural Gas Combustion Emissions Calculation

CO_2e Potential

Global Warming Potentials (GWPs)[1]		
CO_2	CH_4	N_2O
1	28	265

[1] EPA GHG MRR rule (40 CFR 98, dated September 22, 2009), Table A-1. Updated GWP finalized on April 25, 2024.

Hourly Emissions Calculation

Emission Point ID	Unit	Description	Hourly Emissions[1]											
			NO_x (lb/hr)	CO (lb/hr)	SO_2 (lb/hr)	VOC (lb/hr)	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	Lead (lb/hr)	CO_2 (lb/hr)	CH_4 (lb/hr)	N_2O (lb/hr)	CO_2e (lb/hr)
MSMVA through MSMVF	Melt Shop	Ladle Dryer #1	1.500	1.235	0.009	0.081	0.028	0.008	0.006	7.35E-06	1754.659	0.033	0.003	1756
MSMVA through MSMVF	Melt Shop	Ladle Dryer #2	1.500	1.235	0.009	0.081	0.028	0.008	0.006	7.35E-06	1754.659	0.033	0.003	1756
MSMVA through MSMVF	Melt Shop	Ladle Dryer #3	1.500	1.235	0.009	0.081	0.028	0.008	0.006	7.35E-06	1754.659	0.033	0.003	1756
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 1	1.500	1.235	0.009	0.081	0.028	0.008	0.006	7.35E-06	1754.659	0.033	0.003	1756
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 2	1.500	1.235	0.009	0.081	0.028	0.008	0.006	7.35E-06	1754.659	0.033	0.003	1756
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 3	1.500	1.235	0.009	0.081	0.028	0.008	0.006	7.35E-06	1754.659	0.033	0.003	1756
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 4	1.500	1.235	0.009	0.081	0.028	0.008	0.006	7.35E-06	1754.659	0.033	0.003	1756
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 5	1.500	1.235	0.009	0.081	0.028	0.008	0.006	7.35E-06	1754.659	0.033	0.003	1756
MSMVA through MSMVF	Melt Shop	Vertical Ladle Preheater 6	1.000	0.824	0.006	0.054	0.019	0.005	0.004	4.90E-06	1169.773	0.022	0.002	1171
MSMVA through MSMVF	Melt Shop	Vertical Ladle Preheater 7	1.000	0.824	0.006	0.054	0.019	0.005	0.004	4.90E-06	1169.773	0.022	0.002	1171
MSMVA through MSMVF	Melt Shop	Tundish Dryer 1	0.600	0.494	0.004	0.032	0.011	0.003	0.003	2.94E-06	701.864	0.013	0.001	703
MSMVA through MSMVF	Melt Shop	Tundish Dryer 2	0.600	0.494	0.004	0.032	0.011	0.003	0.003	2.94E-06	701.864	0.013	0.001	703
MSMVA through MSMVF	Melt Shop	Tundish Preheater 1	0.900	0.741	0.005	0.049	0.017	0.005	0.004	4.41E-06	1052.795	0.020	0.002	1,054
MSMVA through MSMVF	Melt Shop	Tundish Preheater 2	0.900	0.741	0.005	0.049	0.017	0.005	0.004	4.41E-06	1052.795	0.020	0.002	1,054
MSMVA through MSMVF	Melt Shop	Subentry Nozzle (SEN) Preheater 1	0.062	0.051	3.65E-04	0.003	0.001	3.16E-04	2.61E-04	3.04E-07	72.526	0.001	1.37E-04	73
MSMVA through MSMVF	Melt Shop	Subentry Nozzle (SEN) Preheater 2	0.062	0.051	3.65E-04	0.003	0.001	3.16E-04	2.61E-04	3.04E-07	72.526	0.001	1.37E-04	73
MSMVA through MSMVF	Melt Shop	Subentry Nozzle (SEN) Preheater Oven	0.068	0.056	4.01E-04	0.004	0.001	3.48E-04	2.88E-04	3.34E-07	79.779	0.002	1.50E-04	80
GALVFN1	Cold Mill	Galvanizing Furnace #1	5.131	6.036	0.043	0.395	0.137	0.037	0.031	3.59E-05	8574.434	0.162	0.016	8,583
GALVFN2	Cold Mill	Galvanizing Furnace #2	5.586	6.572	0.047	0.430	0.149	0.041	0.034	3.91E-05	9334.787	0.176	0.018	9,344
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #1	0.250	0.412	0.003	0.027	0.009	0.003	0.002	2.45E-06	584.886	0.011	0.001	585
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #2	0.250	0.412	0.003	0.027	0.009	0.003	0.002	2.45E-06	584.886	0.011	0.001	585
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #3	0.250	0.412	0.003	0.027	0.009	0.003	0.002	2.45E-06	584.886	0.011	0.001	585
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #4	0.250	0.412	0.003	0.027	0.009	0.003	0.002	2.45E-06	584.886	0.011	0.001	585
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #5	0.250	0.412	0.003	0.027	0.009	0.003	0.002	2.45E-06	584.886	0.011	0.001	585
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #6	0.250	0.412	0.003	0.027	0.009	0.003	0.002	2.45E-06	584.886	0.011	0.001	585
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #7	0.250	0.412	0.003	0.027	0.009	0.003	0.002	2.45E-06	584.886	0.011	0.001	585
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #8	0.250	0.412	0.003	0.027	0.009	0.003	0.002	2.45E-06	584.886	0.011	0.001	585
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #9	0.250	0.412	0.003	0.027	0.009	0.003	0.002	2.45E-06	584.886	0.011	0.001	585
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #10	0.250	0.412	0.003	0.027	0.009	0.003	0.002	2.45E-06	584.886	0.011	0.001	585
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #11	0.250	0.412	0.003	0.027	0.009	0.003	0.002	2.45E-06	584.886	0.011	0.001	585
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #12	0.250	0.412	0.003	0.027	0.009	0.003	0.002	2.45E-06	584.886	0.011	0.001	585
TFST-1	Hot Mill	Hot Mill Tunnel Furnace 1	17.500	20.588	0.147	1.348	0.466	0.127	0.105	1.23E-04	29244.319	0.551	0.055	29,274
SCRCUTNG	Scrap Cutting	Scrap Cutting in Scrap Processing Area	0.720	0.593	0.004	0.039	0.013	0.004	0.003	3.53E-06	842.236	0.016	0.002	843
ASP	Air Separation	Water Bath Vaporizer	4.650	3.829	0.027	0.251	0.087	0.024	0.020	2.28E-05	5439.443	0.103	0.010	5,445
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0.400	0.329	0.002	0.022	0.007	0.002	0.002	1.96E-06	467.909	0.009	8.82E-04	468
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0.400	0.329	0.002	0.022	0.007	0.002	0.002	1.96E-06	467.909	0.009	8.82E-04	468
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0.400	0.329	0.002	0.022	0.007	0.002	0.002	1.96E-06	467.909	0.009	8.82E-04	468
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0.400	0.329	0.002	0.022	0.007	0.002	0.002	1.96E-06	467.909	0.009	8.82E-04	468
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0.400	0.329	0.002	0.022	0.007	0.002	0.002	1.96E-06	467.909	0.009	8.82E-04	468
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0.400	0.329	0.002	0.022	0.007	0.002	0.002	1.96E-06	467.909	0.009	8.82E-04	468
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	0.400	0.329	0.002	0.022	0.007	0.002	0.002	1.96E-06	467.909	0.009	8.82E-04	468
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0.400	0.329	0.002	0.022	0.007	0.002	0.002	1.96E-06	467.909	0.009	8.82E-04	468
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0.400	0.329	0.002	0.022	0.007	0.002	0.002	1.96E-06	467.909	0.009	8.82E-04	468
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0.400	0.329	0.002	0.022	0.007	0.002	0.002	1.96E-06	467.909	0.009	8.82E-04	468
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0.400	0.329	0.002	0.022	0.007	0.002	0.002	1.96E-06	467.909	0.009	8.82E-04	468
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0.400	0.329	0.002	0.022	0.007	0.002	0.002	1.96E-06	467.909	0.009	8.82E-04	468
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0.400	0.329	0.002	0.022	0.007	0.002	0.002	1.96E-06	467.909	0.009	8.82E-04	468
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	0.400	0.329	0.002	0.022	0.007	0.002	0.002	1.96E-06	467.909	0.009	8.82E-04	468
MAUPLA through MAUPLC	Air Make Up	NG-Fired Makeup Air Unit, PLTCM Bay	0.400	0.329	0.002	0.022	0.007	0.002	0.002	1.96E-06	467.909	0.009	8.82E-04	468
MAUPLA through MAUPLC	Air Make Up	NG-Fired Makeup Air Unit, PLTCM Bay	0.400	0.329	0.002	0.022	0.007	0.002	0.002	1.96E-06	467.909	0.009	8.82E-04	468
CGL1-ST1	Galv Line	Galv Line Boiler #1	0.335	0.552	0.004	0.036	0.012	0.003	0.003	3.28E-06	783.748	0.015	0.001	785
CGL2-ST1	Galv Line	Galv Line Boiler #2	0.335	0.552	0.004	0.036	0.012	0.003	0.003	3.28E-06	783.748	0.015	0.001	785
PLTCMBLR	PLTCM	PLTCM Boiler #1	3.700	6.094	0.044	0.399	0.138	0.038	0.031	3.63E-05	8656.318	0.163	0.016	8,665
PLTCMBLR	PLTCM	PLTCM Boiler #2	3.582	5.900	0.042	0.386	0.133	0.037	0.030	3.51E-05	8380.252	0.158	0.016	8,389
		Total	**68.931**	**75.75**	**0.54**	**4.96**	**1.71**	**0.47**	**0.39**	**0.00**	**107,591.25**	**2.03**	**0.20**	**107,701.76**

[1] Hourly Emissions (lb/hr) = Heat Input (MMBtu/hr) x Emission Factor (lb/MMBtu)

NO_x Hourly Emissions (lb/hr) = $\frac{15 \text{ MMBtu}}{\text{hr}} \mid \frac{0.100 \text{ lb}}{\text{MMBtu}} = 1.50 \text{ lb/hr}$

NSWV - PTE Calculations
Natural Gas Combustion Emissions Calculation

Annual Emissions Calculation

Emission Point ID	Unit	Description	Annual Emissions[1]											
			NO_X (tpy)	CO (tpy)	SO_2 (tpy)	VOC (tpy)	PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)	Lead (tpy)	CO_2 (tpy)	CH_4 (tpy)	N_2O (tpy)	CO_2e (tpy)
MSMVA through MSMVF	Melt Shop	Ladle Dryer #1	6.570	5.411	0.039	0.354	0.122	0.033	0.028	3.22E-05	7685.407	0.145	0.014	7,693
MSMVA through MSMVF	Melt Shop	Ladle Dryer #2	6.570	5.411	0.039	0.354	0.122	0.033	0.028	3.22E-05	7685.407	0.145	0.014	7,693
MSMVA through MSMVF	Melt Shop	Ladle Dryer #3	6.570	5.411	0.039	0.354	0.122	0.033	0.028	3.22E-05	7685.407	0.145	0.014	7,693
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 1	6.570	5.411	0.039	0.354	0.122	0.033	0.028	3.22E-05	7685.407	0.145	0.014	7,693
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 2	6.570	5.411	0.039	0.354	0.122	0.033	0.028	3.22E-05	7685.407	0.145	0.014	7,693
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 3	6.570	5.411	0.039	0.354	0.122	0.033	0.028	3.22E-05	7685.407	0.145	0.014	7,693
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 4	6.570	5.411	0.039	0.354	0.122	0.033	0.028	3.22E-05	7685.407	0.145	0.014	7,693
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 5	6.570	5.411	0.039	0.354	0.122	0.033	0.028	3.22E-05	7685.407	0.145	0.014	7,693
MSMVA through MSMVF	Melt Shop	Vertical Ladle Preheater 6	4.380	3.607	0.026	0.236	0.082	0.022	0.018	2.15E-05	5123.605	0.097	0.010	5,129
MSMVA through MSMVF	Melt Shop	Vertical Ladle Preheater 7	4.380	3.607	0.026	0.236	0.082	0.022	0.018	2.15E-05	5123.605	0.097	0.010	5,129
MSMVA through MSMVF	Melt Shop	Tundish Dryer 1	2.628	2.164	0.015	0.142	0.049	0.013	0.011	1.29E-05	3074.163	0.058	0.006	3,077
MSMVA through MSMVF	Melt Shop	Tundish Dryer 2	2.628	2.164	0.015	0.142	0.049	0.013	0.011	1.29E-05	3074.163	0.058	0.006	3,077
MSMVA through MSMVF	Melt Shop	Tundish Preheater 1	3.942	3.246	0.023	0.213	0.073	0.020	0.017	1.93E-05	4611.244	0.087	0.009	4,616
MSMVA through MSMVF	Melt Shop	Tundish Preheater 2	3.942	3.246	0.023	0.213	0.073	0.020	0.017	1.93E-05	4611.244	0.087	0.009	4,616
MSMVA through MSMVF	Melt Shop	Subentry Nozzle (SEN) Preheater 1	0.272	0.224	0.002	0.015	0.005	0.001	0.001	1.33E-06	317.663	0.006	0.001	318
MSMVA through MSMVF	Melt Shop	Subentry Nozzle (SEN) Preheater 2	0.272	0.224	0.002	0.015	0.005	0.001	0.001	1.33E-06	317.663	0.006	0.001	318
MSMVA through MSMVF	Melt Shop	Subentry Nozzle (SEN) Preheater Oven	0.299	0.246	0.002	0.016	0.006	0.002	0.001	1.46E-06	349.430	0.007	0.001	350
GALVFN1	Cold Mill	Galvanizing Furnace #1	22.474	26.440	0.189	1.731	0.598	0.164	0.135	1.57E-04	37556.022	0.708	0.071	37,595
GALVFN2	Cold Mill	Galvanizing Furnace #2	24.467	28.784	0.206	1.885	0.651	0.178	0.147	1.71E-04	40886.366	0.771	0.077	40,928
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #1	1.095	1.804	0.013	0.118	0.041	0.011	0.009	1.07E-05	2561.802	0.048	0.005	2,564
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #2	1.095	1.804	0.013	0.118	0.041	0.011	0.009	1.07E-05	2561.802	0.048	0.005	2,564
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #3	1.095	1.804	0.013	0.118	0.041	0.011	0.009	1.07E-05	2561.802	0.048	0.005	2,564
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #4	1.095	1.804	0.013	0.118	0.041	0.011	0.009	1.07E-05	2561.802	0.048	0.005	2,564
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #5	1.095	1.804	0.013	0.118	0.041	0.011	0.009	1.07E-05	2561.802	0.048	0.005	2,564
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #6	1.095	1.804	0.013	0.118	0.041	0.011	0.009	1.07E-05	2561.802	0.048	0.005	2,564
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #7	1.095	1.804	0.013	0.118	0.041	0.011	0.009	1.07E-05	2561.802	0.048	0.005	2,564
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #8	1.095	1.804	0.013	0.118	0.041	0.011	0.009	1.07E-05	2561.802	0.048	0.005	2,564
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #9	1.095	1.804	0.013	0.118	0.041	0.011	0.009	1.07E-05	2561.802	0.048	0.005	2,564
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #10	1.095	1.804	0.013	0.118	0.041	0.011	0.009	1.07E-05	2561.802	0.048	0.005	2,564
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #11	1.095	1.804	0.013	0.118	0.041	0.011	0.009	1.07E-05	2561.802	0.048	0.005	2,564
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #12	1.095	1.804	0.013	0.118	0.041	0.011	0.009	1.07E-05	2561.802	0.048	0.005	2,564
TFST-1	Hot Mill	Hot Mill Tunnel Furnace 1	76.650	90.176	0.644	5.904	2.040	0.558	0.462	5.37E-04	128090.118	2.414	0.241	128,222
SCRCUTNG	Scrap Cutting	Scrap Cutting in Scrap Processing Area	3.154	2.597	0.019	0.170	0.059	0.016	0.013	1.55E-05	3688.995	0.070	0.007	3,693
ASP	Air Separation	Water Bath Vaporizer	20.367	16.773	0.120	1.098	0.379	0.104	0.086	9.98E-05	23824.762	0.449	0.045	23,849
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	1.752	1.443	0.010	0.094	0.033	0.009	0.007	8.59E-06	2049.442	0.039	0.004	2,052
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	1.752	1.443	0.010	0.094	0.033	0.009	0.007	8.59E-06	2049.442	0.039	0.004	2,052
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	1.752	1.443	0.010	0.094	0.033	0.009	0.007	8.59E-06	2049.442	0.039	0.004	2,052
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	1.752	1.443	0.010	0.094	0.033	0.009	0.007	8.59E-06	2049.442	0.039	0.004	2,052
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	1.752	1.443	0.010	0.094	0.033	0.009	0.007	8.59E-06	2049.442	0.039	0.004	2,052
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	1.752	1.443	0.010	0.094	0.033	0.009	0.007	8.59E-06	2049.442	0.039	0.004	2,052
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	1.752	1.443	0.010	0.094	0.033	0.009	0.007	8.59E-06	2049.442	0.039	0.004	2,052
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	1.752	1.443	0.010	0.094	0.033	0.009	0.007	8.59E-06	2049.442	0.039	0.004	2,052
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	1.752	1.443	0.010	0.094	0.033	0.009	0.007	8.59E-06	2049.442	0.039	0.004	2,052
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	1.752	1.443	0.010	0.094	0.033	0.009	0.007	8.59E-06	2049.442	0.039	0.004	2,052
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	1.752	1.443	0.010	0.094	0.033	0.009	0.007	8.59E-06	2049.442	0.039	0.004	2,052
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	1.752	1.443	0.010	0.094	0.033	0.009	0.007	8.59E-06	2049.442	0.039	0.004	2,052
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	1.752	1.443	0.010	0.094	0.033	0.009	0.007	8.59E-06	2049.442	0.039	0.004	2,052
MAUPLA through MAUPLC	Air Make Up	NG-Fired Makeup Air Unit, PLTCM Bay	1.752	1.443	0.010	0.094	0.033	0.009	0.007	8.59E-06	2049.442	0.039	0.004	2,052
MAUPLA through MAUPLC	Air Make Up	NG-Fired Makeup Air Unit, PLTCM Bay	1.752	1.443	0.010	0.094	0.033	0.009	0.007	8.59E-06	2049.442	0.039	0.004	2,052
CGL1-ST1	Galv Line	Galv Line Boiler #1	1.467	2.417	0.017	0.158	0.055	0.015	0.012	1.44E-05	3432.815	0.065	0.006	3,436
CGL2-ST1	Galv Line	Galv Line Boiler #2	1.467	2.417	0.017	0.158	0.055	0.015	0.012	1.44E-05	3432.815	0.065	0.006	3,436
PLTCMBLR	PLTCM	PLTCM Boiler #1	16.206	26.692	0.191	1.748	0.604	0.165	0.137	1.59E-04	37914.675	0.715	0.071	37,954
PLTCMBLR	PLTCM	PLTCM Boiler #2	15.689	25.841	0.185	1.692	0.584	0.160	0.132	1.54E-04	36705.504	0.692	0.069	36,743
		Total	**301.92**	**331.76**	**2.37**	**21.72**	**7.50**	**2.05**	**1.70**	**0.00**	**471,249.69**	**8.88**	**0.89**	**471,733.73**

[1] Annual Emissions (tpy) = Heat Input (MMBtu/yr) x Emission Factor (lb/MMBtu) / 2,000 (lb/ton)

NO_x Annual Emissions (tpy) = $\frac{131{,}400 \text{ MMBtu}}{\text{yr}} \times \frac{0.100 \text{ lb}}{\text{MMBtu}} \times \frac{\text{ton}}{2{,}000 \text{ lb}} = 6.57$ tpy

NSWV - PTE Calculations
Natural Gas Combustion HAP Emissions Calculation

Heat Input and Emission Factor

Emission Point ID	Unit	Description	Heat Input		Emission Factor[1,2]							
			Hourly (MMBtu/hr)	Annual (MMBtu/yr)	Benzene (lb/MMBtu)	Dichlorobenzene (lb/MMBtu)	Formaldehyde (lb/MMBtu)	N-Hexane (lb/MMBtu)	Naphthalene (lb/MMBtu)	Toluene (lb/MMBtu)	PAHs (lb/MMBtu)	Total HAP (lb/MMBtu)
MSMVA through MSMVF	Melt Shop	Ladle Dryer #1	15	131,400	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MSMVA through MSMVF	Melt Shop	Ladle Dryer #2	15	131,400	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MSMVA through MSMVF	Melt Shop	Ladle Dryer #3	15	131,400	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 1	15	131,400	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 2	15	131,400	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 3	15	131,400	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 4	15	131,400	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 5	15	131,400	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MSMVA through MSMVF	Melt Shop	Vertical Ladle Preheater 6	10	87,600	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MSMVA through MSMVF	Melt Shop	Vertical Ladle Preheater 7	10	87,600	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MSMVA through MSMVF	Melt Shop	Tundish Dryer 1	6	52,560	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MSMVA through MSMVF	Melt Shop	Tundish Dryer 2	6	52,560	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MSMVA through MSMVF	Melt Shop	Tundish Preheater 1	9	78,840	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MSMVA through MSMVF	Melt Shop	Tundish Preheater 2	9	78,840	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MSMVA through MSMVF	Melt Shop	Subentry Nozzle (SEN) Preheater 1	0.62	5,431	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MSMVA through MSMVF	Melt Shop	Subentry Nozzle (SEN) Preheater 2	0.62	5,431	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MSMVA through MSMVF	Melt Shop	Subentry Nozzle (SEN) Preheater Oven	0.682	5,974	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
GALVFN1	Cold Mill	Galvanizing Furnace #1	73.3	642,108	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
GALVFN2	Cold Mill	Galvanizing Furnace #2	79.8	699,048	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #1	5	43,800	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #2	5	43,800	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #3	5	43,800	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #4	5	43,800	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #5	5	43,800	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #6	5	43,800	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #7	5	43,800	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #8	5	43,800	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #9	5	43,800	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #10	5	43,800	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #11	5	43,800	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #12	5	43,800	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
TFST-1	Hot Mill	Hot Mill Tunnel Furnace 1	250	2,190,000	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
SCRCUTNG	Scrap Cutting	Scrap Cutting in Scrap Processing Area	7.2	63,072	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
ASP	Air Separation	Water Bath Vaporizer	46.5	407,340	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	4	35,040	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	4	35,040	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	4	35,040	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	4	35,040	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	4	35,040	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	4	35,040	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	4	35,040	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	4	35,040	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	4	35,040	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	4	35,040	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	4	35,040	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	4	35,040	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	4	35,040	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	4	35,040	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MAUPLA through MAUPLC	Air Make Up	NG-Fired Makeup Air Unit, PLTCM Bay	4	35,040	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
MAUPLA through MAUPLC	Air Make Up	NG-Fired Makeup Air Unit, PLTCM Bay	4	35,040	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
CGL1-ST1	Galv Line	Galv Line Boiler #1	6.7	58,692.0	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
CGL2-ST1	Galv Line	Galv Line Boiler #2	6.7	58,692.0	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
PLTCMBLR	PLTCM	PLTCM Boiler #1	74.0	648,240.0	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03
PLTCMBLR	PLTCM	PLTCM Boiler #2	71.6	627,566.4	2.06E-06	1.18E-06	7.35E-05	1.76E-03	5.98E-07	3.33E-06	8.65E-08	1.85E-03

[1] Emission factors based on AP-42 Section 1.4, Natural Gas Combustion, Table 1.4-3 (July 1998).

Polycyclic Aromatic Compounds (PAHs) with two or more aromatic rings are grouped (except for naphathalene) and represented as PAHs.

[2] AP-42 emission factors are converted to heat input rating by dividing by natural gas heating value of 1,020 Btu/scf.

NSWV - PTE Calculations
Natural Gas Combustion HAP Emissions Calculation

Hourly Emissions Calculation

Emission Point ID	Unit	Description	Hourly Emissions[1]							
			Benzene (lb/hr)	Dichlorobenzene (lb/hr)	Formaldehyde (lb/hr)	N-Hexane (lb/hr)	Naphthalene (lb/hr)	Toluene (lb/hr)	PAHs (lb/hr)	Total HAP (lb/hr)
MSMVA through MSMVF	Melt Shop	Ladle Dryer #1	3.09E-05	1.76E-05	1.10E-03	2.65E-02	8.97E-06	5.00E-05	1.30E-06	0.03
MSMVA through MSMVF	Melt Shop	Ladle Dryer #2	3.09E-05	1.76E-05	1.10E-03	2.65E-02	8.97E-06	5.00E-05	1.30E-06	0.03
MSMVA through MSMVF	Melt Shop	Ladle Dryer #3	3.09E-05	1.76E-05	1.10E-03	2.65E-02	8.97E-06	5.00E-05	1.30E-06	0.03
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 1	3.09E-05	1.76E-05	1.10E-03	2.65E-02	8.97E-06	5.00E-05	1.30E-06	0.03
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 2	3.09E-05	1.76E-05	1.10E-03	2.65E-02	8.97E-06	5.00E-05	1.30E-06	0.03
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 3	3.09E-05	1.76E-05	1.10E-03	2.65E-02	8.97E-06	5.00E-05	1.30E-06	0.03
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 4	3.09E-05	1.76E-05	1.10E-03	2.65E-02	8.97E-06	5.00E-05	1.30E-06	0.03
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 5	3.09E-05	1.76E-05	1.10E-03	2.65E-02	8.97E-06	5.00E-05	1.30E-06	0.03
MSMVA through MSMVF	Melt Shop	Vertical Ladle Preheater 6	2.06E-05	1.18E-05	7.35E-04	1.76E-02	5.98E-06	3.33E-05	8.65E-07	0.02
MSMVA through MSMVF	Melt Shop	Vertical Ladle Preheater 7	2.06E-05	1.18E-05	7.35E-04	1.76E-02	5.98E-06	3.33E-05	8.65E-07	0.02
MSMVA through MSMVF	Melt Shop	Tundish Dryer 1	1.24E-05	7.06E-06	4.41E-04	1.06E-02	3.59E-06	2.00E-05	5.19E-07	0.01
MSMVA through MSMVF	Melt Shop	Tundish Dryer 2	1.24E-05	7.06E-06	4.41E-04	1.06E-02	3.59E-06	2.00E-05	5.19E-07	0.01
MSMVA through MSMVF	Melt Shop	Tundish Preheater 1	1.85E-05	1.06E-05	6.62E-04	1.59E-02	5.38E-06	3.00E-05	7.78E-07	0.02
MSMVA through MSMVF	Melt Shop	Tundish Preheater 2	1.85E-05	1.06E-05	6.62E-04	1.59E-02	5.38E-06	3.00E-05	7.78E-07	0.02
MSMVA through MSMVF	Melt Shop	Subentry Nozzle (SEN) Preheater 1	1.28E-06	7.29E-07	4.56E-05	1.09E-03	3.71E-07	2.07E-06	5.36E-08	0.00
MSMVA through MSMVF	Melt Shop	Subentry Nozzle (SEN) Preheater 2	1.28E-06	7.29E-07	4.56E-05	1.09E-03	3.71E-07	2.07E-06	5.36E-08	0.00
MSMVA through MSMVF	Melt Shop	Subentry Nozzle (SEN) Preheater Oven	1.40E-06	8.02E-07	5.01E-05	1.20E-03	4.08E-07	2.27E-06	5.90E-08	0.00
GALVFN1	Cold Mill	Galvanizing Furnace #1	1.51E-04	8.62E-05	5.39E-03	1.29E-01	4.38E-05	2.44E-04	6.34E-06	0.14
GALVFN2	Cold Mill	Galvanizing Furnace #2	1.64E-04	9.39E-05	5.87E-03	1.41E-01	4.77E-05	2.66E-04	6.90E-06	0.15
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #1	1.03E-05	5.88E-06	3.68E-04	8.82E-03	2.99E-06	1.67E-05	4.32E-07	0.01
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #2	1.03E-05	5.88E-06	3.68E-04	8.82E-03	2.99E-06	1.67E-05	4.32E-07	0.01
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #3	1.03E-05	5.88E-06	3.68E-04	8.82E-03	2.99E-06	1.67E-05	4.32E-07	0.01
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #4	1.03E-05	5.88E-06	3.68E-04	8.82E-03	2.99E-06	1.67E-05	4.32E-07	0.01
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #5	1.03E-05	5.88E-06	3.68E-04	8.82E-03	2.99E-06	1.67E-05	4.32E-07	0.01
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #6	1.03E-05	5.88E-06	3.68E-04	8.82E-03	2.99E-06	1.67E-05	4.32E-07	0.01
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #7	1.03E-05	5.88E-06	3.68E-04	8.82E-03	2.99E-06	1.67E-05	4.32E-07	0.01
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #8	1.03E-05	5.88E-06	3.68E-04	8.82E-03	2.99E-06	1.67E-05	4.32E-07	0.01
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #9	1.03E-05	5.88E-06	3.68E-04	8.82E-03	2.99E-06	1.67E-05	4.32E-07	0.01
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #10	1.03E-05	5.88E-06	3.68E-04	8.82E-03	2.99E-06	1.67E-05	4.32E-07	0.01
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #11	1.03E-05	5.88E-06	3.68E-04	8.82E-03	2.99E-06	1.67E-05	4.32E-07	0.01
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #12	1.03E-05	5.88E-06	3.68E-04	8.82E-03	2.99E-06	1.67E-05	4.32E-07	0.01
TFST-1	Hot Mill	Hot Mill Tunnel Furnace 1	5.15E-04	2.94E-04	1.84E-02	4.41E-01	1.50E-04	8.33E-04	2.16E-05	0.46
SCRCUTNG	Scrap Cutting	Scrap Cutting in Scrap Processing Area	1.48E-05	8.47E-06	5.29E-04	1.27E-02	4.31E-06	2.40E-05	6.23E-07	0.01
ASP	Air Separation	Water Bath Vaporizer	9.57E-05	5.47E-05	3.42E-03	8.21E-02	2.78E-05	1.55E-04	4.02E-06	0.09
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	8.24E-06	4.71E-06	2.94E-04	7.06E-03	2.39E-06	1.33E-05	3.46E-07	0.01
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	8.24E-06	4.71E-06	2.94E-04	7.06E-03	2.39E-06	1.33E-05	3.46E-07	0.01
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	8.24E-06	4.71E-06	2.94E-04	7.06E-03	2.39E-06	1.33E-05	3.46E-07	0.01
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	8.24E-06	4.71E-06	2.94E-04	7.06E-03	2.39E-06	1.33E-05	3.46E-07	0.01
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	8.24E-06	4.71E-06	2.94E-04	7.06E-03	2.39E-06	1.33E-05	3.46E-07	0.01
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	8.24E-06	4.71E-06	2.94E-04	7.06E-03	2.39E-06	1.33E-05	3.46E-07	0.01
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	8.24E-06	4.71E-06	2.94E-04	7.06E-03	2.39E-06	1.33E-05	3.46E-07	0.01
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	8.24E-06	4.71E-06	2.94E-04	7.06E-03	2.39E-06	1.33E-05	3.46E-07	0.01
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	8.24E-06	4.71E-06	2.94E-04	7.06E-03	2.39E-06	1.33E-05	3.46E-07	0.01
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	8.24E-06	4.71E-06	2.94E-04	7.06E-03	2.39E-06	1.33E-05	3.46E-07	0.01
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	8.24E-06	4.71E-06	2.94E-04	7.06E-03	2.39E-06	1.33E-05	3.46E-07	0.01
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	8.24E-06	4.71E-06	2.94E-04	7.06E-03	2.39E-06	1.33E-05	3.46E-07	0.01
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	8.24E-06	4.71E-06	2.94E-04	7.06E-03	2.39E-06	1.33E-05	3.46E-07	0.01
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	8.24E-06	4.71E-06	2.94E-04	7.06E-03	2.39E-06	1.33E-05	3.46E-07	0.01
MAUPLA through MAUPLC	Air Make Up	NG-Fired Makeup Air Unit, PLTCM Bay	8.24E-06	4.71E-06	2.94E-04	7.06E-03	2.39E-06	1.33E-05	3.46E-07	0.01
MAUPLA through MAUPLC	Air Make Up	NG-Fired Makeup Air Unit, PLTCM Bay	8.24E-06	4.71E-06	2.94E-04	7.06E-03	2.39E-06	1.33E-05	3.46E-07	0.01
CGL1-ST1	Galv Line	Galv Line Boiler #1	1.38E-05	7.88E-06	4.93E-04	1.18E-02	4.01E-06	2.23E-05	5.79E-07	0.01
CGL2-ST1	Galv Line	Galv Line Boiler #2	1.38E-05	7.88E-06	4.93E-04	1.18E-02	4.01E-06	2.23E-05	5.79E-07	0.01
PLTCMBLR	PLTCM	PLTCM Boiler #1	1.52E-04	8.71E-05	5.44E-03	1.31E-01	4.43E-05	2.47E-04	6.40E-06	0.14
PLTCMBLR	PLTCM	PLTCM Boiler #2	1.47E-04	8.43E-05	5.27E-03	1.26E-01	4.28E-05	2.39E-04	6.19E-06	0.13
		Total	**1.89E-03**	**1.08E-03**	**0.07**	**1.62**	**5.50E-04**	**3.07E-03**	**7.95E-05**	**1.70**

[1] Hourly Emissions (lb/hr) = Heat Input (MMBtu/hr) x Emission Factor (lb/MMBtu)

Benzene Hourly Emissions (lb/hr) = $\frac{73 \text{ MMBtu}}{\text{hr}} \left| \frac{2.06\text{E-}06 \text{ lb}}{\text{MMBtu}} \right. = 1.38\text{E-}05 \text{ lb/hr}$

NSWV - PTE Calculations
Natural Gas Combustion HAP Emissions Calculation

Annual Emissions Calculation

Emission Point ID	Unit	Description	Annual Emissions[1]							
			Benzene (tpy)	Dichlorobenzene (tpy)	Formaldehyde (tpy)	N-Hexane (tpy)	Naphthalene (tpy)	Toluene (tpy)	PAHs (tpy)	Total HAP (tpy)
MSMVA through MSMVF	Melt Shop	Ladle Dryer #1	1.35E-04	7.73E-05	4.83E-03	1.16E-01	3.93E-05	2.19E-04	5.68E-06	0.12
MSMVA through MSMVF	Melt Shop	Ladle Dryer #2	1.35E-04	7.73E-05	4.83E-03	1.16E-01	3.93E-05	2.19E-04	5.68E-06	0.12
MSMVA through MSMVF	Melt Shop	Ladle Dryer #3	1.35E-04	7.73E-05	4.83E-03	1.16E-01	3.93E-05	2.19E-04	5.68E-06	0.12
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 1	1.35E-04	7.73E-05	4.83E-03	1.16E-01	3.93E-05	2.19E-04	5.68E-06	0.12
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 2	1.35E-04	7.73E-05	4.83E-03	1.16E-01	3.93E-05	2.19E-04	5.68E-06	0.12
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 3	1.35E-04	7.73E-05	4.83E-03	1.16E-01	3.93E-05	2.19E-04	5.68E-06	0.12
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 4	1.35E-04	7.73E-05	4.83E-03	1.16E-01	3.93E-05	2.19E-04	5.68E-06	0.12
MSMVA through MSMVF	Melt Shop	Horizontal Ladle Preheater 5	1.35E-04	7.73E-05	4.83E-03	1.16E-01	3.93E-05	2.19E-04	5.68E-06	0.12
MSMVA through MSMVF	Melt Shop	Vertical Ladle Preheater 6	9.02E-05	5.15E-05	3.22E-03	7.73E-02	2.62E-05	1.46E-04	3.79E-06	0.08
MSMVA through MSMVF	Melt Shop	Vertical Ladle Preheater 7	9.02E-05	5.15E-05	3.22E-03	7.73E-02	2.62E-05	1.46E-04	3.79E-06	0.08
MSMVA through MSMVF	Melt Shop	Tundish Dryer 1	5.41E-05	3.09E-05	1.93E-03	4.64E-02	1.57E-05	8.76E-05	2.27E-06	0.05
MSMVA through MSMVF	Melt Shop	Tundish Dryer 2	5.41E-05	3.09E-05	1.93E-03	4.64E-02	1.57E-05	8.76E-05	2.27E-06	0.05
MSMVA through MSMVF	Melt Shop	Tundish Preheater 1	8.12E-05	4.64E-05	2.90E-03	6.96E-02	2.36E-05	1.31E-04	3.41E-06	0.07
MSMVA through MSMVF	Melt Shop	Tundish Preheater 2	8.12E-05	4.64E-05	2.90E-03	6.96E-02	2.36E-05	1.31E-04	3.41E-06	0.07
MSMVA through MSMVF	Melt Shop	Subentry Nozzle (SEN) Preheater 1	5.59E-06	3.19E-06	2.00E-04	4.79E-03	1.62E-06	9.05E-06	2.35E-07	0.01
MSMVA through MSMVF	Melt Shop	Subentry Nozzle (SEN) Preheater 2	5.59E-06	3.19E-06	2.00E-04	4.79E-03	1.62E-06	9.05E-06	2.35E-07	0.01
MSMVA through MSMVF	Melt Shop	Subentry Nozzle (SEN) Preheater Oven	6.15E-06	3.51E-06	2.20E-04	5.27E-03	1.79E-06	9.96E-06	2.58E-07	0.01
GALVFN1	Cold Mill	Galvanizing Furnace #1	6.61E-04	3.78E-04	2.36E-02	5.67E-01	1.92E-04	1.07E-03	2.78E-05	0.59
GALVFN2	Cold Mill	Galvanizing Furnace #2	7.20E-04	4.11E-04	2.57E-02	6.17E-01	2.09E-04	1.17E-03	3.02E-05	0.65
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #1	4.51E-05	2.58E-05	1.61E-03	3.86E-02	1.31E-05	7.30E-05	1.89E-06	0.04
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #2	4.51E-05	2.58E-05	1.61E-03	3.86E-02	1.31E-05	7.30E-05	1.89E-06	0.04
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #3	4.51E-05	2.58E-05	1.61E-03	3.86E-02	1.31E-05	7.30E-05	1.89E-06	0.04
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #4	4.51E-05	2.58E-05	1.61E-03	3.86E-02	1.31E-05	7.30E-05	1.89E-06	0.04
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #5	4.51E-05	2.58E-05	1.61E-03	3.86E-02	1.31E-05	7.30E-05	1.89E-06	0.04
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #6	4.51E-05	2.58E-05	1.61E-03	3.86E-02	1.31E-05	7.30E-05	1.89E-06	0.04
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #7	4.51E-05	2.58E-05	1.61E-03	3.86E-02	1.31E-05	7.30E-05	1.89E-06	0.04
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #8	4.51E-05	2.58E-05	1.61E-03	3.86E-02	1.31E-05	7.30E-05	1.89E-06	0.04
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #9	4.51E-05	2.58E-05	1.61E-03	3.86E-02	1.31E-05	7.30E-05	1.89E-06	0.04
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #10	4.51E-05	2.58E-05	1.61E-03	3.86E-02	1.31E-05	7.30E-05	1.89E-06	0.04
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #11	4.51E-05	2.58E-05	1.61E-03	3.86E-02	1.31E-05	7.30E-05	1.89E-06	0.04
GALVMVA through GALVMVF	Cold Mill	Box Annealing Furnace #12	4.51E-05	2.58E-05	1.61E-03	3.86E-02	1.31E-05	7.30E-05	1.89E-06	0.04
TFST-1	Hot Mill	Hot Mill Tunnel Furnace 1	2.25E-03	1.29E-03	8.05E-02	1.93E+00	6.55E-04	3.65E-03	9.47E-05	2.03
SCRCUTNG	Scrap Cutting	Scrap Cutting in Scrap Processing Area	6.49E-05	3.71E-05	2.32E-03	5.57E-02	1.89E-05	1.05E-04	2.73E-06	0.06
ASP	Air Separation	Water Bath Vaporizer	4.19E-04	2.40E-04	1.50E-02	3.59E-01	1.22E-04	6.79E-04	1.76E-05	0.38
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	3.61E-05	2.06E-05	1.29E-03	3.09E-02	1.05E-05	5.84E-05	1.51E-06	0.03
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	3.61E-05	2.06E-05	1.29E-03	3.09E-02	1.05E-05	5.84E-05	1.51E-06	0.03
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	3.61E-05	2.06E-05	1.29E-03	3.09E-02	1.05E-05	5.84E-05	1.51E-06	0.03
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	3.61E-05	2.06E-05	1.29E-03	3.09E-02	1.05E-05	5.84E-05	1.51E-06	0.03
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	3.61E-05	2.06E-05	1.29E-03	3.09E-02	1.05E-05	5.84E-05	1.51E-06	0.03
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	3.61E-05	2.06E-05	1.29E-03	3.09E-02	1.05E-05	5.84E-05	1.51E-06	0.03
MAUWIPA through MAUWIPE	Air Make Up	NG-Fired Makeup Air Unit, WIP Coil Storage Building	3.61E-05	2.06E-05	1.29E-03	3.09E-02	1.05E-05	5.84E-05	1.51E-06	0.03
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	3.61E-05	2.06E-05	1.29E-03	3.09E-02	1.05E-05	5.84E-05	1.51E-06	0.03
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	3.61E-05	2.06E-05	1.29E-03	3.09E-02	1.05E-05	5.84E-05	1.51E-06	0.03
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	3.61E-05	2.06E-05	1.29E-03	3.09E-02	1.05E-05	5.84E-05	1.51E-06	0.03
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	3.61E-05	2.06E-05	1.29E-03	3.09E-02	1.05E-05	5.84E-05	1.51E-06	0.03
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	3.61E-05	2.06E-05	1.29E-03	3.09E-02	1.05E-05	5.84E-05	1.51E-06	0.03
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	3.61E-05	2.06E-05	1.29E-03	3.09E-02	1.05E-05	5.84E-05	1.51E-06	0.03
MAUFGA through MAUFGC	Air Make Up	NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building	3.61E-05	2.06E-05	1.29E-03	3.09E-02	1.05E-05	5.84E-05	1.51E-06	0.03
MAUPLA through MAUPLC	Air Make Up	NG-Fired Makeup Air Unit, PLTCM Bay	3.61E-05	2.06E-05	1.29E-03	3.09E-02	1.05E-05	5.84E-05	1.51E-06	0.03
MAUPLA through MAUPLC	Air Make Up	NG-Fired Makeup Air Unit, PLTCM Bay	3.61E-05	2.06E-05	1.29E-03	3.09E-02	1.05E-05	5.84E-05	1.51E-06	0.03
CGL1-ST1	Galv Line	Galv Line Boiler #1	6.04E-05	3.45E-05	2.16E-03	5.18E-02	1.76E-05	9.78E-05	2.54E-06	0.05
CGL2-ST1	Galv Line	Galv Line Boiler #2	6.04E-05	3.45E-05	2.16E-03	5.18E-02	1.76E-05	9.78E-05	2.54E-06	0.05
PLTCMBLR	PLTCM	PLTCM Boiler #1	6.67E-04	3.81E-04	2.38E-02	5.72E-01	1.94E-04	1.08E-03	2.80E-05	0.60
PLTCMBLR	PLTCM	PLTCM Boiler #2	6.46E-04	3.69E-04	2.31E-02	5.54E-01	1.88E-04	1.05E-03	2.71E-05	0.58
		Total	**8.29E-03**	**4.74E-03**	**0.30**	**7.11**	**2.41E-03**	**0.01**	**3.48E-04**	**7.46**

[1] Annual Emissions (tpy) = Heat Input (MMBtu/yr) x Emission Factor (lb/MMBtu) / 2,000 (lb/ton)

Benzene Annual Emissions (tpy) = $\frac{52{,}560 \text{ MMBtu}}{\text{yr}} \times \frac{2.06\text{E-}06 \text{ lb}}{\text{MMBtu}} \times \frac{\text{ton}}{2{,}000 \text{ lb}} = 5.41\text{E-}05 \text{ tpy}$

NSWV - PTE Calculations
Fugitive Dust from Refractory Brick Recycling Operations

Emission Point ID	Emission Unit ID	Description of Operation	Material	# of drop points	Max Hourly Rate (tph)	Annual Rate (tpy)	Location	Control Option	Emission Factor[1,2]			Total Emissions[3]					
									PM (lb/ton)	PM_{10} (lb/ton)	$PM_{2.5}$ (lb/ton)	PM (lb/hr)	PM (tpy)	PM_{10} (lb/hr)	PM_{10} (tpy)	$PM_{2.5}$ (lb/hr)	$PM_{2.5}$ (tpy)
BRCKCRSH	BRCKCRSH	Truck unloading to Primary Crusher	Crushed Brick	1	60	14,400	Outdoor	Water Spray	1.60E-05	1.60E-05	1.60E-05	9.60E-04	1.15E-04	9.60E-04	1.15E-04	9.60E-04	1.15E-04
BRCKCRSH	BRCKCRSH	Primary Crusher to Conveyor 1	Crushed Brick	1	60	14,400	Outdoor	Water Spray	1.40E-04	4.60E-05	1.30E-05	8.40E-03	1.01E-03	2.76E-03	3.31E-04	7.80E-04	9.36E-05
BRCKCRSH	BRCKCRSH	Truck unloading to Surge Pile	Crushed Brick	1	60	14,400	Outdoor	Water Spray	1.60E-05	1.60E-05	1.60E-05	9.60E-04	1.15E-04	9.60E-04	1.15E-04	9.60E-04	1.15E-04
BRCKCRSH	BRCKCRSH	Conveyor 1 to Surge Pile	Crushed Brick	1	60	14,400	Outdoor	Water Spray	1.40E-04	4.60E-05	1.30E-05	8.40E-03	1.01E-03	2.76E-03	3.31E-04	7.80E-04	9.36E-05
BRCKCRSH	BRCKCRSH	Surge Pile to Conveyor 2	Crushed Brick	1	60	14,400	Outdoor	Water Spray	1.40E-04	4.60E-05	1.30E-05	8.40E-03	1.01E-03	2.76E-03	3.31E-04	7.80E-04	9.36E-05
BRCKCRSH	BRCKCRSH	Conveyor 2 to Scalping Screener	Crushed Brick	1	60	14,400	Outdoor	Water Spray	1.40E-04	4.60E-05	1.30E-05	8.40E-03	1.01E-03	2.76E-03	3.31E-04	7.80E-04	9.36E-05
BRCKCRSH	BRCKCRSH	Scalping Screener to Conveyor 3	Crushed Brick	1	60	14,400	Outdoor	Water Spray	2.20E-03	7.40E-04	5.00E-05	1.32E-01	1.58E-02	4.44E-02	5.33E-03	3.00E-03	3.60E-04
BRCKCRSH	BRCKCRSH	Conveyor 3 to Product Pile	Crushed Brick	1	60	14,400	Outdoor	Water Spray	1.40E-04	4.60E-05	1.30E-05	8.40E-03	1.01E-03	2.76E-03	3.31E-04	7.80E-04	9.36E-05
BRCKCRSH	BRCKCRSH	Scalping Screener to Conveyor 4	Crushed Brick	1	60	14,400	Outdoor	Water Spray	2.20E-03	7.40E-04	5.00E-05	1.32E-01	1.58E-02	4.44E-02	5.33E-03	3.00E-03	3.60E-04
BRCKCRSH	BRCKCRSH	Conveyor 4 to Secondary Crusher	Crushed Brick	1	60	14,400	Outdoor	Water Spray	1.40E-04	4.60E-05	1.30E-05	8.40E-03	1.01E-03	2.76E-03	3.31E-04	7.80E-04	9.36E-05
BRCKCRSH	BRCKCRSH	Conveyor 4 to Conveyor 5	Crushed Brick	1	60	14,400	Outdoor	Water Spray	1.40E-04	4.60E-05	1.30E-05	8.40E-03	1.01E-03	2.76E-03	3.31E-04	7.80E-04	9.36E-05
BRCKCRSH	BRCKCRSH	Secondary Crusher to Conveyor 6	Crushed Brick	1	60	14,400	Outdoor	Water Spray	1.20E-03	5.40E-04	1.00E-04	7.20E-02	8.64E-03	3.24E-02	3.89E-03	6.00E-03	7.20E-04
BRCKCRSH	BRCKCRSH	Conveyor 6 to Tertiary Crusher	Crushed Brick	1	60	14,400	Outdoor	Water Spray	1.40E-04	4.60E-05	1.30E-05	8.40E-03	1.01E-03	2.76E-03	3.31E-04	7.80E-04	9.36E-05
BRCKCRSH	BRCKCRSH	Conveyor 6 to Sizing Screener	Crushed Brick	1	60	14,400	Outdoor	Water Spray	1.40E-04	4.60E-05	1.30E-05	8.40E-03	1.01E-03	2.76E-03	3.31E-04	7.80E-04	9.36E-05
BRCKCRSH	BRCKCRSH	Tertiary Crusher to Conveyor 7	Crushed Brick	1	60	14,400	Outdoor	Water Spray	1.20E-03	5.40E-04	1.00E-04	7.20E-02	8.64E-03	3.24E-02	3.89E-03	6.00E-03	7.20E-04
BRCKCRSH	BRCKCRSH	Conveyor 7 to Sizing Screener	Crushed Brick	1	60	14,400	Outdoor	Water Spray	1.40E-04	4.60E-05	1.30E-05	8.40E-03	1.01E-03	2.76E-03	3.31E-04	7.80E-04	9.36E-05
BRCKCRSH	BRCKCRSH	Sizing Screener to Conveyor 8	Crushed Brick	1	60	14,400	Outdoor	Water Spray	2.20E-03	7.40E-04	5.00E-05	1.32E-01	1.58E-02	4.44E-02	5.33E-03	3.00E-03	3.60E-04
BRCKCRSH	BRCKCRSH	Conveyor 8 to Truck	Crushed Brick	1	60	14,400	Outdoor	Water Spray	1.40E-04	4.60E-05	1.30E-05	8.40E-03	1.01E-03	2.76E-03	3.31E-04	7.80E-04	9.36E-05
								Total Brick Crushing Emissions				**6.34E-01**	**7.61E-02**	**2.30E-01**	**2.76E-02**	**3.15E-02**	**3.78E-03**

[1] Per AP-42 Table 11.19.2-2.

[2] Assume $PM=PM_{10}=PM_{2.5}$ for truck loading and unloading.

[3] Hourly emissions (lb/hr) = # of Drop Points x Max Hourly Rate (tph) x PM Emission Factor (lb/ton)

$$\text{PM Hourly Emissions (lb/hr)} = \frac{60 \text{ ton}}{\text{hour}} \left| \frac{1 \text{ drop}}{} \right| \frac{0.00002 \text{ lb}}{\text{ton}} = 0.00096 \text{ lb/hr}$$

[4] Annual Emissions = # of Drop Points x Max Annual Rate (tpy) x PM Emission Factor (lb/ton) / 2000 (lb/ton)

$$\text{PM Annual Emissions (tpy)} = \frac{14400 \text{ ton}}{\text{year}} \left| \frac{1 \text{ drop}}{} \right| \frac{0.00002 \text{ lb}}{\text{ton}} \left| \frac{1 \text{ ton}}{2000 \text{ lb}} \right. = 0.00012 \text{ tpy}$$

NSWV - PTE Calculations Cooling Tower Emissions Calculation

Cooling Tower Properties

Emission Point ID	Unit	Description	Flow Rate[1] (gpm)	Drift Eliminator Efficiency[2] (%)	Water Density (lb/gal)	Entrained Water Carried Over[3] (lb/hr)	Total Dissoved Solids Concentration[4] (ppmw)	PM Distribution Factor (%)	PM_{10} to PM Ratio[6] (%)	$PM_{2.5}$ to PM Ratio[7] (%)	VOC Air Strippable Concentration[5] (ppmv)	Chloroform Air Strippable Concentration[5] (ppmv)	Methylene Chloride Air Strippable Concentration[5] (ppmv)	Toluene Air Strippable Concentration[5] (ppmv)	Carbon Disulfide Air Strippable Concentration[5] (ppmv)	Chloromethane Air Strippable Concentration[5] (ppmv)	Xylene Air Strippable Concentration[5] (ppmv)	Hexane Air Strippable Concentration[5] (ppmv)
NCT1A through NCT1E	Melt Shop	Melt Shop Cooling Tower 1	112,000	0.0005%	8.34	280.22	1,500	100%	31%	31%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CCT4A through CCT4B	Hot Mill	Caster Cooling Tower 2	15,500	0.0005%	8.34	38.78	2,000	100%	31%	31%	2.37E-03	1.06E-03	1.17E-04	5.66E-04	9.81E-05	3.31E-05	6.33E-05	1.60E-04
NCT5A through NCT5B	Hot Mill	Caster Cooling Tower 3	37,200	0.0005%	8.34	93.07	1,500	100%	31%	31%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CCT6A through CCT6C	Hot Mill	Hot Mill Cooling Tower 4	71,000	0.0005%	8.34	177.64	2,000	100%	31%	31%	2.37E-03	1.06E-03	1.17E-04	5.66E-04	9.81E-05	3.31E-05	6.33E-05	1.60E-04
LCT7A through LCT7C	Hot Mill	Hot Mill Cooling Tower 5	56,710	0.0005%	8.34	141.89	2,000	100%	31%	31%	2.37E-03	1.06E-03	1.17E-04	5.66E-04	9.81E-05	3.31E-05	6.33E-05	1.60E-04
NCT8A through NCT8B	Cold Mill	Cold Mill Cooling Tower 6	28,000	0.0005%	8.34	70.06	1,500	100%	31%	31%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPCTA through ASPCTE	Air Separation Plant	Air Separation Plant Cooling Tower 7	350	0.0005%	8.34	0.88	1,500	100%	31%	31%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[1] Maximum flowrate conservatively based on worst case operating scenarios.

[2] Drift eliminator efficiency based on proposed BACT.

[3] Entrained Water Carried Over (lb/hr) = Flow Rate (gpm) x Water Density (lb/gal) x 60 (min/hr) x Drift Eliminator Efficiency (%)

$$\text{Entrained Water Carried Over (lb/hr)} = \frac{112{,}000 \text{ gal}}{\text{min}} \times \frac{8.34 \text{ lb}}{\text{gal}} \times \frac{60 \text{ min}}{\text{hr}} \times 0.0005\ \% = 280.22 \text{ lb/hr}$$

[4] Conservative assumption based on TDS levels at similar facilities.

[5] Based on emission concentrations from Nucor Arkansas.

[6] Reference: J. Reisman and G. Frisbie, Calculating Realistic PM10 Emissions from Cooling Towers. Presented at Air & Waste Management Association Annual Conference. (June 2001).

[7] Assumes PM10 = PM2.5

Cooling Tower Emissions Calculation

Emission Point ID	Unit	Description	Hourly PM Emissions[1] (lb/hr)	Annual PM Emissions[2] (tpy)	Hourly PM_{10} Emissions[3] (lb/hr)	Annual PM_{10} Emissions[2] (tpy)	Hourly $PM_{2.5}$ Emissions[3] (lb/hr)	Annual $PM_{2.5}$ Emissions[2] (tpy)	Hourly VOC Emissions[4] (lb/hr)	Annual VOC Emissions[5] (tpy)	Hourly Total HAP Emissions[4] (lb/hr)	Annual Total HAP Emissions[5] (tpy)
NCT1A through NCT1E	Melt Shop	Melt Shop Cooling Tower 1	0.42	1.84	0.13	0.57	0.13	0.57	-	-	-	-
CCT4A through CCT4B	Hot Mill	Caster Cooling Tower 2	0.08	0.34	0.02	0.10	0.02	0.10	0.02	0.08	0.02	0.07
NCT5A through NCT5B	Hot Mill	Caster Cooling Tower 3	0.14	0.61	0.04	0.19	0.04	0.19	-	-	-	-
CCT6A through CCT6C	Hot Mill	Hot Mill Cooling Tower 4	0.36	1.56	0.11	0.48	0.11	0.48	0.08	0.37	0.07	0.33
LCT7A through LCT7C	Hot Mill	Hot Mill Cooling Tower 5	0.28	1.24	0.09	0.38	0.09	0.38	0.07	0.29	0.06	0.26
NCT8A through NCT8B	Cold Mill	Cold Mill Cooling Tower 6	0.11	0.46	0.03	0.14	0.03	0.14	-	-	-	-
ASPCTA through ASPCTE	Air Separation Plant	Air Separation Plant Cooling Tower 7	1.31E-03	0.01	4.04E-04	1.77E-03	4.04E-04	1.77E-03	-	-	-	-

[1] Maximum Hourly PM Emissions (lb/hr) = Entrained Water Carried Over (lb/hr) x Total Dissolved Solids Concentration (ppmw) / 1,000,000

$$\text{PM Hourly Emission Rate (lb/hr)} = \frac{280.22 \text{ lb/hr} \times 1{,}500 \text{ ppmw}}{1{,}000{,}000} = 0.42 \text{ lb/hr}$$

[2] Maximum Annual PM/PM10/PM2.5 Emission (tpy) = Maximum Hourly PM/PM10/PM2.5 Emission Rate (lb/hr) x Hours of Operation (hr/yr) / (2,000 lb/ton)

$$\text{Example PM Annual Emission Rate (tpy)} = \frac{0.42 \text{ lb}}{\text{hr}} \times \frac{8{,}760 \text{ hr}}{\text{yr}} \times \frac{1 \text{ ton}}{2{,}000 \text{ lb}} = 1.84 \text{ tpy}$$

[3] Maximum Hourly PM10/PM2.5 Emissions (lb/hr) = PM Emissions (lb/hr) x PM10/PM2.5 Ratio (%)

$$\text{PM10 Hourly Emission Rate (lb/hr)} = 0.88 \text{ lb/hr} \times 31\ \% = 0.13 \text{ lb/hr}$$

[4] Maximum Hourly VOC/HAP Emissions (lb/hr) = Flow Rate (gpm) x Water Density (lb/gal) x VOC Strippable Concentration (ppmv) x 60 (min/hr) / 1,000,000

$$\text{VOC Hourly Emission Rate (lb/hr)} = \frac{15{,}500 \text{ gal}}{\text{min}} \times \frac{8.34 \text{ lb}}{\text{gal}} \times \frac{60 \text{ min}}{\text{hr}} \times \frac{0.002 \text{ ppmw}}{1{,}000{,}000} = 0.02 \text{ lb/hr}$$

[5] Maximum Annual VOC/HAP Emission (tpy) = Maximum Hourly VOC/HAP Emission Rate (lb/hr) x Hours of Operation (hr/yr) / (2,000 lb/ton)

$$\text{Example VOC Annual Emission Rate (tpy)} = \frac{0.02 \text{ lb}}{\text{hr}} \times \frac{8{,}760 \text{ hr}}{\text{yr}} \times \frac{1 \text{ ton}}{2{,}000 \text{ lb}} = 0.08 \text{ tpy}$$

NSWV - PTE Calculations
Pickling and Galvanizing (Cold Mill) Emissions Calculation

Pickling Line Scrubber Emissions

Emission Point ID	Unit	Description	Universal Gas Law Constant (psia-ft^3/lbmol-°R)	Vapor Molecular Weight[1] (lb/lb-mol)	Temperature[2] (Rank)	Atmospheric Pressure[2] (psia)	Flow Rate[3] (dscfm)	HCl Concentration Breakthrough[3] (ppmv)	Hours of Operation (hr/yr)	Hourly HCl Emissions[4,5] (lb/hr)	Annual HCl Emissions[4,6] (tpy)
PLST1	Cold Mill	Pickling Line #1	10.7310	36.46	519.67	14.7	15,303	6	8760	0.53	2.32

[1] HCL properties based on Perry's Handbook for Chemical Engineers, Table 2-10, Partial Pressures of HCl over Aqueous Solutions of HCl

[2] Based on atmospheric properties.

[3] Based on vendor guarantee.

[4] Pickling Line operations are enclosed in a building under negative pressure. No fugitive emissions are anticipated.

[5] Hourly HCl Emissions (lb/hr) = Flow Rate (dscfm) x 60 min/hr x Atmospheric Pressure (psia) x Molecular Weight (lb/lbmol) / Universal Gas Law Constant (psia-ft3/lbmol-Rank) / Temperature (Rank) x 6 ppmv / 1000000

$$\text{Hourly HCl Emissions (lb/hr)} = \frac{15{,}303 \text{ dscf}}{\text{min}} \times \frac{60 \text{ min}}{\text{hr}} \times \frac{14.7 \text{ psia}}{} \times \frac{36.46 \text{ lb}}{\text{lbmol}} \times \frac{\text{lbmol-Rank}}{10.73 \text{ psia-ft3}} \times \frac{}{519.67 \text{ Rank}} \times \frac{6 \text{ ppmv}}{1{,}000{,}000} = 0.53 \text{ lb/hr}$$

[6] Annual HCl Emissions (tpy) = Hourly HCl Emissions (lb/hr) x Hours of Operation (hr/yr) / 2000 (lb/ton)

$$\text{Annual HCl Emissions (tpy)} = \frac{0.53 \text{ lb}}{\text{hr}} \times \frac{8760 \text{ hr}}{\text{yr}} \times \frac{\text{ton}}{2000 \text{ lb}} = 2.32 \text{ tpy}$$

Cold Mill Control Devices Emissions

Emission Point ID	Unit	Description	Flow Rate (m^3/hr)	Hours of Operation (hr/yr)	Emission Factor[1,2]				Potential Emissions[3,4]							
					PM (mg/Nm^3)	PM_{10} (mg/Nm^3)	$PM_{2.5}$ (mg/Nm^3)	VOC (mg/Nm^3)	PM (lb/hr)	PM (tpy)	PM_{10} (lb/hr)	PM_{10} (tpy)	$PM_{2.5}$ (lb/hr)	$PM_{2.5}$ (tpy)	VOC (lb/hr)	VOC (tpy)
PLST1	Cold Mill	Pickling Line #1	26,000	8,760	25	25	25	0	1.43	6.28	1.43	6.28	1.43	6.28	0.00	0.00
PKLSB	Cold Mill	Pickle Line Scale Breaker	80,000	8,760	7.5	7.5	7.5	0	1.32	5.79	1.32	5.79	1.32	5.79	0.00	0.00
TCMST	Cold Mill	Tandem Cold Mill	400,000	8,760	15	15	15	10	13.23	57.94	13.23	57.94	13.23	57.94	8.82	38.63
STMST	Cold Mill	Standalone Temper Mill	40,000	8,760	5	5	5	10	0.44	1.93	0.44	1.93	0.44	1.93	0.88	3.86
CGL1MVA through CGL1MVE	Cold Mill	Skin Pass Mill #1	23,288	8,760	10	10	10	0	0.51	2.25	0.51	2.25	0.51	2.25	0.00	0.00
CGL2MVA through CGL2MVE	Cold Mill	Skin Pass Mill #2	23,288	8,760	10	10	10	0	0.51	2.25	0.51	2.25	0.51	2.25	0.00	0.00
CGL1_ST1	Cold Mill	CGL1 - Cleaning Section	12000	8,760	10	10	10	0	0.26	1.16	0.26	1.16	0.26	1.16	0.00	0.00
CGL2_ST1	Cold Mill	CGL2 - Cleaning Section	12000	8,760	10	10	10	0	0.26	1.16	0.26	1.16	0.26	1.16	0.00	0.00

[1] Based on BACT limits and control device vendor guarantees with safety factor, as applicable. Units of mg per m^3 at STP.

[2] Assumes PM = PM_{10} = $PM_{2.5}$

[3] Hourly Emissions (lb/hr) = Flow Rate (m^3/hr) x Emission Factor (mg/Nm^3) / 1,000 (mg/g) / 454 (g/lb)

$$\text{Hourly Emissions (lb/hr)} = \frac{26{,}000 \text{ m3}}{\text{hr}} \times \frac{25 \text{ mg}}{\text{Nm}^3} \times \frac{1 \text{ g}}{1{,}000 \text{ mg}} \times \frac{1 \text{ lb}}{454 \text{ g}} = 1.43 \text{ lb/hr}$$

[4] Annual Emissions (tpy) = Flow Rate (m^3/hr) x Emission Factor (mg/Nm^3) x Operating Hours (hr/yr) / 1,000 (mg/g) / 454 (g/lb) / 2000 (lb/ton)

$$\text{Annual Emissions (tpy)} = \frac{26{,}000 \text{ m3}}{\text{hr}} \times \frac{25 \text{ mg}}{\text{Nm}^3} \times \frac{1 \text{ g}}{1{,}000 \text{ mg}} \times \frac{1 \text{ lb}}{454 \text{ g}} \times \frac{8760 \text{ hr}}{\text{yr}} \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 6.28 \text{ tpy}$$

NSWV - PTE Calculations
Fugitive Dust from Paved Roads Emissions Calculation

Paved Roads Operational Properties

Emission Point ID	Route Description	Number of Vehicles[1] (Vehicles/day)	Number of Vehicles[1] (Vehicles/year)	Road Surface Silt Loading[2] (g/m^2)	Number of Days with Precipitation[3] (days/yr)	Control Efficiency[4] (%)	Average Weight of Vehicle Incoming [1] (tons)	Average Weight of Vehicle Outgoing [1] (tons)	Length of Incoming Pathway[1] (miles)	Length of Outgoing Pathway[1] (miles)	Length of Route Roundtrip (miles)	Total Vehicle Miles Travelled (VMT/day)	Total Vehicle Miles Travelled (VMT/yr)	Average Vehicle Weight[5] (tons)
ROAD1 through ROAD184	North Entry to P&O	24	8,760	3	140	90%	15.00	40.00	0.54	0.43	0.97	23.30	8,506	26.2
ROAD1 through ROAD184	North Entry to FG	23	8,395	3	140	90%	15.00	40.00	1.16	1.10	2.26	51.89	18,939	27.2
ROAD1 through ROAD184	North Entry to HB Yard	16	5,840	3	140	90%	15.00	40.00	1.17	1.13	2.29	36.69	13,392	27.3
ROAD1 through ROAD184	North Entry to Scrap Yard	15	5,475	3	140	90%	40.00	15.00	1.84	1.78	3.63	54.42	19,864	27.7
ROAD1 through ROAD184	North Entry to Alloy Storage	26	9,490	3	140	90%	40.00	15.00	1.37	1.31	2.68	69.74	25,455	27.8
ROAD1 through ROAD184	North Entry to EAF Bay	8	2,920	3	140	90%	40.00	15.00	1.74	1.74	3.47	27.79	10,143	27.5
ROAD1 through ROAD184	North Entry to Slag Bay	9	3,285	3	140	90%	20.00	53.33	1.77	1.77	3.53	31.77	11,597	36.7
ROAD1 through ROAD184	Scrap Yard to EAF Bay	141	51,465	3	140	90%	57.88	152.90	0.65	0.65	1.29	182.36	66,560	105.4
ROAD1 through ROAD184	South Port to Scrap Yard	176	64,240	3	140	90%	123.25	200.75	0.44	0.44	0.88	154.94	56,552	162.0
ROAD1 through ROAD184	South Port to HB Yard	4	1,460	3	140	90%	37.33	260.24	1.34	0.81	2.15	8.60	3,138	121.2
ROAD1 through ROAD184	South Port to FG	10	3,650	3	140	90%	37.33	260.24	2.29	2.29	4.59	45.87	16,741	148.8
ROAD1 through ROAD184	South Port to P&O	10	3,650	3	140	90%	37.33	260.24	1.63	1.50	3.13	31.33	11,436	144.0

[1] Design parameters based on anticipated operation and potential material throughputs. Roadway lengths determined based on proposed material haul routes, where lengths were measured using georeferenced aerial photos.

[2] Based on AP-42 Table 13.2.1-2, worst-case silt loading for low ADT (<500) public roadways .

[3] Determined from AP-42 Figure 13.2.1-2, *Mean number of days with 0.01 inch or more of precipitation in United States.*

[4] From EPA document: Control of Open Fugitive Dust Sources, published September 1988.

[5] Distance-weighted average vehicle weight, based on weights of incoming and outgoing vehicles.

Particle Size Multiplier (k)[1]		
<30 µm	<10 µm	<2.5 µm
0.011	0.0022	0.00054

[1] Per AP-42 Table 13.2.1-1, Particle Size Multiplier for Paved Road Equation

Fugitive Dust from Paved Roads Emission Factors Calculations

Emission Point ID	Description	Emission Factor - Daily (Uncontrolled)[1] PM_{30} (lb/VMT)	Emission Factor - Daily (Uncontrolled)[1] PM_{10} (lb/VMT)	Emission Factor - Daily (Uncontrolled)[1] $PM_{2.5}$ (lb/VMT)	Emission Factor - Annual (Uncontrolled)[1] PM_{30} (lb/VMT)	Emission Factor - Annual (Uncontrolled)[1] PM_{10} (lb/VMT)	Emission Factor - Annual (Uncontrolled)[1] $PM_{2.5}$ (lb/VMT)
ROAD1 through ROAD184	North Entry to P&O	0.84	0.17	0.041	0.76	0.15	0.037
ROAD1 through ROAD184	North Entry to FG	0.87	0.17	0.043	0.78	0.16	0.039
ROAD1 through ROAD184	North Entry to HB Yard	0.87	0.17	0.043	0.79	0.16	0.039
ROAD1 through ROAD184	North Entry to Scrap Yard	0.88	0.18	0.043	0.80	0.16	0.039
ROAD1 through ROAD184	North Entry to Alloy Storage	0.89	0.18	0.044	0.80	0.16	0.039
ROAD1 through ROAD184	North Entry to EAF Bay	0.88	0.18	0.043	0.79	0.16	0.039
ROAD1 through ROAD184	North Entry to Slag Bay	1.18	0.24	0.058	1.07	0.21	0.052
ROAD1 through ROAD184	Scrap Yard to EAF Bay	3.46	0.69	0.170	3.13	0.63	0.153
ROAD1 through ROAD184	South Port to Scrap Yard	5.36	1.07	0.263	4.85	0.97	0.238
ROAD1 through ROAD184	South Port to HB Yard	3.99	0.80	0.196	3.61	0.72	0.177
ROAD1 through ROAD184	South Port to FG	4.92	0.98	0.241	4.44	0.89	0.218
ROAD1 through ROAD184	South Port to P&O	4.75	0.95	0.233	4.30	0.86	0.211

[1]AP-42 Section 13.2.1.3, Equation 1 & 2 (Predictive Emission Factor Equations for Paved Roads)

Daily: $E\ (lb/VMT) = k * sL^{0.91} * W^{1.02}$

Annual: $E\ (lb/VMT) = k \times sL^{0.91} \times W^{1.02} \times (1 - (P/4N))$

Where

- E= Size specific emission factor (lb/VMT)
- k= Constant from AP-42 Table 13.2.1-1 (lb/VMT)
- sL= Road surface silt loading (g/m^2)
- W= Average weight of vehicles traveling the road (tons)
- P= Number of days in a year with at least 0.254 mm (0.1 in) of precipitation using Figure 13.2.2-1.
- N= Number of days in the averaging period (365 for annual)

NSWV - PTE Calculations
Fugitive Dust from Paved Roads Emissions Calculation

Fugitive Dust from Paved Roads Emissions Calculation

Emission Point ID	Description	Hourly Emissions[1]			Annual Emissions[2]		
		PM_{30} (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	PM_{30} (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
ROAD1 through ROAD184	North Entry to P&O	0.08	0.02	0.004	0.32	0.06	0.02
ROAD1 through ROAD184	North Entry to FG	0.19	0.04	0.009	0.74	0.15	0.04
ROAD1 through ROAD184	North Entry to HB Yard	0.13	0.03	0.007	0.53	0.11	0.03
ROAD1 through ROAD184	North Entry to Scrap Yard	0.20	0.04	0.010	0.79	0.16	0.04
ROAD1 through ROAD184	North Entry to Alloy Storage	0.26	0.05	0.013	1.02	0.20	0.05
ROAD1 through ROAD184	North Entry to EAF Bay	0.10	0.02	0.005	0.40	0.08	0.02
ROAD1 through ROAD184	North Entry to Slag Bay	0.16	0.03	0.008	0.62	0.12	0.03
ROAD1 through ROAD184	Scrap Yard to EAF Bay	2.63	0.53	0.129	10.40	2.08	0.51
ROAD1 through ROAD184	South Port to Scrap Yard	3.46	0.69	0.170	13.71	2.74	0.67
ROAD1 through ROAD184	South Port to HB Yard	0.14	0.03	0.007	0.57	0.11	0.03
ROAD1 through ROAD184	South Port to FG	0.94	0.19	0.046	3.72	0.74	0.18
ROAD1 through ROAD184	South Port to P&O	0.62	0.12	0.030	2.46	0.49	0.12
Total Paved Roadways		**8.91**	**1.78**	**0.44**	**35.28**	**7.06**	**1.73**

[1] Hourly Emissions (lb/hr) = Total Daily Vehicle Miles Traveled (VMT/day) / 24 (hours/day) x Daily Emission Factor (lb/VMT) x (1 - Control Efficiency (%))

$$\text{PM Hourly Emission Rate (lb/hr)} = \frac{23.30 \text{ VMT}}{\text{day}} \mid \frac{\text{day}}{24 \text{ hr}} \mid \frac{0.84 \text{ lb}}{\text{VMT}} \mid \frac{(1 - 90\ \%)}{} = 0.08 \text{ lb/hr}$$

[2] Annual Emissions (tpy) = Total Annual Miles Traveled (VMT/yr) x Annual Emission Factor (lb/VMT) / 2000 (lb/ton) x (1 - Control Efficiency (%))

$$\text{PM Annual Emission Rate (tpy)} = \frac{8{,}506 \text{ VMT}}{\text{yr}} \mid \frac{0.76 \text{ lb}}{\text{VMT}} \mid \frac{\text{ton}}{2000 \text{ lb}} \mid \frac{(1 - 90\ \%)}{} = 0.32 \text{ tpy}$$

NSWV - PTE Calculations
Emergency Generator Emissions Calculation

Criteria Pollutant Emission Factors

Emission Point ID	Description	Emission Factor (lb/hp-hr)						
		NOx[1]	CO [1]	SO_2[2]	VOC[1]	PM[2,3]	PM_{10}[4]	$PM_{2.5}$[4]
EMGEN1	Emergency Generator 1	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN2	Emergency Generator 2	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN3	Emergency Generator 3	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN4	Emergency Generator 4	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN5	Emergency Generator 5	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN6	Emergency Generator 6	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN7	Emergency Generator 7	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN8	Emergency Generator 8	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN9	Emergency Generator 9	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN10	Emergency Generator 10	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN11	Emergency Generator 11	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN12	Emergency Generator 12	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN13	Emergency Generator 13	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN14	Emergency Generator 14	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN15	Emergency Generator 15	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN16	Emergency Generator 16	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN17	Emergency Generator 17	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN18	Emergency Generator 18	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN19	Emergency Generator 19	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN20	Emergency Generator 20	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN21	Emergency Generator 21	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN22	Emergency Generator 22	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN23	Emergency Generator 23	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN24	Emergency Generator 24	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN25	Emergency Generator 25	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06
EMGEN26	Emergency Generator 26	2.20E-03	4.41E-03	4.12E-06	1.54E-03	1.36E-04	2.13E-06	1.30E-06

[1] Emission factors for generators from EPA Certificate of Conformity (Certificate Number RGNXB25.82N1)
VOC emission factor listed excludes formaldehyde.

[2] Worst-case emission factor for natural gas-fired reciprocating engines in AP-42 Section 3.2, Tables 3.2-1, 3.2-2, and 3.2-3. Conversion to lb/hp-hr assumes brake-specific fuel consumption of 7000 Btu/hp-hr.

[3] Includes PM filterable and PM condensable.

[4] PM10 and PM2.5 factors are based on EPA Region V study using preliminary test data for Industrial IC Natural Gas Engines (all types). PM10 and PM2.5 emission factors are filterable and condensable PM combined. Factor is converted to lb/MMBtu based on natural gas heat value.

NSWV - PTE Calculations
Emergency Generator Emissions Calculation

Criteria Pollutants Emissions Calculation

Emission Point ID	Description[1]	Engine Rating (hp)	Max Annual Hours of Operation[2] (hr/yr)	Maximum Hourly Emissions[3]							Maximum Annual Emissions[4]						
				NO_X (lb/hr)	CO (lb/hr)	SO_2 (lb/hr)	VOC[5] (lb/hr)	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	NO_X (tpy)	CO (tpy)	SO_2 (tpy)	VOC[5] (tpy)	PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
EMGEN1	Emergency Generator 1	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN2	Emergency Generator 2	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN3	Emergency Generator 3	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN4	Emergency Generator 4	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN5	Emergency Generator 5	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN6	Emergency Generator 6	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN7	Emergency Generator 7	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN8	Emergency Generator 8	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN9	Emergency Generator 9	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN10	Emergency Generator 10	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN11	Emergency Generator 11	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN12	Emergency Generator 12	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN13	Emergency Generator 13	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN14	Emergency Generator 14	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN15	Emergency Generator 15	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN16	Emergency Generator 16	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN17	Emergency Generator 17	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN18	Emergency Generator 18	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN19	Emergency Generator 19	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN20	Emergency Generator 20	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN21	Emergency Generator 21	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN22	Emergency Generator 22	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN23	Emergency Generator 23	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN24	Emergency Generator 24	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN25	Emergency Generator 25	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
EMGEN26	Emergency Generator 26	777	100	1.71	3.43	3.20E-03	1.50	0.11	1.65E-03	1.01E-03	0.09	0.17	1.60E-04	0.07	5.28E-03	8.27E-05	5.07E-05
Total:				44.54	89.08	0.08	38.98	2.74	0.04	0.03	2.23	4.45	4.16E-03	1.95	0.14	2.15E-03	1.32E-03

[1] All engines are spark ignition engines.

[2] A maximum of 50 hours of maintenance and maximum of 50 hours of general use are allowed under MACT ZZZZ and NSPS JJJJ for emergency engines.

[3] Maximum Hourly Emissions (lb/hr) = Engine Rating (hp) x Emission Factor (lb/hp-hr)

Example NOx Hourly Emission Rate (lb/hr) = 777 hp × 2.20E-03 lb / hp-hr = 1.71 lb/hr

[4] Maximum Annual Emission (tpy) = Maximum Hourly Emission Rate (lb/hr) x Hours of Operation (hr/yr) / (2,000 lb/ton)

Example NOx Annual Emission Rate (tpy) = 1.71 lb / hr × 100 hr / yr × 1 ton / 2,000 lb = 0.09 tpy

[5] VOC emissions listed include formaldehyde.

NSWV - PTE Calculations
Emergency Generator Emissions Calculation

Greenhouse Gas Emission Factors

Fuel	Default Higher Heating Value (HHV)[1]	Emission Factors[2] (kg/MMBtu)			Global Warming Potentials (GWPs)[3]		
	(MMBtu/scf)	CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
Natural Gas	1.02E-03	53.06	0.0010	0.0001	1	28	265

[1] HHV (MMBtu/scf) is taken from the GHG MRR under "Table C-1 of Subpart C of Part 98 - Default CO_2 Emission Factors and High Heat values for Various Types of Fuel."

[2] Emission Factors are from the GHG MRR under "Table C-1 of Subpart C and Table C-2 of Subpart C." Default CH_4 and N_2O emission factors are based on Natural Gas, per listings in Table C-2.

[3] EPA GHG MRR rule (40 CFR 98, dated September 22, 2009), Table A-1. Updated GWP finalized on April 25, 2024.

Greenhouse Gas Emission Calculations

Emission Point ID	Description	Fuel Usage[1] (MMscf/hr)	Hours of Operation (hr/yr)	Maximum Hourly Emissions[2,4] CO_2 (lb/hr)	CH_4 (lb/hr)	N_2O (lb/hr)	CO_2e (lb/hr)	Maximum Annual Emissions[3,4] CO_2 (tpy)	CH_4 (tpy)	N_2O (tpy)	CO_2e (tpy)
EMGEN1	Emergency Generator 1	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN2	Emergency Generator 2	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN3	Emergency Generator 3	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN4	Emergency Generator 4	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN5	Emergency Generator 5	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN6	Emergency Generator 6	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN7	Emergency Generator 7	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN8	Emergency Generator 8	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN9	Emergency Generator 9	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN10	Emergency Generator 10	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN11	Emergency Generator 11	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN12	Emergency Generator 12	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN13	Emergency Generator 13	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN14	Emergency Generator 14	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN15	Emergency Generator 15	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN16	Emergency Generator 16	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN17	Emergency Generator 17	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN18	Emergency Generator 18	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN19	Emergency Generator 19	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN20	Emergency Generator 20	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN21	Emergency Generator 21	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN22	Emergency Generator 22	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN23	Emergency Generator 23	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN24	Emergency Generator 24	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN25	Emergency Generator 25	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
EMGEN26	Emergency Generator 26	0.005	100	636.24	1.20E-02	0.001	637	31.81	6.00E-04	6.00E-05	31.84
Total:				16542.22	0.31	0.03	16559.22	827.11	0.02	1.56E-03	827.96

[1] Fuel usage is calculated using assumed brake-specific fuel consumption of 7,000 Btu/hp-hr.

[2] Maximum Hourly Emissions (lb/hr) = Engine Fuel Usage (mmscf/hr) x Default HHV (MMBtu/scf) x Emission Factor (kg/MMBtu) x Conversion factor (scf/MMscf) x Conversion Factor (lb/kg)

$$CO_2 \text{ Hourly Emission Rate (lb/hr)} = \frac{0.005 \text{ MMscf}}{\text{hour}} \times \frac{0.001 \text{ MMBtu}}{\text{scf}} \times \frac{53.06 \text{ kg}}{\text{MMBtu}} \times \frac{2.2046 \text{ lb}}{\text{kg}} \times \frac{1{,}000{,}000 \text{ scf}}{\text{MMscf}} = 636.24 \text{ lb/hr}$$

[3] Maximum Annual Emission (tpy) = Maximum Hourly Emission Rate (lb/hr) x Hours of Operation (hr/yr) / (2,000 lb/ton)

$$CO_2 \text{ Annual Emission Rate (tpy)} = \frac{0{,}636.24 \text{ lb}}{\text{hr}} \times \frac{100 \text{ hr}}{\text{yr}} \times \frac{1 \text{ ton}}{2{,}000 \text{ lb}} = 31.81 \text{ tpy}$$

[4] CO_2e emissions are calculated based on the Global Warming Potentials (GWP)

$CO_2e = CO_2$ Emission Rate * CO_2 GWP + CH_4 Emission Rate * CH_4 GWP + N_2O Emission Rate * N_2O GWP

NSWV - PTE Calculations
Scrap Unloading & Handling Emissions Calculation

Scrap Receiving Assumptions and Inputs

Emission Point ID	Emission Unit ID	Unit	Description[1]	Throughput			Emission Factor[2]		
				Hourly (ton/hr)	Daily (ton/day)	Annual (tpy)	PM^{3} (lb/ton)	PM_{10} (lb/ton)	$PM_{2.5}$ (lb/ton)
SCRPBRGE	SCRAP-RECEIVING1	Scrap Handling	Barge to Hauler	952	9,066	3,309,000	0.000300	0.000150	0.000043
SCRPBRGE	SCRAP-RECEIVING2	Scrap Handling	Rail to Hauler						
SCRPBRGE	SCRAP-RECEIVING3	Scrap Handling	Truck to Hauler						

[1] Assume all scrap emissions are at barge unloading rate. These emissions will be greater by default compared to truck and rail due to the additional drop point.

[2] Emission factors from AP-42 Chapter 12.5 *Iron and Steel Production* Table 12.5-4, lump ore pile formation.

[3] Per AP-42 (Table 13.2.2-2), PM_{30} is assumed equivalent to total PM.

Scrap Handling Assumptions and Inputs

Emission Point ID	Emission Unit ID	Unit	Description[1]	Throughput		Moisture Content[2] (%)	Aerodynamic Particle Size Multiplier (k)[3]			Emission Factor[4,5]		
				Hourly (ton/hr)	Annual (tpy)		<30 µm	<10 µm	<2.5 µm	Filterable PM^{5} (lb/ton)	PM_{10} (lb/ton)	$PM_{2.5}$ (lb/ton)
SCRPHNDA through SCRPHNDC	SCRAP-HANDLING1	Scrap Handling	Hauler to Scrap Piles	952	3,309,000	5.4	0.74	0.35	0.053	9.13E-04	4.32E-04	6.54E-05
SCRPHNDA through SCRPHNDC	SCRAP-HANDLING2	Scrap Handling	Transfers Between Scrap Storage Piles	952	3,309,000	5.4	0.74	0.35	0.053	9.13E-04	4.32E-04	6.54E-05
SCRPHNDA through SCRPHNDC	SCRAP-HANDLING3	Scrap Handling	Scrap Piles to Hauler	952	3,309,000	5.4	0.74	0.35	0.053	9.13E-04	4.32E-04	6.54E-05

[1] Assume all scrap emissions are at barge unloading rate. These emissions will be greater by default compared to truck and rail due to the additional drop point.

[2] AP-42 Section 13.2.4: Aggregate Handling and Storage Piles, Table 13.2.4-1 Typical Silt and Moisture Contents of Materials at Various Industries - Iron and Steel Production - Lump Ore.

[3] AP-42 Section 13.2.4: Aggregate Handling and Storage Piles, Aerodynamic Particle Size Multiplier (k) For Equation 1

[4] AP-42 Section 13.2.4: Aggregate Handling and Storage Piles, Equation 1

[5] Emission Factor (lb/ton) = Particle Size Multiplier x 0.0032 x ((Wind Speed (mph) / 5)^1.3) / ((Moisture Content (%) / 2)^1.4

Example Filterable PM Emission Factor (lb/ton) = $0.0032 \times \frac{7\ \text{mph}^{1.3}}{5} \times \frac{2}{5\ \%^{1.4}}$ = 0.0009 lb/ton

Emissions from Scrap Receiving

Emission Point ID	Emission Unit ID	Unit	Description	Total Emissions[1,2,3]								
				PM			PM_{10}			$PM_{2.5}$		
				(lb/hr)	(lb/day)	(tpy)	(lb/hr)	(lb/day)	(tpy)	(lb/hr)	(lb/day)	(tpy)
SCRPBRGE	SCRAP-RECEIVING1	Scrap Handling	Barge to Hauler	0.29	2.72	0.50	0.14	1.36	0.25	0.04	0.39	0.07
SCRPBRGE	SCRAP-RECEIVING2	Scrap Handling	Rail to Hauler									
SCRPBRGE	SCRAP-RECEIVING3	Scrap Handling	Truck to Hauler									

[1] Hourly Emissions (lb/hr) = Hourly Throughput (ton/hr) x Emission Factor (lb/ton)

Example PM Emission Rate (lb/hr) = $\frac{952\ \text{ton}}{\text{hr}} \times \frac{0.00030\ \text{lb}}{\text{ton}}$ = 0.29 lb/hr

[2] Daily Emissions (lb/day) = Daily Throughput (ton/day) x Emission Factor (lb/ton)

Example PM Emission Rate (lb/day) = $\frac{9066\ \text{ton}}{\text{day}} \times \frac{0.00030\ \text{lb}}{\text{ton}}$ = 2.72 lb/day

[3] Annual Emissions (tpy) = Annual Throughput (tpy) x Emission Factor (lb/ton) / 2000 (lb/ton)

Example PM Emission Rate (tpy) = $\frac{3{,}309{,}000\ \text{ton}}{\text{yr}} \times \frac{0.00030\ \text{lb}}{\text{ton}} \times \frac{\text{ton}}{2000\ \text{lb}}$ = 0.4964 tpy

NSWV - PTE Calculations
Scrap Unloading & Handling Emissions Calculation

Calculation Basis for Scrap Handling:

Calculation methodology derived from Section 13.2.4 "Aggregate Handling and Storage Piles," AP-42 (11/06).
Transfer Locations: (1) stacker/dump to pile; (2) reclaimer/loader out of pile into scrap Euk truck

Emission Factor (lb PM / ton handled)

$$Emission\ factor\ (lb/ton) = k*(0.0032)*\frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}}$$

where U = Mean wind speed (mph) for the area [1]
M = Material moisture content (%) [2]
k = Particle size multiplier [3]

Note: [1] onsite weather station
[2] From AP-42 (11/06), Section 13.2.4.2, Table 13.2.4-1
[3] From AP-42 (11/06), Section 13.2.4.3

Emissions from Scrap Handling

Emission Point ID	Emission Unit ID	Unit	Description	Total Emissions[1,2]					
				Filterable PM		PM_{10}		$PM_{2.5}$	
				(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
SCRPHNDA through SCRPHNDC	SCRAP-HANDLING1	Scrap Handling	Hauler to Scrap Piles	0.87	1.51	0.41	0.71	0.06	0.11
SCRPHNDA through SCRPHNDC	SCRAP-HANDLING2	Scrap Handling	Transfers Between Scrap Storage Piles	0.87	1.51	0.41	0.71	0.06	0.11
SCRPHNDA through SCRPHNDC	SCRAP-HANDLING3	Scrap Handling	Scrap Piles to Hauler	0.87	1.51	0.41	0.71	0.06	0.11

[1] Hourly Emissions (lb/hr) = Hourly Throughput (ton/hr) x Emission Factor (lb/ton)

Example Filterable PM Emission Rate (lb/hr) = $\frac{952\ ton}{hr} \times \frac{0.00091\ lb}{ton} = 0.87\ lb/hr$

[2] Annual Emissions (tpy) = Annual Throughput (tpy) x Emission Factor (lb/ton) / 2000 (lb/ton)

Example PM Emission Rate (tpy) = $\frac{3{,}309{,}000\ ton}{yr} \times \frac{0.00091\ lb}{ton} \times \frac{ton}{2000\ lb} = 1.51\ tpy$

NSWV - PTE Calculations Scrap
Piles Emissions Calculation

Scrap Yard

Emission Point ID	Emission Unit ID	Unit	Description	Number of Piles[1]	Silt Content [s][2]	Height[1]	Max Stockpile Surface Area[1]		Days with >0.1 inch of Rainfall [p][3]	Time that wind exceeds 5.36 m/s - 12 mph) [f][4]	Ratio of PM to PM_{10}[5]	Ratio of PM to $PM_{2.5}$[6]	Emission Factor[7]		
													PM	PM_{10}	$PM_{2.5}$
					(%)	(ft)	(ft^2)	(acre)	(days)	(%)	(%)	(%)	(lb/acre-d)	(lb/acre-d)	(lb/acre-d)
SCRPSKPA	SCRAP-PILE1	Scrap Piles	Scrap Yard Stockpiles	30	4.3	30	435,602	10.00	140	4.73%	50%	7.5%	1.47	0.74	0.11
SCRPSKPB	SCRAP-PILE2	Scrap Piles	Scrap Yard Stockpiles		4.3	30	435,602	10.00	140	4.73%	50%	7.5%	1.47	0.74	0.11
SCRPSKPC	SCRAP-PILE3	Scrap Piles	Scrap Yard Stockpiles		4.3	30	435,602	10.00	140	4.73%	50%	7.5%	1.47	0.74	0.11

[1] Pile dimensions and number based on anticipated scrap yard specifications.

[2] AP-42 Section 13.2.4: Aggregate Handling and Storage Piles, Table 13.2.4-1 Typical Silt and Moisture Contents of Materials at Various Industries - Iron and Steel Production - Pellet Ore, Mean Silt Content. Fugitive dust is expected to be minimal in scrap piles.

[3] AP 42 Section 13.2.1 Paved Roads, Figure 13.2.1-2 Mean number of days with 0.01 inch or more of precipitation in the United States.

[4] Based on 2021-2023 hourly wind speed recordings for Huntington WV (HUNTINGTON TRI STATE AIRPORT, WV US (Station ID: 72425003860)

[5] PM10 is assumed equal to 50% of TSP based on U.S. EPA Control of Open Fugitive Dust Sources, Research Triangle Park, North Carolina, EPA-450/3-88-008. September 1988.

[6] $PM_{2.5}$ is assumed equal to 7.5 % of TSP U.S. EPA Background Document for Revisions to Fine Fraction Ratios Used for AP-42 Fugitive Dust Emission Factors. November 2006.

[7] Total Suspended Particulate (TSP) emission factor [assumed equivalent to PM] based on U.S. EPA *Control of Open Fugitive Dust Sources*. Research Triangle Park, North Carolina, EPA-450/3-88-008. September 1988, Page 4-17.

Calculation Basis for Wind Erosion Emissions

$$E = 1.7\left(\frac{s}{1.5}\right)\left(\frac{(365-p)}{235}\right)\left(\frac{f}{15}\right)(\text{lb/day/acre})$$

where:
s = silt content (%)
p = number of days with rainfall greater than 0.01 inch
f = (time that wind exceeds 5.36 m/s - 12 mph) (%)

Fugitive Dust from Scrap Yard Emissions Calculation

Emission Point ID	Description	Hourly Emissions[1]			Annual Emissions[2]		
		PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$
		(lb/hr)	(lb/hr)	(lb/hr)	(tpy)	(tpy)	(tpy)
SCRPSKPA	Scrap Yard Stockpiles	0.61	0.31	4.60E-02	2.69	1.34	0.20
SCRPSKPB	Scrap Yard Stockpiles	0.61	0.31	4.60E-02	2.69	1.34	0.20
SCRPSKPC	Scrap Yard Stockpiles	0.61	0.31	4.60E-02	2.69	1.34	0.20
				Total:	**8.06**	**4.03**	**0.60**

[1] Hourly Emissions (lb/hr) = Surface Area (acre) x PM Emission Factor (lb/acre-d) / 24 (hr/day)

PM Hourly Emission Rate (lb/hr) = $\frac{10 \text{ acre}}{1} \times \frac{1.47 \text{ lb}}{\text{acre-day}} \times \frac{\text{day}}{24 \text{ hr}} = 0.61 \text{ lb/hr}$

[2] Annual Emissions (tpy) = Surface Area (acre) x PM Emission Factor (lb/acre-d) x 365 (day/yr) / 2,000 (lb/ton)

PM Annual Emission Rate (tpy) = $\frac{10 \text{ acre}}{1} \times \frac{1.47 \text{ lb}}{\text{acre-day}} \times \frac{\text{ton}}{2000 \text{ lb}} \times \frac{365 \text{ day}}{\text{yr}} = 2.69 \text{ tpy}$

NSWV - PTE Calculations
Fugitive Dust from Slag Stockpiles Emissions Calculation

Stockpile Properties and Emission Factor[1]

Emission Point ID	Emission Unit ID	Description[2]	Material	Pile Area[2] (ft^2)	Pile Area[2] (acres)	Silt Content[3] (%)	Days with >0.1 inch of Rainfall[4] (days)	f (time that wind exceeds 5.36 m/s - 12 mph)[5] (%)	Ratio of PM to PM_{10}[6] (%)	Ratio of PM to $PM_{2.5}$[7] (%)	Emission Factor[8,9] PM (lb/acre-d)	PM_{10} (lb/acre-d)	$PM_{2.5}$ (lb/acre-d)
SLAGMRP	SLGSKP1	GFH-MA Hopper Pile	Slag	1,332	0.03	5.30	140.00	4.73	50%	8%	1.81	0.91	0.14
SLAGMRP	SLGSKP2	CV-MA-RS2 Radial Stacker Pile	Scrap	24,643	0.57	4.30	140.00	4.73	50%	8%	1.47	0.74	0.11
SLAGMRP	SLGSKP3	OBM-MA1 Magnet Pile	Scrap	533	0.01	4.30	140.00	4.73	50%	8%	1.47	0.74	0.11
SLAGMRP	SLGSKP4	CV-MA-RS1 Radial Stacker Pile	Slag	24,643	0.57	5.30	140.00	4.73	50%	8%	1.81	0.91	0.14
SLAGPORT	SLGSKP5	SP-OBM1 Magnet Pile	Scrap	507	0.01	4.30	140.00	4.73	50%	8%	1.47	0.74	0.11
SLAGPORT	SLGSKP6	MAG HP Magnet Pile	Scrap	169	0.00	4.30	140.00	4.73	50%	8%	1.47	0.74	0.11
SLAGPORT	SLGSKP7	SP-RS1 Radial Stacker Pile Duraberm	Slag	15,730	0.36	5.30	140.00	4.73	50%	8%	1.81	0.91	0.14
SLAGPORT	SLGSKP8	SP-RS2 Radial Stacker Pile Durabase	Slag	15,730	0.36	5.30	140.00	4.73	50%	8%	1.81	0.91	0.14
SLAGPORT	SLGSKP9	SP-RS1 Radial Stacker Pile 5 Small Chips	Slag	15,730	0.36	5.30	140.00	4.73	50%	8%	1.81	0.91	0.14
SLAGPORT	SLGSKP10	SP-RS2 Radial Stacker Pile 6 Big Chips	Slag	15,730	0.36	5.30	140.00	4.73	50%	8%	1.81	0.91	0.14
SLAGPORT	SLGSKP11	Long-Term Radial Stacker Pile Duraberm	Slag	31,459	0.72	5.30	140.00	4.73	50%	8%	1.81	0.91	0.14
SLAGPORT	SLGSKP12	Long-Term Radial Stacker Pile Durabase	Slag	31,459	0.72	5.30	140.00	4.73	50%	8%	1.81	0.91	0.14
SLAGPORT	SLGSKP13	Long-Term Radial Stacker Pile Small Chips	Slag	31,459	0.72	5.30	140.00	4.73	50%	8%	1.81	0.91	0.14
SLAGPORT	SLGSKP14	Long-Term Radial Stacker Pile Big Chips	Slag	31,459	0.72	5.30	140.00	4.73	50%	8%	1.81	0.91	0.14

[1] Stockpile emissions reflect wind erosion only with continuous use. See Bulk Material Transfer for stockpile drop point emissions.

[2] Piles based on Slag Processing Plant and Metal Recovery Plant process design. Assumes Radial Stacker surface area is equivalent to 90° of a half torus and Long-Term Piles are double the size of process piles.

[3] AP-42 Section 13.2.4: Aggregate Handling and Storage Piles, Table 13.2.4-1 Typical Silt and Moisture Contents of Materials at Various Industries - Iron and Steel Production - Pellet Ore or Slag. The mean silt content of pellet ore is assumped equivalent to scrap and fugitive dust is expected to be minimal in scrap piles. Slag silt content is based on the mean value.

[4] AP 42 Section 13.2.1 Paved Roads, Figure 13.2.1-2 Mean number of days with 0.01 inch or more of precipitation in the United States.

[5] Based on 2021-2023 hourly wind speed recordings for Huntington WV (HUNTINGTON TRI STATE AIRPORT, WV US (Station ID: 72425003860)

[6] PM10 is assumed equal to 50% of TSP based on U.S. EPA Control of Open Fugitive Dust Sources, Research Triangle Park, North Carolina, EPA-450/3-88-008. September 1988.

[7] $PM_{2.5}$ is assumed equal to 7.5 % of TSP U.S. EPA Background Document for Revisions to Fine Fraction Ratios Used for AP-42 Fugitive Dust Emission Factors. November 2006.

[8] Total Suspended Particulate (TSP) emission factor based on U.S. EPA *Control of Open Fugitive Dust Sources*. Research Triangle Park, North Carolina, EPA-450/3-88-008. September 1988, Page 4-17.

[9] Total Suspended Particulate assumed equivalent to PM

Calculation Basis for Wind Emissions from Continuously Active Piles:

$$E = 1.7\left(\frac{s}{1.5}\right)\left(\frac{(365-p)}{235}\right)\left(\frac{f}{15}\right)(\text{lb/day/acre})$$

where:
s = silt content (%)
p = number of days with rainfall greater than 0.01 inch
f = (time that wind exceeds 5.36 m/s - 12 mph) (%)

Fugitive Dust from Stockpiles Emissions Calculation

Emission Point ID	Emission Unit ID	Description	Hourly Emissions[1] PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	Annual Emissions[2] PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
SLAGMRP	SLGSKP1	GFH-MA Hopper Pile	2.31E-03	1.16E-03	1.73E-04	1.01E-02	5.06E-03	7.59E-04
SLAGMRP	SLGSKP2	CV-MA-RS2 Radial Stacker Pile	0.03	0.02	2.60E-03	0.15	0.08	0.01
SLAGMRP	SLGSKP3	OBM-MA1 Magnet Pile	7.50E-04	3.75E-04	5.63E-05	3.29E-03	1.64E-03	2.46E-04
SLAGMRP	SLGSKP4	CV-MA-RS1 Radial Stacker Pile	0.04	0.02	3.21E-03	0.19	0.09	0.01
SLAGPORT	SLGSKP5	SP-OBM1 Magnet Pile	7.14E-04	3.57E-04	5.36E-05	3.13E-03	1.56E-03	2.35E-04
SLAGPORT	SLGSKP6	MAG HP Magnet Pile	2.38E-04	1.19E-04	1.79E-05	1.04E-03	5.22E-04	7.82E-05
SLAGPORT	SLGSKP7	SP-RS1 Radial Stacker Pile Duraberm	0.03	0.01	2.05E-03	0.12	0.06	0.01
SLAGPORT	SLGSKP8	SP-RS2 Radial Stacker Pile Durabase	0.03	0.01	2.05E-03	0.12	0.06	0.01
SLAGPORT	SLGSKP9	SP-RS1 Radial Stacker Pile 5 Small Chips	0.03	0.01	2.05E-03	0.12	0.06	0.01
SLAGPORT	SLGSKP10	SP-RS2 Radial Stacker Pile 6 Big Chips	0.03	0.01	2.05E-03	0.12	0.06	0.01
SLAGPORT	SLGSKP11	Long-Term Radial Stacker Pile Duraberm	0.05	0.03	4.09E-03	0.24	0.12	0.02
SLAGPORT	SLGSKP12	Long-Term Radial Stacker Pile Durabase	0.05	0.03	4.09E-03	0.24	0.12	0.02
SLAGPORT	SLGSKP13	Long-Term Radial Stacker Pile Small Chips	0.05	0.03	4.09E-03	0.24	0.12	0.02
SLAGPORT	SLGSKP14	Long-Term Radial Stacker Pile Big Chips	0.05	0.03	4.09E-03	0.24	0.12	0.02
					Total:	**1.79**	**0.90**	**0.13**

[1] Hourly Emissions (lb/hr) = Surface Area (acre) x PM Emission Factor (lb/acre-d) / 24 (hr/day)

$$\text{PM Hourly Emission Rate (lb/hr)} = \frac{0.03\ \text{acres}}{\text{hr}} \left| \frac{1.81\ \text{lb}}{\text{acre-d}} \right| \frac{1\ \text{day}}{24\ \text{hr}} = 0.0023\ \text{lb/hr}$$

[2] Annual Emissions (tpy) = Surface Area (acre) x PM Emission Factor (lb/acre-d) x 365 (day/yr) / 2,000 (lb/ton)

$$\text{PM Annual Emission Rate (tpy)} = \frac{0.03\ \text{acres}}{\text{hr}} \left| \frac{1.81\ \text{lb}}{\text{acre-d}} \right| \frac{\text{ton}}{2000\ \text{lb}} \left| \frac{365\ \text{day}}{\text{yr}} \right. = 0.01\ \text{tpy}$$

NSWV - PTE Calculations Slag
Handling Emissions Calculation

Slag/Scrap Handling Assumptions and Inputs

Emission Point ID	Emission Unit ID	Unit	Description	Material	Throughput		Emission Factor[1,2,3]			Outdoor/ Indoor?	Control Applied	Enclosure	Control Efficiency[4] (%)	Capture Efficiency[4] (%)
					Hourly (ton/hr)	Annual (tpy)[5]	PM (lb/ton)	PM_{10} (lb/ton)	$PM_{2.5}$ (lb/ton)					
SLAGPORT	SLAG-BULK1	Slag Handling	Tractor to SP-JP-H1 Hopper	Slag	500	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGPORT	SLAG-BULK2	Slag Handling	SP-JP-H1 Hopper to SP-JP-VGF1 Vibrating Grizzly Feeder	Slag	500	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGPORT	SLAG-BULK3	Slag Handling	SP-JP-VGF1 Vibrating Grizzly Feeder to SP-JP-CR1 Crusher	Slag	158	491,320	1.20E-03	5.40E-04	1.00E-04	Outdoor	Water Spray	Covered	0.00%	0%
SLAGPORT	SLAG-BULK4	Slag Handling	SP-JP-CR1 Crusher to SP-JP-PF1 Vibrating Pan Feeder	Slag	158	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGPORT	SLAG-BULK5	Slag Handling	SP-JP-PF1 Vibrating Pan Feeder to SP-JP-CV1 Conveyor	Slag	158	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGPORT	SLAG-BULK6	Slag Handling	SP-JP-VGF1 Vibrating Grizzly Feeder to SP-JP-CV1 Conveyor	Slag	342	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGPORT	SLAG-BULK7	Slag Handling	SP-JP-CV1 Conveyor to SP-CV2 Portable Transfer Conveyor	Slag	500	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGPORT	SLAG-BULK8	Slag Handling	SP-CV2 Portable Transfer Conveyor to SP-OBM1 Magnet	Slag	567	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGPORT	HSCRAP-BULK9	Home Scrap Handling	SP-OBM1 Magnet to Stockpile	Scrap	9	78,840	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGPORT	SLAG-BULK10	Slag Handling	SP-CV2 Portable Transfer Conveyor to SP-CV3 Portable Transfer Conveyor	Slag	558	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGPORT	SLAG-BULK11	Slag Handling	SP-CV3 Portable Transfer Conveyor to MAG HP	Slag	558	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGPORT	HSCRAP-BULK12	Home Scrap Handling	MAG HP to Stockpile	Scrap	3	26,280	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGPORT	SLAG-BULK13	Slag Handling	SP-CV3 Portable Transfer Conveyor to SP-DB-SCR1 Screener	Slag	555	491,320	2.20E-03	7.40E-04	5.00E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGPORT	SLAG-BULK14	Slag Handling	Sp-DB-SCR1 Screener to SP-DB-CV5 Reversing Conveyor	Slag	210	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGPORT	SLAG-BULK15	Slag Handling	SP-DB-CV5 Conveyor to SP-RS2 Radial Stacker	Slag	210	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGPORT	SLAG-BULK16	Slag Handling	SP-RS2 Radial Stacker to Durabase	Slag	210	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGPORT	SLAG-BULK17	Slag Handling	SP-DB-SCR1 Screener to SP-DB-CV4 Conveyor	Slag	279	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGPORT	SLAG-BULK18	Slag Handling	SP-DB-CV4 Conveyor to SP-RS1 Radial Stacker	Slag	279	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGPORT	SLAG-BULK19	Slag Handling	SP-RS1 Radial Stacker to Duraberm	Slag	279	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGPORT	SLAG-BULK20	Slag Handling	SP-CP-SCR1 Screener to SP-CP-CV6 Conveyor	Slag	67	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGPORT	SLAG-BULK21	Slag Handling	SP-CP-CV6 Conveyor to SP-CP-CV7 Conveyor	Slag	67	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGPORT	SLAG-BULK22	Slag Handling	SP-CP-CV7 Conveyor to SP-CP-CR2 Cone Crusher	Slag	67	491,320	1.20E-03	5.40E-04	1.00E-04	Outdoor	Water Spray	Covered	0.00%	0%
SLAGPORT	SLAG-BULK23	Slag Handling	SP-CP-CR2 Cone Crusher to SP-CP-CV8 Conveyor	Slag	67	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGPORT	SLAG-BULK24	Slag Handling	SP-CP-CV8 Conveyor to SP-CP-CV2 Conveyor	Slag	67	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGMRP	SLAG-BULK25	Slag Handling	Front-End Loader to GFH-MA1 Hopper	Slag	500	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGMRP	SLAG-BULK26	Slag Handling	GFH-MA1 Hopper to Stockpile	Slag	10	87,600	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGMRP	SLAG-BULK27	Slag Handling	GFH-MA1 Hopper to PF-MA1 Pan Feeder	Slag	490	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGMRP	SLAG-BULK28	Slag Handling	PF-MA1 Pan Feeder to CV-MA1 Conveyor	Slag	490	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGMRP	SLAG-BULK29	Slag Handling	CV-MA1 Conveyor to MD1 Mag Drum	Slag	490	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGMRP	HSCRAP-BULK30	Home Scrap Handling	MD1 Mag Drum to FD-MA1 Feeder	Scrap	301	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGMRP	HSCRAP-BULK31	Home Scrap Handling	FD-MA1 Feeder to CV-MA2 Conveyor	Scrap	301	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGMRP	HSCRAP-BULK32	Home Scrap Handling	CV-MA2 Conveyor to SC-MA1 Screener	Scrap	301	491,320	2.20E-03	7.40E-04	5.00E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGMRP	HSCRAP-BULK33	Home Scrap Handling	SC-MA1 Screener to FD-MA3 Syntron Feeder	Scrap	20	175,200	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGMRP	HSCRAP-BULK34	Home Scrap Handling	FD-MA3 Syntron Feeder to CV-MA6 Conveyor	Scrap	20	175,200	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGMRP	HSCRAP-BULK35	Home Scrap Handling	CV-MA6 Conveyor to FE Pallet	Scrap	20	175,200	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGMRP	HSCRAP-BULK36	Home Scrap Handling	SC-MA1 Screener to CV-MA5 Conveyor	Scrap	281	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGMRP	HSCRAP-BULK37	Home Scrap Handling	CV-MA5 Conveyor to OBM-MA2 Magnet	Scrap	1	8,760	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGMRP	HSCRAP-BULK38	Home Scrap Handling	OBM-MA2 Magnet to FE Dump Bin	Scrap	1	8,760	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGMRP	HSCRAP-BULK39	Home Scrap Handling	CV-MA5 Conveyor to CV-MA-RS2 Radial Stacker	Scrap	280	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGMRP	HSCRAP-BULK40	Home Scrap Handling	CV-MA-RS2 Radial Stacker to Stockpile	Scrap	280	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGMRP	SLAG-BULK41	Slag Handling	MD1 Mag Drum to FD-MA2 Feeder	Slag	189	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGMRP	SLAG-BULK42	Slag Handling	FD-MA2 Feeder to CV-MA3 Conveyor	Slag	189	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGMRP	HSCRAP-BULK43	Home Scrap Handling	CV-MA3 Conveyor to OBM-MA1 Magnet	Scrap	4	35,040	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGMRP	HSCRAP-BULK44	Home Scrap Handling	OBM-MA1 Magnet to Stockpile	Scrap	4	35,040	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGMRP	SLAG-BULK45	Slag Handling	CV-MA3 Conveyor to CV-MA4 Conveyor	Slag	185	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGMRP	SLAG-BULK46	Slag Handling	CV-MA4 Conveyor to CV-MA-RS1 Radial Stacker	Slag	185	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGMRP	SLAG-BULK47	Slag Handling	CV-MA-RS1 Radial Stacker to Stockpile	Slag	185	491,320	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGDROP	SLAG-BULK48	Slag Handling[5]	Slag loading from Stockpiles	Slag	1.7	15,231	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Covered	0.00%	0%
SLAGDROP	SLAG-BULK49	Slag Handling[5]	Crane unload oversize product to drop ball	Slag	1.7	15,231	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Open	0.00%	0%
SLAGDROP	SLAG-BULK50	Slag Handling[5]	Drop ball crushing	Slag	1.7	15,231	1.20E-03	5.40E-04	1.00E-04	Outdoor	Water Spray	Open	0.00%	0%
SLAGDROP	SLAG-BULK51	Slag Handling[5]	Crane/Front End Loader to Trucks	Slag	1.7	15,231	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Open	0.00%	0%
SLAGDROP	SLAG-BULK52	Slag Handling[5]	Transfer of resized material to storage pile	Slag	1.7	15,231	1.40E-04	4.60E-05	1.30E-05	Outdoor	Water Spray	Open	0.00%	0%

[1] For all drop points, emission factors based on AP-42 Section 11.19.2. Table 11.19.2-2 for Conveyor Transfer Point (controlled). Drop points use the controlled factors for wet suppression included in AP-42.

[2] For screens and crushers, emission factors based on AP-42 Table 11.19.2-2, August 2004, Tertiary Crushing (controlled) or Screening (controlled). Calculations use the controlled factors for wet suppression included in AP-42.

[3] For slag loading transfer points and crushing operations, emission factors based on AP-42 Table 11.19.2-2, August 2004.

[4] Control and Capture efficiencies are considered in the AP-42 emission factors listed above, thus percent control/capture was left as zero to prevent double counting.

[5] Assumes 3.1% annual slag throughput is sent to drop ball crushing based on similar mills.

NSWV - PTE Calculations Slag
Handling Emissions Calculation

Slag/Scrap Handling Calculations

Emission Point ID	Emission Unit ID	Description of Operation	Material	Total Emissions					
				PM (lb/hr)	PM (tpy)	PM_{10} (lb/hr)	PM_{10} (tpy)	$PM_{2.5}$ (lb/hr)	$PM_{2.5}$ (tpy)
SLAGPORT	SLAG-BULK1	Tractor to SP-JP-H1 Hopper	Slag	7.00E-02	3.44E-02	2.30E-02	1.13E-02	6.50E-03	3.19E-03
SLAGPORT	SLAG-BULK2	SP-JP-H1 Hopper to SP-JP-VGF1 Vibrating Grizzly Feeder	Slag	7.00E-02	3.44E-02	2.30E-02	1.13E-02	6.50E-03	3.19E-03
SLAGPORT	SLAG-BULK3	SP-JP-VGF1 Vibrating Grizzly Feeder to SP-JP-CR1 Crusher	Slag	1.90E-01	2.95E-01	8.53E-02	1.33E-01	1.58E-02	2.46E-02
SLAGPORT	SLAG-BULK4	SP-JP-CR1 Crusher to SP-JP-PF1 Vibrating Pan Feeder	Slag	2.21E-02	3.44E-02	7.27E-03	1.13E-02	2.05E-03	3.19E-03
SLAGPORT	SLAG-BULK5	SP-JP-PF1 Vibrating Pan Feeder to SP-JP-CV1 Conveyor	Slag	2.21E-02	3.44E-02	7.27E-03	1.13E-02	2.05E-03	3.19E-03
SLAGPORT	SLAG-BULK6	SP-JP-VGF1 Vibrating Grizzly Feeder to SP-JP-CV1 Conveyor	Slag	4.79E-02	3.44E-02	1.57E-02	1.13E-02	4.45E-03	3.19E-03
SLAGPORT	SLAG-BULK7	SP-JP-CV1 Conveyor to SP-CV2 Portable Transfer Conveyor	Slag	7.00E-02	3.44E-02	2.30E-02	1.13E-02	6.50E-03	3.19E-03
SLAGPORT	SLAG-BULK8	SP-CV2 Portable Transfer Conveyor to SP-OBM1 Magnet	Slag	7.94E-02	3.44E-02	2.61E-02	1.13E-02	7.37E-03	3.19E-03
SLAGPORT	HSCRAP-BULK9	SP-OBM1 Magnet to Stockpile	Scrap	1.26E-03	5.52E-03	4.14E-04	1.81E-03	1.17E-04	5.12E-04
SLAGPORT	SLAG-BULK10	SP-CV2 Portable Transfer Conveyor to SP-CV3 Portable Transfer Conveyor	Slag	7.81E-02	3.44E-02	2.57E-02	1.13E-02	7.25E-03	3.19E-03
SLAGPORT	SLAG-BULK11	SP-CV3 Portable Transfer Conveyor to MAG HP	Slag	7.81E-02	3.44E-02	2.57E-02	1.13E-02	7.25E-03	3.19E-03
SLAGPORT	HSCRAP-BULK12	MAG HP to Stockpile	Scrap	4.20E-04	1.84E-03	1.38E-04	6.04E-04	3.90E-05	1.71E-04
SLAGPORT	SLAG-BULK13	SP-CV3 Portable Transfer Conveyor to SP-DB-SCR1 Screener	Slag	1.22E+00	5.40E-01	4.11E-01	1.82E-01	2.78E-02	1.23E-02
SLAGPORT	SLAG-BULK14	Sp-DB-SCR1 Screener to SP-DB-CV5 Reversing Conveyor	Slag	2.94E-02	3.44E-02	9.66E-03	1.13E-02	2.73E-03	3.19E-03
SLAGPORT	SLAG-BULK15	SP-DB-CV5 Conveyor to SP-RS2 Radial Stacker	Slag	2.94E-02	3.44E-02	9.66E-03	1.13E-02	2.73E-03	3.19E-03
SLAGPORT	SLAG-BULK16	SP-RS2 Radial Stacker to Durabase	Slag	2.94E-02	3.44E-02	9.66E-03	1.13E-02	2.73E-03	3.19E-03
SLAGPORT	SLAG-BULK17	SP-DB-SCR1 Screener to SP-DB-CV4 Conveyor	Slag	3.91E-02	3.44E-02	1.28E-02	1.13E-02	3.63E-03	3.19E-03
SLAGPORT	SLAG-BULK18	SP-DB-CV4 Conveyor to SP-RS1 Radial Stacker	Slag	3.91E-02	3.44E-02	1.28E-02	1.13E-02	3.63E-03	3.19E-03
SLAGPORT	SLAG-BULK19	SP-RS1 Radial Stacker to Duraberm	Slag	3.91E-02	3.44E-02	1.28E-02	1.13E-02	3.63E-03	3.19E-03
SLAGPORT	SLAG-BULK20	SP-CP-SCR1 Screener to SP-CP-CV6 Conveyor	Slag	9.38E-03	3.44E-02	3.08E-03	1.13E-02	8.71E-04	3.19E-03
SLAGPORT	SLAG-BULK21	SP-CP-CV6 Conveyor to SP-CP-CV7 Conveyor	Slag	9.38E-03	3.44E-02	3.08E-03	1.13E-02	8.71E-04	3.19E-03
SLAGPORT	SLAG-BULK22	SP-CP-CV7 Conveyor to SP-CP-CR2 Cone Crusher	Slag	8.04E-02	2.95E-01	3.62E-02	1.33E-01	6.70E-03	2.46E-02
SLAGPORT	SLAG-BULK23	SP-CP-CR2 Cone Crusher to SP-CP-CV8 Conveyor	Slag	9.38E-03	3.44E-02	3.08E-03	1.13E-02	8.71E-04	3.19E-03
SLAGPORT	SLAG-BULK24	SP-CP-CV8 Conveyor to SP-CP-CV2 Conveyor	Slag	9.38E-03	3.44E-02	3.08E-03	1.13E-02	8.71E-04	3.19E-03
SLAGMRP	SLAG-BULK25	Front-End Loader to GFH-MA1 Hopper	Slag	7.00E-02	3.44E-02	2.30E-02	1.13E-02	6.50E-03	3.19E-03
SLAGMRP	SLAG-BULK26	GFH-MA1 Hopper to Stockpile	Slag	1.40E-03	6.13E-03	4.60E-04	2.01E-03	1.30E-04	5.69E-04
SLAGMRP	SLAG-BULK27	GFH-MA1 Hopper to PF-MA1 Pan Feeder	Slag	6.86E-02	3.44E-02	2.25E-02	1.13E-02	6.37E-03	3.19E-03
SLAGMRP	SLAG-BULK28	PF-MA1 Pan Feeder to CV-MA1 Conveyor	Slag	6.86E-02	3.44E-02	2.25E-02	1.13E-02	6.37E-03	3.19E-03
SLAGMRP	SLAG-BULK29	CV-MA1 Conveyor to MD1 Mag Drum	Slag	6.86E-02	3.44E-02	2.25E-02	1.13E-02	6.37E-03	3.19E-03
SLAGMRP	HSCRAP-BULK30	MD1 Mag Drum to FD-MA1 Feeder	Scrap	4.21E-02	3.44E-02	1.38E-02	1.13E-02	3.91E-03	3.19E-03
SLAGMRP	HSCRAP-BULK31	FD-MA1 Feeder to CV-MA2 Conveyor	Scrap	4.21E-02	3.44E-02	1.38E-02	1.13E-02	3.91E-03	3.19E-03
SLAGMRP	HSCRAP-BULK32	CV-MA2 Conveyor to SC-MA1 Screener	Scrap	6.62E-01	5.40E-01	2.23E-01	1.82E-01	1.51E-02	1.23E-02
SLAGMRP	HSCRAP-BULK33	SC-MA1 Screener to FD-MA3 Syntron Feeder	Scrap	2.80E-03	1.23E-02	9.20E-04	4.03E-03	2.60E-04	1.14E-03
SLAGMRP	HSCRAP-BULK34	FD-MA3 Syntron Feeder to CV-MA6 Conveyor	Scrap	2.80E-03	1.23E-02	9.20E-04	4.03E-03	2.60E-04	1.14E-03
SLAGMRP	HSCRAP-BULK35	CV-MA6 Conveyor to FE Pallet	Scrap	2.80E-03	1.23E-02	9.20E-04	4.03E-03	2.60E-04	1.14E-03
SLAGMRP	HSCRAP-BULK36	SC-MA1 Screener to CV-MA5 Conveyor	Scrap	3.93E-02	3.44E-02	1.29E-02	1.13E-02	3.65E-03	3.19E-03
SLAGMRP	HSCRAP-BULK37	CV-MA5 Conveyor to OBM-MA2 Magnet	Scrap	1.40E-04	6.13E-04	4.60E-05	2.01E-04	1.30E-05	5.69E-05
SLAGMRP	HSCRAP-BULK38	OBM-MA2 Magnet to FE Dump Bin	Scrap	1.40E-04	6.13E-04	4.60E-05	2.01E-04	1.30E-05	5.69E-05
SLAGMRP	HSCRAP-BULK39	CV-MA5 Conveyor to CV-MA-RS2 Radial Stacker	Scrap	3.92E-02	3.44E-02	1.29E-02	1.13E-02	3.64E-03	3.19E-03
SLAGMRP	HSCRAP-BULK40	CV-MA-RS2 Radial Stacker to Stockpile	Scrap	3.92E-02	3.44E-02	1.29E-02	1.13E-02	3.64E-03	3.19E-03
SLAGMRP	SLAG-BULK41	MD1 Mag Drum to FD-MA2 Feeder	Slag	2.65E-02	3.44E-02	8.69E-03	1.13E-02	2.46E-03	3.19E-03
SLAGMRP	SLAG-BULK42	FD-MA2 Feeder to CV-MA3 Conveyor	Slag	2.65E-02	3.44E-02	8.69E-03	1.13E-02	2.46E-03	3.19E-03
SLAGMRP	HSCRAP-BULK43	CV-MA3 Conveyor to OBM-MA1 Magnet	Scrap	5.60E-04	2.45E-03	1.84E-04	8.06E-04	5.20E-05	2.28E-04
SLAGMRP	HSCRAP-BULK44	OBM-MA1 Magnet to Stockpile	Scrap	5.60E-04	2.45E-03	1.84E-04	8.06E-04	5.20E-05	2.28E-04
SLAGMRP	SLAG-BULK45	CV-MA3 Conveyor to CV-MA4 Conveyor	Slag	2.59E-02	3.44E-02	8.51E-03	1.13E-02	2.41E-03	3.19E-03
SLAGMRP	SLAG-BULK46	CV-MA4 Conveyor to CV-MA-RS1 Radial Stacker	Slag	2.59E-02	3.44E-02	8.51E-03	1.13E-02	2.41E-03	3.19E-03
SLAGMRP	SLAG-BULK47	CV-MA-RS1 Radial Stacker to Stockpile	Slag	2.59E-02	3.44E-02	8.51E-03	1.13E-02	2.41E-03	3.19E-03
SLAGDROP	SLAG-BULK48	Slag loading from Stockpiles	Slag	2.43E-04	1.07E-03	8.00E-05	3.50E-04	2.26E-05	9.90E-05
SLAGDROP	SLAG-BULK49	Crane unload oversize product to drop ball	Slag	2.43E-04	1.07E-03	8.00E-05	3.50E-04	2.26E-05	9.90E-05
SLAGDROP	SLAG-BULK50	Drop ball crushing	Slag	2.09E-03	9.14E-03	9.39E-04	4.11E-03	1.74E-04	7.62E-04
SLAGDROP	SLAG-BULK51	Crane/Front End Loader to Trucks	Slag	2.43E-04	1.07E-03	8.00E-05	3.50E-04	2.26E-05	9.90E-05
SLAGDROP	SLAG-BULK52	Transfer of resized material to storage pile	Slag	2.43E-04	1.07E-03	8.00E-05	3.50E-04	2.26E-05	9.90E-05
			Total Slag and Scrap Transfers	**3.56**	**2.88**	**1.22**	**1.03**	**0.20**	**0.19**

NSWV - PTE Calculations
Fugitive Dust from Bulk Material Transfer Emissions Calculation

Material	Percent of Product[1] (%)	Total Throughput (tpy)
Scrap Steel	100%	3,309,000
Slag	100%	491,320
Scrap Substitute	100%	2,481,750
Lime (LMF)	6%	168,000
Lime (EAF)	94%	
Alloy (LMF)	26%	62,000
Alloy (EAF)	74%	
Carbon (LMF)	0.05%	85,485
Carbon (EAF)	95%	

[1]Percentages are representative of the split for each material between the EAF and LMF

Bulk Materials Transfer/Process Assumptions and Inputs

Emission Point ID	Emission Unit ID	Unit	Description	Material	Throughput			Emission Factor[1,2]			Outdoor/ Indoor?	Emission Controls	Enclosure	Capture Efficiency (%)
					Hourly (ton/hr)	Daily (ton/day)	Annual (tpy)	PM (lb/ton)	PM_{10} (lb/ton)	$PM_{2.5}$ (lb/ton)[3]				
SUBSUNL	RAW-FEED1	Scrap Substitute Handling	Crane Unloading to Dock Scrap Substitute Bin	Scrap Substitute	455	1792	2,481,750	3.00E-03	1.10E-03	3.11E-04	Outdoor	BV-0011-0016	Open	75.00%
SUBSILOF	RAW-FEED2	Scrap Substitute Handling	Dock Scrap Substitute Bin to NBC01 normal belt conveyor	Scrap Substitute	455	1792	2,481,750	3.00E-03	1.10E-03	3.11E-04	Outdoor	BV-003	Open	75.00%
BULKMH	RAW-FEED3	EAF Handling	Unnamed feed into UDH01 unloading hopper	Lime, Alloy, Carbon	240	5,760	285,312	3.00E-03	1.10E-03	3.11E-04	Outdoor	EXT Baghouse	Open	95.00%
BULKMH	RAW-FEED4	EAF Handling	Unnamed feed into UDH02 unloading hopper											
BULKMH	RAW-FEED5	EAF Handling	Unnamed feed into UDH03 unloading hopper											
BULKMH	RAW-FEED6	LMF Handling	Unnamed feed into UDH04 unloading hopper	Lime, Alloy, Carbon	240	5,760	26,156	3.00E-03	1.10E-03	3.11E-04	Outdoor	EXT Baghouse	Open	95.00%
BULKMH	RAW-FEED7	LMF Handling	Unnamed feed into UDH05 unloading hopper											
BULKMH	RAW-FEED8	LMF Handling	Unnamed feed into UDH06 unloading hopper											
BULKMH	EAF-FEED1	EAF Handling	UDH01 unloading hopper to RBC10 reversible belt conveyor	Lime, Alloy, Carbon	240	5,760	285,312	3.00E-03	1.10E-03	3.11E-04	Outdoor	EXT Baghouse	Covered	95.00%
BULKMH	EAF-FEED2	EAF Handling	UDH02 unloading hopper to RBC10 reversible belt conveyor											
BULKMH	EAF-FEED3	EAF Handling	UDH03 unloading hopper to RBC10 reversible belt conveyor											
BULKMH	EAF-FEED4	EAF Handling	RBC10 reversible belt conveyor to EBC11 elevating belt conveyor	Lime, Alloy, Carbon	240	5,760	285,312	3.00E-03	1.10E-03	3.11E-04	Outdoor	EXT Baghouse	Covered	95.00%
BULKMH	EAF-FEED5	EAF Handling	EBC11 elevating belt conveyor to WBC11 weighing belt conveyor	Lime, Alloy, Carbon	240	5,760	285,312	3.00E-03	1.10E-03	3.11E-04	Outdoor	EXT Baghouse	Covered	95.00%
BULKMH	EAF-FEED6	EAF Handling	WBC11 weighing belt conveyor to RSC11 reversible shuttle belt conveyor	Lime, Alloy, Carbon	240	5,760	285,312	3.00E-03	1.10E-03	3.11E-04	Outdoor	EXT Baghouse	Covered	95.00%
MSMVA through MSMVF	EAF-FEED7	EAF Handling	RSC11 reversible shuttle belt conveyor to SBN11-SBN22 daily bins	Lime, Alloy, Carbon	240	5,760	285,312	3.00E-03	1.10E-03	3.11E-04	Indoor	BV-111-122	Covered	95.00%
MSMVA through MSMVF	EAF-FEED8	EAF Handling	SBN11 daily bin to DBC11 dosing and weighing belt conveyor	Lime, Carbon	27	657	239,628	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	EAF-FEED9	EAF Handling	SBN12 daily bin to DBC12 dosing and weighing belt conveyor	Lime, Carbon	27	657	239,628	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	EAF-FEED10	EAF Handling	SBN13 daily bin to DBC13 dosing and weighing belt conveyor	Lime, Carbon	27	657	239,628	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	EAF-FEED11	EAF Handling	SBN14 daily bin to DBC14 dosing and weighing belt conveyor	Lime, Carbon	27	657	239,628	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	EAF-FEED12	EAF Handling	DBC11-DBC14 dosing and weighing belt conveyor to RBC11 reversible belt conveyor	Lime, Carbon	27	657	239,628	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	EAF-FEED13	EAF Handling	SBN15-SBN16 daily bins to FWH11 fixed weighing hopper	Alloys	5	125	45,684	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	EAF-FEED14	EAF Handling	FWH11 fixed weighing hopper to RBC11 reversible belt conveyor	Alloys	5	125	45,684	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	EAF-FEED15	EAF Handling	SBN17 daily bin to DBC15 dosing and weighing belt conveyor	Lime, Carbon	27	657	239,628	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	EAF-FEED16	EAF Handling	SBN18 daily bin to DBC16 dosing and weighing belt conveyor	Lime, Carbon	27	657	239,628	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	EAF-FEED17	EAF Handling	SBN19 daily bin to DBC17 dosing and weighing belt conveyor	Lime, Carbon	27	657	239,628	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	EAF-FEED18	EAF Handling	SBN20 daily bin to DBC18 dosing and weighing belt conveyor	Lime, Carbon	27	657	239,628	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	EAF-FEED19	EAF Handling	DBC15-DBC18 dosing and weighing belt conveyor to RBC12 reversible belt conveyor	Lime, Carbon	27	657	239,628	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	EAF-FEED20	EAF Handling	SBN21-SBN22 daily bins to FWH12 fixed weighing hopper	Alloys	5	125	45,684	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	EAF-FEED21	EAF Handling	FWH12 fixed weighing hopper to RBC12 reversible belt conveyor	Alloys	5	125	45,684	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	EAF-FEED22	EAF Handling	RBC11 reversible belt conveyor to EBC12 elevating belt conveyor	Lime, Alloy, Carbon	33	782	285,312	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	EAF-FEED23	EAF Handling	RBC12 reversible belt conveyor to EBC13 elevating belt conveyor	Lime, Alloy, Carbon	33	782	285,312	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	EAF-FEED24	EAF Handling	EBC12 elevating belt conveyor to NBC12 normal belt conveyor	Lime, Alloy, Carbon	33	782	285,312	3.00E-03	1.10E-03	3.11E-04	Indoor	BV-123-BV-124	Covered	99.50%
MSMVA through MSMVF	EAF-FEED25	EAF Handling	EBC13 elevating belt conveyor to NBC13 normal belt conveyor	Lime, Alloy, Carbon	33	782	285,312	3.00E-03	1.10E-03	3.11E-04	Indoor	BV-125-BV-126	Covered	99.50%
SUBSILOF	SUBS-FEED1	Scrap Substitute Handling	NBC01 normal belt conveyor to SBM01-SBM04 silos	Scrap Substitute	455	1792	3,985,800	3.00E-03	1.10E-03	3.11E-04	Outdoor	BV-301-BV-304	Covered	95.00%
SUBSILOF	SUBS-FEED2	Scrap Substitute Handling	SBM01-SBM04 silos to NBC02 normal belt conveyor	Scrap Substitute	455	1792	3,985,800	3.00E-03	1.10E-03	3.11E-04	Outdoor	BV-305-BV-308	Covered	95.00%
SUBSFUG	SUBS-FEED3	Scrap Substitute Handling	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment	Scrap Substitute	283	1792	2,481,750	3.00E-03	1.10E-03	3.11E-04	Outdoor	BV-309-BV-313	Covered	95.00%
SUBSFUG	SUBS-FEED4	Scrap Substitute Handling	SBN01-SBN02 bin extraction equipment to WBC02 weighing belt conveyor	Scrap Substitute	283	1792	2,481,750	3.00E-03	1.10E-03	3.11E-04	Outdoor	BV-314-BV-315	Covered	95.00%
SUBSFUG	SUBS-FEED5	Scrap Substitute Handling	SBN03-SBN04 bin extraction equipment to WBC01 weighing belt conveyor	Scrap Substitute	283	1792	2,481,750	3.00E-03	1.10E-03	3.11E-04	Outdoor	BV-316-BV-317	Covered	95.00%
MSMVA through MSMVF	SUBS-FEED6	Scrap Substitute Handling	WBC02 weighing belt conveyor to NBC13 for EAF #2 Feed	Scrap Substitute	283	1792	2,481,750	3.00E-03	1.10E-03	3.11E-04	Indoor	BV-318	Covered	95.00%
MSMVA through MSMVF	SUBS-FEED7	Scrap Substitute Handling	WBC01 weighing belt conveyor to NBC12 for EAF #1 Feed	Scrap Substitute	283	1792	2,481,750	3.00E-03	1.10E-03	3.11E-04	Indoor	BV-319	Covered	95.00%

NSWV - PTE Calculations
Fugitive Dust from Bulk Material Transfer Emissions Calculation

Material	Percent of Product[1] (%)	Total Throughput (tpy)
Scrap Steel	100%	3,309,000
Slag	100%	491,320
Scrap Substitute	100%	2,481,750
Lime (LMF)	6%	168,000
Lime (EAF)	94%	
Alloy (LMF)	26%	62,000
Alloy (EAF)	74%	
Carbon (LMF)	0.05%	85,485
Carbon (EAF)	95%	

[1]Percentages are representative of the split for each material between the EAF and LMF

Bulk Materials Transfer/Process Assumptions and Inputs

Emission Point ID	Emission Unit ID	Unit	Description	Material	Throughput			Emission Factor[1,2]			Outdoor/ Indoor?	Emission Controls	Enclosure	Capture Efficiency (%)
					Hourly (ton/hr)	Daily (ton/day)	Annual (tpy)	PM (lb/ton)	PM_{10} (lb/ton)	$PM_{2.5}$ (lb/ton)[3]				
BULKMH	LMF-FEED1	LMF Handling	UDH04 unloading hopper to RBC20 reversible belt conveyor	Alloys, Carbon, Lime	9	215	78,469	3.00E-03	1.10E-03	3.11E-04	Outdoor	EXT Baghouse	Open	95.00%
BULKMH	LMF-FEED2	LMF Handling	UDH05 unloading hopper to RBC20 reversible belt conveyor											
BULKMH	LMF-FEED3	LMF Handling	UDH06 unloading hopper to RBC20 reversible belt conveyor											
BULKMH	LMF-FEED4	LMF Handling	RBC20 reversible belt conveyor to EBC21 elevating belt conveyor	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Outdoor	EXT Baghouse	Covered	95.00%
BULKMH	LMF-FEED5	LMF Handling	EBC21 elevating belt conveyor to WBC21 weighing belt conveyor	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Outdoor	EXT Baghouse	Covered	95.00%
MSMVA through MSMVF	LMF-FEED6	LMF Handling	WBC21 weighing belt conveyor to RSC21 reversible shuttle belt conveyor	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	LMF-FEED7	LMF Handling	RSC21 reversible shuttle belt conveyor to SBN31-58 bin extraction equipment	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	BV-400-BV-427	Open	99.50%
MSMVA through MSMVF	LMF-FEED8	LMF Handling	SBN31-SBN36 bin extraction equipment to FWH21 fixed weighing hopper	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Open	99.50%
MSMVA through MSMVF	LMF-FEED9	LMF Handling	SBN37-SBN40 bin extraction equipment to FWH22 fixed weighing hopper	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Open	99.50%
MSMVA through MSMVF	LMF-FEED10	LMF Handling	SBN41-SBN44 bin extraction equipment to FWH23 fixed weighing hopper	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Open	99.50%
MSMVA through MSMVF	LMF-FEED11	LMF Handling	SBN45-SBN50 bin extraction equipment to FWH24 fixed weighing hopper	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Open	99.50%
MSMVA through MSMVF	LMF-FEED12	LMF Handling	SBN51-SBN54 bin extraction equipment to FWH25 fixed weighing hopper	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Open	99.50%
MSMVA through MSMVF	LMF-FEED13	LMF Handling	SBN55-SBN58 bin extraction equipment to FWH26 fixed weighing hopper	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Open	99.50%
MSMVA through MSMVF	LMF-FEED14	LMF Handling	FWH21-FWH23 fixed weighing hopper to RBC21 reversible belt conveyor	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	LMF-FEED15	LMF Handling	FWH24-FWH26 fixed weighing hopper to RBC22 reversible belt conveyor	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	LMF-FEED16	LMF Handling	RBC21 reversible belt conveyor to EBC22 elevating belt conveyor	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	LMF-FEED17	LMF Handling	EBC22 elevating belt conveyor to NBC22 normal belt conveyor	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	LMF-FEED18	LMF Handling	NBC22 normal belt conveyor to RBC23 reversible belt conveyor	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	LMF-FEED19	LMF Handling	RBC23 reversible belt conveyor to NBC24 normal belt conveyor	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	LMF-FEED20	LMF Handling	NBC24 normal belt conveyor to SHP21-SHP23 surge hopper	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Covered	95.00%
MSMVA through MSMVF	LMF-FEED21	LMF Handling	SHP21-SHP23 surge hopper to LF #1.1 ladle furnace	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Covered	95.00%
MSMVA through MSMVF	LMF-FEED22	LMF Handling	NBC22 normal belt conveyor to NBC25 normal belt conveyor	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	LMF-FEED23	LMF Handling	NBC25 normal belt conveyor to SHP24-SHP26 surge hopper	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Covered	95.00%
MSMVA through MSMVF	LMF-FEED24	LMF Handling	SHP24-SHP26 surge hopper to LF #1.2 ladle furnace	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Covered	95.00%
MSMVA through MSMVF	LMF-FEED25	LMF Handling	RBC23 reversible belt conveyor to SHP27-SHP28 surge hopper	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Covered	95.00%
MSMVA through MSMVF	LMF-FEED26	LMF Handling	SHP27-SHP28 surge hopper to VCG21 vibrating channel	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Covered	95.00%
MSMVA through MSMVF	LMF-FEED27	LMF Handling	VCG21 vibrating channel to VD #1 vacuum degasser	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Covered	95.00%
MSMVA through MSMVF	LMF-FEED28	LMF Handling	From main crane to SBN59-SBN62 bin extraction equipment	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Open	95.00%
MSMVA through MSMVF	LMF-FEED29	LMF Handling	From main crane to SBN63-SBN66 bin extraction equipment	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Open	95.00%
MSMVA through MSMVF	LMF-FEED30	LMF Handling	SBN59-SBN62 bin extraction equipment to TWH21 traveling weighing hopper	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Covered	95.00%
MSMVA through MSMVF	LMF-FEED31	LMF Handling	SBN63-SBN66 bin extraction equipment to TWH22 traveling weighing hopper	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Covered	95.00%
MSMVA through MSMVF	LMF-FEED32	LMF Handling	TWH21 traveling weighing hopper to LF #1.1 ladle furnace	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Covered	95.00%
MSMVA through MSMVF	LMF-FEED33	LMF Handling	TWH22 traveling weighing hopper to LF #1.2 ladle furnace	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Covered	95.00%
MSMVA through MSMVF	LMF-FEED34	LMF Handling	RBC22 reversible belt conveyor to EBC23 elevating belt conveyor	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	LMF-FEED35	LMF Handling	EBC23 elevating belt conveyor to NBC23 normal belt conveyor	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	LMF-FEED36	LMF Handling	NBC23 normal belt conveyor to NBC27 normal belt conveyor	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	LMF-FEED37	LMF Handling	NBC27 normal belt conveyor to SHP32-SHP34 surge hopper	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Covered	95.00%
MSMVA through MSMVF	LMF-FEED38	LMF Handling	SHP32-SHP34 surge hopper to LF #2.2 ladle furnace	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Covered	95.00%
MSMVA through MSMVF	LMF-FEED39	LMF Handling	NBC23 normal belt conveyor to RBC24 reversible belt conveyor	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	LMF-FEED40	LMF Handling	RBC24 reversible belt conveyor to SHP35-SHP36 surge hopper	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Covered	95.00%
MSMVA through MSMVF	LMF-FEED41	LMF Handling	SHP35-SHP36 surge hopper to VCG21 vibrating channel	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Covered	95.00%
MSMVA through MSMVF	LMF-FEED42	LMF Handling	VCG21 vibrating channel to VD #1 vacuum degasser	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Covered	95.00%
MSMVA through MSMVF	LMF-FEED43	LMF Handling	RBC24 reversible belt conveyor to NBC26 normal belt conveyor	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	INT Baghouse	Covered	99.50%
MSMVA through MSMVF	LMF-FEED44	LMF Handling	NBC26 normal belt conveyor to SHP29-SHP31 surge hopper	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Covered	95.00%
MSMVA through MSMVF	LMF-FEED45	LMF Handling	SHP29-SHP31 surger hopper to LF #2.1 ladle furnace	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Covered	95.00%
MSMVA through MSMVF	LMF-FEED46	LMF Handling	From main crane to SBN67-SBN70 bin extraction equipment	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Open	95.00%
MSMVA through MSMVF	LMF-FEED47	LMF Handling	From main crane to SBN71-SBN74 bin extraction equipment	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Open	95.00%
MSMVA through MSMVF	LMF-FEED48	LMF Handling	SBN67-SBN70 bin extraction equipment to TWH23 traveling weighing hopper	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Covered	95.00%
MSMVA through MSMVF	LMF-FEED49	LMF Handling	SBN71-SBN74 bin extraction equipment to TWH24 traveling weighing hopper	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Covered	95.00%
MSMVA through MSMVF	LMF-FEED50	LMF Handling	TWH23 traveling weighing hopper to LF #2.1 ladle furnace	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Covered	95.00%
MSMVA through MSMVF	LMF-FEED51	LMF Handling	TWH24 traveling weighing hopper to LF #2.2 ladle furnace	Alloys, Carbon, Lime	3	72	26,156	3.00E-03	1.10E-03	3.11E-04	Indoor	Canopy Hood	Covered	95.00%

[1] For all drop points, emission factors based on AP-42 Section 11.19.2. Drop points use uncontrolled factors.

[2] Control and Capture efficiencies are representative of the material transfer baghouses, building capture, and melt shop canopy hood.

[3] PM distribution for uncontrolled emission factors assumed to be equivalent to the PM distribution for controlled emission factors presented in AP-42 Section 11.19.2.

Bulk Materials Transfer/Process Calculations

Emission Point ID	Emission Unit ID	Description of Operation	Material	Max Hourly Rate (tph)	Max Daily Rate (ton/day)	Annual Rate (tpy)	Location	Control Option	Capture Efficiency[2]	Emission Factor[1,2]			Total Emissions							
										PM (lb/ton)	PM_{10} (lb/ton)	$PM_{2.5}$ (lb/ton)	PM (lb/hr)	PM (lb/day)	PM (tpy)	PM_{10} (lb/hr)	PM_{10} (lb/day)	PM_{10} (tpy)	$PM_{2.5}$ (lb/hr)	$PM_{2.5}$ (lb/day)	$PM_{2.5}$ (tpy)
SUBSUNL	RAW-FEED1	Crane Unloading to Dock Scrap Substitute Bin	Scrap Substitute	455	1,792	2,481,750	Outdoor	BV-0011-0016	0.75	3.00E-03	1.10E-03	3.11E-04	3.41E-01	1.34	9.31E-01	1.25E-01	0.49	3.41E-01	3.54E-02	0.14	9.64E-02
SUBSILOF	RAW-FEED2	Dock Scrap Substitute Bin to NBC01 normal belt conveyor	Scrap Substitute	455	1,792	2,481,750	Outdoor	BV-003	0.75	3.00E-03	1.10E-03	3.11E-04	3.41E-01	1.34	9.31E-01	1.25E-01	0.49	3.41E-01	3.54E-02	0.14	9.64E-02
BULKMH	RAW-FEED3	Unnamed feed into UDH01 unloading hopper																			
BULKMH	RAW-FEED4	Unnamed feed into UDH02 unloading hopper		240	5,760	285,312															
BULKMH	RAW-FEED5	Unnamed feed into UDH03 unloading hopper	Lime, Alloy, Carbon				Outdoor	EXT Baghouse	0.95	3.00E-03	1.10E-03	3.11E-04	3.60E-02	0.86	2.14E-02	1.32E-02	0.32	7.85E-03	3.73E-03	0.09	2.22E-03
BULKMH	RAW-FEED6	Unnamed feed into UDH04 unloading hopper																			
BULKMH	RAW-FEED7	Unnamed feed into UDH05 unloading hopper		240	5,760	26,156															
BULKMH	RAW-FEED8	Unnamed feed into UDH06 unloading hopper	Lime, Alloy, Carbon				Outdoor	EXT Baghouse	0.95	3.00E-03	1.10E-03	3.11E-04	3.60E-02	0.86	1.96E-03	1.32E-02	0.32	7.19E-04	3.73E-03	0.09	2.03E-04
BULKMH	EAF-FEED1	UDH01 unloading hopper to RBC10 reversible belt conveyor																			
BULKMH	EAF-FEED2	UDH02 unloading hopper to RBC10 reversible belt conveyor																			
BULKMH	EAF-FEED3	UDH03 unloading hopper to RBC10 reversible belt conveyor	Lime, Alloy, Carbon	240	5,760	285,312	Outdoor	EXT Baghouse	0.95	3.00E-03	1.10E-03	3.11E-04	3.60E-02	0.86	2.14E-02	1.32E-02	0.32	7.85E-03	3.73E-03	0.09	2.22E-03
BULKMH	EAF-FEED4	RBC10 reversible belt conveyor to EBC11 elevating belt conveyor	Lime, Alloy, Carbon	240	5,760	285,312	Outdoor	EXT Baghouse	0.95	3.00E-03	1.10E-03	3.11E-04	3.60E-02	0.86	2.14E-02	1.32E-02	0.32	7.85E-03	3.73E-03	0.09	2.22E-03
BULKMH	EAF-FEED5	EBC11 elevating belt conveyor to WBC11 weighing belt conveyor	Lime, Alloy, Carbon	240	5,760	285,312	Outdoor	EXT Baghouse	0.95	3.00E-03	1.10E-03	3.11E-04	3.60E-02	0.86	2.14E-02	1.32E-02	0.32	7.85E-03	3.73E-03	0.09	2.22E-03
BULKMH	EAF-FEED6	WBC11 weighing belt conveyor to RSC11 reversible shuttle belt conveyor	Lime, Alloy, Carbon	240	5,760	285,312	Outdoor	INT Baghouse	0.95	3.00E-03	1.10E-03	3.11E-04	3.60E-02	0.86	2.14E-02	1.32E-02	0.32	7.85E-03	3.73E-03	0.09	2.22E-03
MSMVA through MSMVF	EAF-FEED7	RSC11 reversible shuttle belt conveyor to SBN11-SBN22 daily bins	Lime, Alloy, Carbon	240	5,760	285,312	Indoor	BV-111-122	0.95	3.00E-03	1.10E-03	3.11E-04	3.60E-02	0.86	2.14E-02	1.32E-02	0.32	7.85E-03	3.73E-03	0.09	2.22E-03
MSMVA through MSMVF	EAF-FEED8	SBN11 daily bin to DBC11 dosing and weighing belt conveyor	Lime, Carbon	27	657	239,628	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.10E-04	0.01	1.80E-03	1.50E-04	3.61E-03	6.59E-04	4.25E-05	1.02E-03	1.86E-04
MSMVA through MSMVF	EAF-FEED9	SBN12 daily bin to DBC12 dosing and weighing belt conveyor	Lime, Carbon	27	657	239,628	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.10E-04	0.01	1.80E-03	1.50E-04	3.61E-03	6.59E-04	4.25E-05	1.02E-03	1.86E-04
MSMVA through MSMVF	EAF-FEED10	SBN13 daily bin to DBC13 dosing and weighing belt conveyor	Lime, Carbon	27	657	239,628	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.10E-04	0.01	1.80E-03	1.50E-04	3.61E-03	6.59E-04	4.25E-05	1.02E-03	1.86E-04
MSMVA through MSMVF	EAF-FEED11	SBN14 daily bin to DBC14 dosing and weighing belt conveyor	Lime, Carbon	27	657	239,628	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.10E-04	0.01	1.80E-03	1.50E-04	3.61E-03	6.59E-04	4.25E-05	1.02E-03	1.86E-04
MSMVA through MSMVF	EAF-FEED12	DBC11-DBC14 dosing and weighing belt conveyor to RBC11 reversible belt conveyor	Lime, Carbon	27	657	239,628	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.10E-04	0.01	1.80E-03	1.50E-04	3.61E-03	6.59E-04	4.25E-05	1.02E-03	1.86E-04
MSMVA through MSMVF	EAF-FEED13	SBN15-SBN16 daily bins to FWH11 fixed weighing hopper	Alloys	5	125	45,684	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	7.82E-05	0.00	3.43E-04	2.87E-05	6.88E-04	1.26E-04	8.11E-06	1.95E-04	3.55E-05
MSMVA through MSMVF	EAF-FEED14	FWH11 fixed weighing hopper to RBC11 reversible belt conveyor	Alloys	5	125	45,684	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	7.82E-05	0.00	3.43E-04	2.87E-05	6.88E-04	1.26E-04	8.11E-06	1.95E-04	3.55E-05
MSMVA through MSMVF	EAF-FEED15	SBN17 daily bin to DBC15 dosing and weighing belt conveyor	Lime, Carbon	27	657	239,628	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.10E-04	0.01	1.80E-03	1.50E-04	3.61E-03	6.59E-04	4.25E-05	1.02E-03	1.86E-04
MSMVA through MSMVF	EAF-FEED16	SBN18 daily bin to DBC16 dosing and weighing belt conveyor	Lime, Carbon	27	657	239,628	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.10E-04	0.01	1.80E-03	1.50E-04	3.61E-03	6.59E-04	4.25E-05	1.02E-03	1.86E-04
MSMVA through MSMVF	EAF-FEED17	SBN19 daily bin to DBC17 dosing and weighing belt conveyor	Lime, Carbon	27	657	239,628	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.10E-04	0.01	1.80E-03	1.50E-04	3.61E-03	6.59E-04	4.25E-05	1.02E-03	1.86E-04
MSMVA through MSMVF	EAF-FEED18	SBN20 daily bin to DBC18 dosing and weighing belt conveyor	Lime, Carbon	27	657	239,628	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.10E-04	0.01	1.80E-03	1.50E-04	3.61E-03	6.59E-04	4.25E-05	1.02E-03	1.86E-04
MSMVA through MSMVF	EAF-FEED19	DBC15-DBC18 dosing and weighing belt conveyor to RBC12 reversible belt conveyor	Lime, Carbon	27	657	239,628	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.10E-04	0.01	1.80E-03	1.50E-04	3.61E-03	6.59E-04	4.25E-05	1.02E-03	1.86E-04
MSMVA through MSMVF	EAF-FEED20	SBN21-SBN22 daily bins to FWH12 fixed weighing hopper	Alloys	5	125	45,684	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	7.82E-05	0.00	3.43E-04	2.87E-05	6.88E-04	1.26E-04	8.11E-06	1.95E-04	3.55E-05
MSMVA through MSMVF	EAF-FEED21	FWH12 fixed weighing hopper to RBC12 reversible belt conveyor	Alloys	5	125	45,684	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	7.82E-05	0.00	3.43E-04	2.87E-05	6.88E-04	1.26E-04	8.11E-06	1.95E-04	3.55E-05
MSMVA through MSMVF	EAF-FEED22	RBC11 reversible belt conveyor to EBC12 elevating belt conveyor	Lime, Alloy, Carbon	33	782	285,312	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.89E-04	0.01	2.14E-03	1.79E-04	4.30E-03	7.85E-04	5.06E-05	1.21E-03	2.22E-04
MSMVA through MSMVF	EAF-FEED23	RBC12 reversible belt conveyor to EBC13 elevating belt conveyor	Lime, Alloy, Carbon	33	782	285,312	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.89E-04	0.01	2.14E-03	1.79E-04	4.30E-03	7.85E-04	5.06E-05	1.21E-03	2.22E-04
MSMVA through MSMVF	EAF-FEED24	EBC12 elevating belt conveyor to NBC12 normal belt conveyor	Lime, Alloy, Carbon	33	782	285,312	Indoor	BV-123-BV-124	1.00	3.00E-03	1.10E-03	3.11E-04	4.89E-04	0.01	2.14E-03	1.79E-04	4.30E-03	7.85E-04	5.06E-05	1.21E-03	2.22E-04
MSMVA through MSMVF	EAF-FEED25	EBC13 elevating belt conveyor to NBC13 normal belt conveyor	Lime, Alloy, Carbon	33	782	285,312	Indoor	BV-125-BV-126	1.00	3.00E-03	1.10E-03	3.11E-04	4.89E-04	0.01	2.14E-03	1.79E-04	4.30E-03	7.85E-04	5.06E-05	1.21E-03	2.22E-04

Bulk Materials Transfer/Process Calculations

Emission Point ID	Emission Unit ID	Description of Operation	Material	Max Hourly Rate (tph)	Max Daily Rate (ton/day)	Annual Rate (tpy)	Location	Control Option	Capture Efficiency[2]	Emission Factor[1,2]			Total Emissions							
										PM (lb/ton)	PM_{10} (lb/ton)	$PM_{2.5}$ (lb/ton)	PM (lb/hr)	PM (lb/day)	PM (tpy)	PM_{10} (lb/hr)	PM_{10} (lb/day)	PM_{10} (tpy)	$PM_{2.5}$ (lb/hr)	$PM_{2.5}$ (lb/day)	$PM_{2.5}$ (tpy)
SUBSILOF	SUBS-FEED1	NBC01 normal belt conveyor to SBM01-SBM04 silos	Scrap Substitute	455	1,792	3,985,800	Outdoor	BV-301-BV-304	0.95	3.00E-03	1.10E-03	3.11E-04	6.83E-02	0.27	2.99E-01	2.50E-02	0.10	1.10E-01	7.07E-03	0.03	3.10E-02
SUBSILOF	SUBS-FEED2	SBM01-SBM04 silos to NBC02 normal belt conveyor	Scrap Substitute	455	1,792	3,985,800	Outdoor	BV-305-BV-308	0.95	3.00E-03	1.10E-03	3.11E-04	6.83E-02	0.27	2.99E-01	2.50E-02	0.10	1.10E-01	7.07E-03	0.03	3.10E-02
SUBSFUG	SUBS-FEED3	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment	Scrap Substitute	283	1,792	2,481,750	Outdoor	BV-309-BV-313	0.95	3.00E-03	1.10E-03	3.11E-04	4.25E-02	0.27	1.86E-01	1.56E-02	0.10	6.82E-02	4.40E-03	0.03	1.93E-02
SUBSFUG	SUBS-FEED4	SBN01-SBN02 bin extraction equipment to WBC02 weighing belt conveyor	Scrap Substitute	283	1,792	2,481,750	Outdoor	BV-314-BV-315	0.95	3.00E-03	1.10E-03	3.11E-04	4.25E-02	0.27	1.86E-01	1.56E-02	0.10	6.82E-02	4.40E-03	0.03	1.93E-02
SUBSFUG	SUBS-FEED5	SBN03-SBN04 bin extraction equipment to WBC01 weighing belt conveyor	Scrap Substitute	283	1,792	2,481,750	Outdoor	BV-316-BV-317	0.95	3.00E-03	1.10E-03	3.11E-04	4.25E-02	0.27	1.86E-01	1.56E-02	0.10	6.82E-02	4.40E-03	0.03	1.93E-02
MSMVA through MSMVF	SUBS-FEED6	WBC02 weighing belt conveyor to NBC13 for EAF #2 Feed	Scrap Substitute	283	1,792	2,481,750	Indoor	BV-318	0.95	3.00E-03	1.10E-03	3.11E-04	4.25E-02	0.27	1.86E-01	1.56E-02	0.10	6.82E-02	4.40E-03	0.03	1.93E-02
MSMVA through MSMVF	SUBS-FEED7	WBC01 weighing belt conveyor to NBC12 for EAF #1 Feed	Scrap Substitute	283	1,792	2,481,750	Indoor	BV-319	0.95	3.00E-03	1.10E-03	3.11E-04	4.25E-02	0.27	1.86E-01	1.56E-02	0.10	6.82E-02	4.40E-03	0.03	1.93E-02
BULKMH	LMF-FEED1	UDH04 unloading hopper to RBC20 reversible belt conveyor																			
BULKMH	LMF-FEED2	UDH05 unloading hopper to RBC20 reversible belt conveyor																			
BULKMH	LMF-FEED3	UDH06 unloading hopper to RBC20 reversible belt conveyor	Alloys, Carbon, Lime	9	215	78,469	Outdoor	EXT Baghouse	0.95	3.00E-03	1.10E-03	3.11E-04	1.34E-03	0.03	5.89E-03	4.93E-04	0.01	2.16E-03	1.39E-04	3.34E-03	6.10E-04
BULKMH	LMF-FEED4	RBC20 reversible belt conveyor to EBC21 elevating belt conveyor	Alloys, Carbon, Lime	3	72	26,156	Outdoor	EXT Baghouse	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
BULKMH	LMF-FEED5	EBC21 elevating belt conveyor to WBC21 weighing belt conveyor	Alloys, Carbon, Lime	3	72	26,156	Outdoor	EXT Baghouse	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED6	WBC21 weighing belt conveyor to RSC21 reversible shuttle belt conveyor	Alloys, Carbon, Lime	3	72	26,156	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.48E-05	0.00	1.96E-04	1.64E-05	3.94E-04	7.19E-05	4.64E-06	1.11E-04	2.03E-05
MSMVA through MSMVF	LMF-FEED7	RSC21 reversible shuttle belt conveyor to SBN31-58 bin extraction equipment	Alloys, Carbon, Lime	3	72	26,156	Indoor	BV-400-BV-427	1.00	3.00E-03	1.10E-03	3.11E-04	4.48E-05	0.00	1.96E-04	1.64E-05	3.94E-04	7.19E-05	4.64E-06	1.11E-04	2.03E-05
MSMVA through MSMVF	LMF-FEED8	SBN31-SBN36 bin extraction equipment to FWH21 fixed weighing hopper	Alloys, Carbon, Lime	3	72	26,156	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.48E-05	0.00	1.96E-04	1.64E-05	3.94E-04	7.19E-05	4.64E-06	1.11E-04	2.03E-05
MSMVA through MSMVF	LMF-FEED9	SBN37-SBN40 bin extraction equipment to FWH22 fixed weighing hopper	Alloys, Carbon, Lime	3	72	26,156	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.48E-05	0.00	1.96E-04	1.64E-05	3.94E-04	7.19E-05	4.64E-06	1.11E-04	2.03E-05
MSMVA through MSMVF	LMF-FEED10	SBN41-SBN44 bin extraction equipment to FWH23 fixed weighing hopper	Alloys, Carbon, Lime	3	72	26,156	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.48E-05	0.00	1.96E-04	1.64E-05	3.94E-04	7.19E-05	4.64E-06	1.11E-04	2.03E-05
MSMVA through MSMVF	LMF-FEED11	SBN45-SBN50 bin extraction equipment to FWH24 fixed weighing hopper	Alloys, Carbon, Lime	3	72	26,156	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.48E-05	0.00	1.96E-04	1.64E-05	3.94E-04	7.19E-05	4.64E-06	1.11E-04	2.03E-05
MSMVA through MSMVF	LMF-FEED12	SBN51-SBN54 bin extraction equipment to FWH25 fixed weighing hopper	Alloys, Carbon, Lime	3	72	26,156	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.48E-05	0.00	1.96E-04	1.64E-05	3.94E-04	7.19E-05	4.64E-06	1.11E-04	2.03E-05
MSMVA through MSMVF	LMF-FEED13	SBN55-SBN58 bin extraction equipment to FWH26 fixed weighing hopper	Alloys, Carbon, Lime	3	72	26,156	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.48E-05	0.00	1.96E-04	1.64E-05	3.94E-04	7.19E-05	4.64E-06	1.11E-04	2.03E-05
MSMVA through MSMVF	LMF-FEED14	FWH21-FWH23 fixed weighing hopper to RBC21 reversible belt conveyor	Alloys, Carbon, Lime	3	72	26,156	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.48E-05	0.00	1.96E-04	1.64E-05	3.94E-04	7.19E-05	4.64E-06	1.11E-04	2.03E-05
MSMVA through MSMVF	LMF-FEED15	FWH24-FWH26 fixed weighing hopper to RBC22 reversible belt conveyor	Alloys, Carbon, Lime	3	72	26,156	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.48E-05	0.00	1.96E-04	1.64E-05	3.94E-04	7.19E-05	4.64E-06	1.11E-04	2.03E-05
MSMVA through MSMVF	LMF-FEED16	RBC21 reversible belt conveyor to EBC22 elevating belt conveyor	Alloys, Carbon, Lime	3	72	26,156	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.48E-05	0.00	1.96E-04	1.64E-05	3.94E-04	7.19E-05	4.64E-06	1.11E-04	2.03E-05
MSMVA through MSMVF	LMF-FEED17	EBC22 elevating belt conveyor to NBC22 normal belt conveyor	Alloys, Carbon, Lime	3	72	26,156	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.48E-05	0.00	1.96E-04	1.64E-05	3.94E-04	7.19E-05	4.64E-06	1.11E-04	2.03E-05
MSMVA through MSMVF	LMF-FEED18	NBC22 normal belt conveyor to RBC23 reversible belt conveyor	Alloys, Carbon, Lime	3	72	26,156	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.48E-05	0.00	1.96E-04	1.64E-05	3.94E-04	7.19E-05	4.64E-06	1.11E-04	2.03E-05
MSMVA through MSMVF	LMF-FEED19	RBC23 reversible belt conveyor to NBC24 normal belt conveyor	Alloys, Carbon, Lime	3	72	26,156	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.48E-05	0.00	1.96E-04	1.64E-05	3.94E-04	7.19E-05	4.64E-06	1.11E-04	2.03E-05
MSMVA through MSMVF	LMF-FEED20	NBC24 normal belt conveyor to SHP21-SHP23 surge hopper	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED21	SHP21-SHP23 surge hopper to LF #1.1 ladle furnace	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED22	NBC22 normal belt conveyor to NBC25 normal belt conveyor	Alloys, Carbon, Lime	3	72	26,156	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.48E-05	0.00	1.96E-04	1.64E-05	3.94E-04	7.19E-05	4.64E-06	1.11E-04	2.03E-05
MSMVA through MSMVF	LMF-FEED23	NBC25 normal belt conveyor to SHP24-SHP26 surge hopper	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED24	SHP24-SHP26 surge hopper to LF #1.2 ladle furnace	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED25	RBC23 reversible belt conveyor to SHP27-SHP28 surge hopper	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED26	SHP27-SHP28 surge hopper to VCG21 vibrating channel	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED27	VCG21 vibrating channel to VD #1 vacuum degasser	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED28	From main crane to SBN59-SBN62 bin extraction equipment	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED29	From main crane to SBN63-SBN66 bin extraction equipment	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED30	SBN59-SBN62 bin extraction equipment to TWH21 traveling weighing hopper	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED31	SBN63-SBN66 bin extraction equipment to TWH22 traveling weighing hopper	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED32	TWH21 traveling weighing hopper to LF #1.1 ladle furnace	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04

Bulk Materials Transfer/Process Calculations

Emission Point ID	Emission Unit ID	Description of Operation	Material	Max Hourly Rate (tph)	Max Daily Rate (ton/day)	Annual Rate (tpy)	Location	Control Option	Capture Efficiency[2]	Emission Factor[1,2] PM (lb/ton)	Emission Factor[1,2] PM_{10} (lb/ton)	Emission Factor[1,2] $PM_{2.5}$ (lb/ton)	Total Emissions PM (lb/hr)	Total Emissions PM (lb/day)	Total Emissions PM (tpy)	Total Emissions PM_{10} (lb/hr)	Total Emissions PM_{10} (lb/day)	Total Emissions PM_{10} (tpy)	Total Emissions $PM_{2.5}$ (lb/hr)	Total Emissions $PM_{2.5}$ (lb/day)	Total Emissions $PM_{2.5}$ (tpy)
MSMVA through MSMVF	LMF-FEED33	TWH22 traveling weighing hopper to LF #1.2 ladle furnace	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED34	RBC22 reversible belt conveyor to EBC23 elevating belt conveyor	Alloys, Carbon, Lime	3	72	26,156	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.48E-05	0.00	1.96E-04	1.64E-05	3.94E-04	7.19E-05	4.64E-06	1.11E-04	2.03E-05
MSMVA through MSMVF	LMF-FEED35	EBC23 elevating belt conveyor to NBC23 normal belt conveyor	Alloys, Carbon, Lime	3	72	26,156	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.48E-05	0.00	1.96E-04	1.64E-05	3.94E-04	7.19E-05	4.64E-06	1.11E-04	2.03E-05
MSMVA through MSMVF	LMF-FEED36	NBC23 normal belt conveyor to NBC27 normal belt conveyor	Alloys, Carbon, Lime	3	72	26,156	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.48E-05	0.00	1.96E-04	1.64E-05	3.94E-04	7.19E-05	4.64E-06	1.11E-04	2.03E-05
MSMVA through MSMVF	LMF-FEED37	NBC27 normal belt conveyor to SHP32-SHP34 surge hopper	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED38	SHP32-SHP34 surge hopper to LF #2.2 ladle furnace	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED39	NBC23 normal belt conveyor to RBC24 reversible belt conveyor	Alloys, Carbon, Lime	3	72	26,156	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.48E-05	0.00	1.96E-04	1.64E-05	3.94E-04	7.19E-05	4.64E-06	1.11E-04	2.03E-05
MSMVA through MSMVF	LMF-FEED40	RBC24 reversible belt conveyor to SHP35-SHP36 surge hopper	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED41	SHP35-SHP36 surge hopper to VCG21 vibrating channel	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED42	VCG21 vibrating channel to VD #1 vacuum degasser	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED43	RBC24 reversible belt conveyor to NBC26 normal belt conveyor	Alloys, Carbon, Lime	3	72	26,156	Indoor	INT Baghouse	1.00	3.00E-03	1.10E-03	3.11E-04	4.48E-05	0.00	1.96E-04	1.64E-05	3.94E-04	7.19E-05	4.64E-06	1.11E-04	2.03E-05
MSMVA through MSMVF	LMF-FEED44	NBC26 normal belt conveyor to SHP29-SHP31 surge hopper	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED45	SHP29-SHP31 surger hopper to LF #2.1 ladle furnace	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED46	From main crane to SBN67-SBN70 bin extraction equipment	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED47	From main crane to SBN71-SBN74 bin extraction equipment	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED48	SBN67-SBN70 bin extraction equipment to TWH23 traveling weighing hopper	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED49	SBN71-SBN74 bin extraction equipment to TWH24 traveling weighing hopper	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED50	TWH23 traveling weighing hopper to LF #2.1 ladle furnace	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04
MSMVA through MSMVF	LMF-FEED51	TWH24 traveling weighing hopper to LF #2.2 ladle furnace	Alloys, Carbon, Lime	3	72	26,156	Indoor	Canopy Hood	0.95	3.00E-03	1.10E-03	3.11E-04	4.48E-04	0.01	1.96E-03	1.64E-04	3.94E-03	7.19E-04	4.64E-05	1.11E-03	2.03E-04

[1] For all drop points, emission factors based on AP-42 Section 11.19.2. Drop points use uncontrolled factors.

[2] Control and Capture efficiencies are representative of the material transfer baghouses, building capture, and melt shop canopy hood.

[3] PM distribution for uncontrolled emission factors assumed to be equivalent to the PM distribution for controlled emission factors presented in AP-42 Section 11.19.2.

Uncaptured Melt Shop Fugitives from Material Transfer - Emission Calculation

Emission Point ID	Emission Unit ID	Unit	Description	Total Emissions PM (lb/hr)	Total Emissions PM (lb/day)	Total Emissions PM (tpy)	Total Emissions PM_{10} (lb/hr)	Total Emissions PM_{10} (lb/day)	Total Emissions PM_{10} (tpy)	Total Emissions $PM_{2.5}$ (lb/hr)	Total Emissions $PM_{2.5}$ (lb/day)	Total Emissions $PM_{2.5}$ (tpy)
MSMVA through MSMVF	EAF-FEED7-25	EAF Handling	Uncaptured Electric Arc Furnace Fugitives - Raw	4.24E-02	1.017	4.93E-02	1.55E-02	0.373	1.81E-02	4.39E-03	0.105	5.11E-03
MSMVA through MSMVF	LMF-FEED6-51	LMF Handling	Uncaptured Ladle Metallurgy Furnace Fugitives - Raw Material	1.25E-02	0.301	5.49E-02	4.60E-03	0.110	2.01E-02	1.30E-03	0.031	5.69E-03
MSMVA through MSMVF	SUBS-FEED6-7	Scrap Substitute Handling	Uncaptured Scrap Substitute Fugitives - Raw	8.50E-02	5.38E-01	3.72E-01	3.12E-02	0.197	1.36E-01	8.81E-03	0.056	3.86E-02

Uncaptured Melt Shop Fugitives from Material Transfer - Emission Calculation

Emission Point ID	Emission Unit ID	Unit	Description	Total Emissions PM (lb/hr)	Total Emissions PM (lb/day)	Total Emissions PM (tpy)	Total Emissions PM_{10} (lb/hr)	Total Emissions PM_{10} (lb/day)	Total Emissions PM_{10} (tpy)	Total Emissions $PM_{2.5}$ (lb/hr)	Total Emissions $PM_{2.5}$ (lb/day)	Total Emissions $PM_{2.5}$ (tpy)
SUBSUNL	RAW-FEED1	Scrap Substitute Handling	Uncaptured Unloading Fugitives - Raw Material	3.41E-01	1.344	9.31E-01	1.25E-01	0.493	3.41E-01	3.54E-02	0.139	9.64E-02
BULKMH	RAW-FEED3-8	EAF Handling	Lime/Carbon/Alloy Unloading Fugitives - Raw	7.20E-02	1.728	2.34E-02	2.64E-02	0.634	8.57E-03	7.46E-03	0.179	2.42E-03
BULKMH	EAF-FEED1-6	EAF Handling	Unloading Fugitives - Raw Material Transfer	1.44E-01	3.456	8.56E-02	5.28E-02	1.267	3.14E-02	1.49E-02	0.358	8.87E-03
BULKMH	LMF-FEED1-5	LMF Handling	Unloading Fugitives - Raw Material Transfer	2.24E-03	0.054	9.81E-03	8.21E-04	0.020	3.60E-03	2.32E-04	0.006	1.02E-03
SUBSILOF	SUBS-FEED1-2, RAW-FEED2	Scrap Substitute Handling	Uncaptured Scrap Substitute Unloading Fugitives - Raw Material Transfer	4.78E-01	1.882	1.53E+00	1.75E-01	0.690	5.60E-01	4.95E-02	0.195	1.58E-01
SUBSFUG	SUBS-FEED3-5	Scrap Substitute Handling	Uncaptured Scrap Substitute Day Bin Fugitives - Raw Material Transfer	1.27E-01	0.806	5.58E-01	4.67E-02	0.296	2.05E-01	1.32E-02	0.084	5.79E-02

NSWV - PTE Calculations
Bin Vent PM Emissions Calculation

Bin Vent Emissions

Emission Point ID	Emission Unit ID	Description	Number of Vents	Flow Rate (dscfm)	Emission Factor[1]			$PM^{2,3}$		PM_{10} [2,3]		$PM_{2.5}$ [2,3]	
					PM (gr/dscf)	PM_{10} (gr/dscf)	$PM_{2.5}$ (gr/dscf)	PM (lb/hr)	PM (tpy)	PM_{10} (lb/hr)	PM_{10} (tpy)	$PM_{2.5}$ (lb/hr)	$PM_{2.5}$ (tpy)
SUBSDCK1-6	BV-0011-0016	Crane Unloading Transfers to Dock Scrap Substitute Bin	6	280	0.001	0.001	0.0005	0.01	0.06	0.01	0.06	7.20E-03	0.03
BV-003	BV-003	Dock Scrap Substitute Bin to NBC01 normal belt conveyor	1	1,000	0.001	0.001	0.0005	0.01	0.04	0.01	0.04	4.29E-03	0.02
MSMVA through MSMVF	BV-111-122	RSC11 reversible shuttle belt conveyor to SBN11-SBN22 daily bins	12	1,000	0.001	0.001	0.0005	1.03E-01	0.45	1.03E-01	0.45	5.14E-02	0.23
MSMVA through MSMVF	BV-123-BV-124	EBC12 elevating belt conveyor to NBC12 normal belt conveyor	2	1,000	0.001	0.001	0.0005	1.71E-02	0.08	1.71E-02	0.08	8.57E-03	0.04
MSMVA through MSMVF	BV-125-BV-126	EBC13 elevating belt conveyor to NBC13 normal belt conveyor	2	1,000	0.001	0.001	0.0005	1.71E-02	0.08	1.71E-02	0.08	8.57E-03	0.04
SUBSILO1-4	BV-301-BV-304	SBM01-04 silos bin vent	4	1,000	0.001	0.001	0.0005	3.43E-02	0.15	3.43E-02	0.15	1.71E-02	0.08
BV-305-BV-308	BV-305-BV-308	SBM01-04 silos to NBC02 normal belt conveyor	4	1,000	0.001	0.001	0.0005	3.43E-02	0.15	3.43E-02	0.15	1.71E-02	0.08
BV-309-BV-313	BV-309-BV-313	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment	5	1,000	0.001	0.001	0.0005	4.29E-02	0.19	4.29E-02	0.19	2.14E-02	0.09
BV-314-BV-315	BV-314-BV-315	SBN01-SBN02 bin extraction equipment to WBC02 weighing belt conveyor	2	1,000	0.001	0.001	0.0005	1.71E-02	0.08	1.71E-02	0.08	8.57E-03	0.04
BV-316-BV-317	BV-316-BV-317	SBN03-SBN04 bin extraction equipment to WBC01 weighing belt conveyor	2	1,000	0.001	0.001	0.0005	1.71E-02	0.08	1.71E-02	0.08	8.57E-03	0.04
MSMVA through MSMVF	BV-318	WBC02 weighing belt conveyor to NBC13 for EAF #2 Feed	1	1,000	0.001	0.001	0.0005	8.57E-03	0.04	8.57E-03	0.04	4.29E-03	0.02
MSMVA through MSMVF	BV-319	WBC01 weighing belt conveyor to NBC12 for EAF #1 Feed	1	1,000	0.001	0.001	0.0005	8.57E-03	0.04	8.57E-03	0.04	4.29E-03	0.02
MSMVA through MSMVF	BV-400-BV-427	RSC21 reversible shuttle belt conveyor to SBN31-58 bin extraction equipment	28	280	0.001	0.001	0.0005	6.72E-02	0.29	6.72E-02	0.29	3.36E-02	0.15

[1] Exit loading rate in grain per dry standard cubic feet (gr/dscf) obtained from vendor's guarantee.

[2] Hourly Emissions (lb/hr) = Flow Rate (dscfm) x Emission Factor (gr/dscf) x 60 (min/hr) x Number of Vents / 7,000 (gr/dscf)

Example PM Emission Rate (lb/hr) = 0,280 dscfm × 0.0010 gr / dscf × 60 min / hr × lb / 7,000 gr × 1 Vent = 0.01 lb/hr

[3] Annual Emissions (tpy) = Flow Rate (dscfm) x Emission Factor (gr/dscf) x 60 (min/hr) x 8,760 (hr/yr) x Number of Vents / 7,000 (gr/dscf) / 2,000 (lb/ton)

Example PM Emission Rate (tpy) = 0,280 dscfm × 0.0010 gr / dscf × 60 min / hr × lb / 7,000 gr × ton / 2000 lb × 8,760 hr / yr × 1 Vent = 0.06 lb/hr

NSWV - PTE Calculations
Electrostatic Oilers Emissions Calculation

Electrostatic Oiler Assumptions & Inputs

Emission Point ID	Emission Unit ID	Unit	Description	Number of Sides	Maximum Metal Width (ft)	Maximum Steel Processing Rate (ft/min)	Maximum Application Rate (mg/ft^2)	Capture Efficiency (%)	Transfer Efficiency (%)	Building Enclosure[1] (%)	Percent of PM that is PM_{10} (%)	Percent of PM that is $PM_{2.5}$ (%)	VOC Oil Composition (%)
MAUPLA through MAUPLC	PLSTEO	Cold Mill	Pickle Line Electrostatic Oiler	2	6.5	656	300	75%	99.50%	90%	100%	50%	1.65%
TMEOMVA and TMEOMVB	STMSTEO	Cold Mill	Temper Mill Electrostatic Oiler	2	6.5	1400	300	75%	99.50%	90%	100%	50%	1.65%
CGL1MVA through CGL1MVE	CGLEO1	Cold Mill	Galvanizing Line 1 Electrostatic Oiler	2	6.2	750	250	75%	99.50%	90%	100%	50%	1.65%
CGL2MVA through CGL2MVE	CGLEO2	Cold Mill	Galvanizing Line 2 Electrostatic Oiler	2	6.2	750	250	75%	99.50%	90%	100%	50%	1.65%
TMEOMVA and TMEOMVB	RCLEO	Cold Mill	Recoiler Electrostatic Oiler	2	6.5	700	300	75%	99.50%	90%	100%	50%	1.65%

[1] Emission factor obtained from TCEQ Draft RG 058 Rock Crushing Plants, February 2002, Table 7 for sources enclosed by building.

Electrostatic Oiler Emissions Calculation

Emission Point ID	Emission Unit ID	Unit	Description	Hourly Emissions[1,2,3] PM (lb/hr)	Hourly Emissions[1,2,3] PM_{10} (lb/hr)	Hourly Emissions[1,2,3] $PM_{2.5}$ (lb/hr)	Hourly Emissions[1,2,3] VOC (lb/hr)	Annual Emissions[4,5,6] PM (tpy)	Annual Emissions[4,5,6] PM_{10} (tpy)	Annual Emissions[4,5,6] $PM_{2.5}$ (tpy)	Annual Emissions[4,5,6] VOC (tpy)
MAUPLA through MAUPLC	PLSTEO	Cold Mill	Pickle Line Electrostatic Oiler	0.04	0.04	0.02	0.01	0.19	0.19	0.09	0.03
TMEOMVA and TMEOMVB	STMSTEO	Cold Mill	Temper Mill Electrostatic Oiler	0.09	0.09	0.05	0.01	0.40	0.40	0.20	0.07
CGL1MVA through CGL1MVE	CGLEO1	Cold Mill	Galvanizing Line 1 Electrostatic Oiler	0.04	0.04	0.02	0.01	0.17	0.17	0.08	0.03
CGL2MVA through CGL2MVE	CGLEO2	Cold Mill	Galvanizing Line 2 Electrostatic Oiler	0.04	0.04	0.02	0.01	0.17	0.17	0.08	0.03
TMEOMVA and TMEOMVB	RCLEO	Cold Mill	Recoiler Electrostatic Oiler	0.05	0.05	0.02	0.01	0.20	0.20	0.10	0.03

[1] Hourly PM Emissions (lb/hr) = Application Rate (mg/ft2) x Steel Processing Rate (ft/min) x Number of Sides x Metal Width (ft) x 60 (min/hr) x (1- Transfer Efficiency (%)) x (1- Capture Efficiency (%)) x (1 - Building Enclosure (%)) / 1,000 (mg/g) / 453.6 (g/lb)

Example PM Emission Rate (lb/hr) = 300 mg/ft^2 × 656 ft/min × 2 sides × 6.5 ft × 60 min/hr × 0.50 % × 25 % × g/1,000 mg × lb/453.6 g × 10 % = 0.04 lb/hr

[2] Hourly PM10/PM2.5 Emissions (lb/hr) = PM Emissions (lb/hr) x Percent of PM that is PM10/PM2.5 (%)

Example PM10 Emission Rate (lb/hr) = 0.04 lb/hr × 100.00 % = 0.04 lb/hr

[3] Hourly VOC Emissions (lb/hr) = Application Rate (mg/ft2) x Steel Processing Rate (ft/min) x Number of Sides x Metal Width (ft) x 60 (min/hr) x (1- Transfer Efficiency (%)) x (1- Capture Efficiency (%)) x Oil Composition (%) / 1,000 (mg/g) / 453.6 (g/lb)

Example VOC Emission Rate (lb/hr) = 300 mg/ft^2 × 656 ft/min × 2 sides × 6.5 ft × 60 min/hr × 0.50 % × 25 % × g/1,000 mg × lb/453.6 g × 1.65 % = 0.01 lb/hr

[4] Annual PM Emissions (tpy) = Application Rate (mg/ft2) x Steel Processing Rate (ft/min) x Number of Sides x Metal Width (ft) x 60 (min/hr) x (1- Transfer Efficiency (%)) x (1- Capture Efficiency (%)) x (1 - Building Enclosure (%)) x 8,760 (hr/yr) / 1,000 (mg/g) / 453.6 (g/lb) / 2,000 (lb/ton)

Example PM Emission Rate (tpy) = 300 mg/ft^2 × 656 ft/min × 2 sides × 6.5 ft × 60 min/hr × 0.50 % × 25 % × g/1,000 mg × lb/453.6 g × 8760 hr/yr × ton/2,000 lb × 10 % = 0.19 tpy

[5] Annual PM10/PM2.5 Emissions (tpy) = PM Emissions (lb/hr) x Percent of PM that is PM10/2.5 (%) x x 8,760 (hr/yr) / 2,000 (lb/ton)

Example PM10 Emission Rate (tpy) = 0.04 lb/hr × 100.00 % × 8760 hr/yr × ton/2,000 lb = 0.19 tpy

[6] Annual VOC Emissions (tpy) = Application Rate (mg/ft2) x Steel Processing Rate (ft/min) x Number of Sides x Metal Width (ft) x 60 (min/hr) x (1- Transfer Efficiency (%)) x (1- Capture Efficiency (%)) x Oil Composition (%) x 8,760 (hr/yr) / 1,000 (mg/g) / 453.6 (g/lb) / 2,000 (lb/ton)

Example VOC Emission Rate (tpy) = 300 mg/ft^2 × 656 ft/min × 2 sides × 6.5 ft × 60 min/hr × 0.50 % × 25 % × g/1,000 mg × lb/453.6 g × 1.65 % × 8760 hr/yr × ton/2,000 lb = 0.03 tpy

NSWV - PTE Calculations
Galvanizing Line Passivation Rollcoater Emissions Calculation

Passivation Rollcoater Assumptions & Inputs

Emission Point ID	Emission Unit ID	Unit	Description	Annual Throughput (gal/yr)	Relative Density[1]	Evaporation Loss[3] (%)	Methanol Content[2] (%)	Ethanol Content[2] (%)	Water Density (lb/gal)	Coating Density[4] (lb/gal)
CGL1MVA through CGL1MVE	CGL1	Cold Mill	Galvanizing Line 1 Passivation Roll Coater	14235	1.42	100%	3	3	8.345	11.85
CGL2MVA through CGL2MVE	CGL2	Cold Mill	Galvanizing Line 2 Passivation Roll Coater	14235	1.42	100%	3	3	8.345	11.85

[1] Per Primecoat HC 360 SDS

[2] Per Primecoat Z 838-4 SDS

[3] Roll coating assumes 100% transfer efficiency, therefore no particulate emissions are expected.

[4] Coating Density = Relative Density (%) x Density of Water (lb/gal)

$$\text{Coating Density (lb/gal)} = \frac{1.42\ \%}{} \quad \frac{8.35\ \text{lb/gal}}{} = 11.85\ \text{lb/gal}$$

Passivation Rollcoater Emissions Calculation

Emission Point ID	Emission Unit ID	Unit	Description	Hourly Emissions[1,2]		Annual Emissions[3,4]	
				VOC (lb/hr)	Total HAP (lb/hr)	VOC (tpy)	Total HAP (tpy)
CGL1MVA through CGL1MVE	CGL1	Cold Mill	Galvanizing Line 1 Passivation Roll Coater	1.16	0.58	5.06	2.53
CGL2MVA through CGL2MVE	CGL2	Cold Mill	Galvanizing Line 2 Passivation Roll Coater	1.16	0.58	5.06	2.53

[1] Hourly VOC Emissions (lb/hr) = Annual Throughput (gal/yr) x VOC Content (%) x Coating Density (lb/gal) x Evaporation Loss (%) / 8,760 (hr/yr)

$$\text{Example VOC Emission Rate (lb/hr)} = \frac{14{,}235\ \text{gal}}{\text{yr}} \quad 6\ \% \quad \frac{11.85\ \text{lb}}{\text{gal}} \quad \frac{\text{yr}}{8{,}760\ \text{hr}} \quad 100\ \% = 1.16\ \text{lb/hr}$$

[2] Hourly Total HAP Emissions (lb/hr) = Annual Throughput (gal/yr) x HAP Content (%) x Coating Density (lb/gal) x Evaporation Loss (%) / 8,760 (hr/yr)

$$\text{Example HAP Emission Rate (lb/hr)} = \frac{14{,}235\ \text{gal}}{\text{yr}} \quad 3\ \% \quad \frac{11.85\ \text{lb}}{\text{gal}} \quad \frac{\text{yr}}{8{,}760\ \text{hr}} \quad 100\ \% = 0.58\ \text{lb/hr}$$

[3] Annual VOC Emissions (tpy) = Annual Throughput (gal/yr) x VOC Content (%) x Coating Density (lb/gal) x Evaporation Loss (%) / 2000 (lb/ton)

$$\text{Example VOC Emission Rate (lb/hr)} = \frac{14{,}235\ \text{gal}}{\text{yr}} \quad 6\ \% \quad \frac{11.85\ \text{lb}}{\text{gal}} \quad \frac{\text{ton}}{2{,}000\ \text{lb}} \quad 100\ \% = 5.06\ \text{lb/hr}$$

[4] Annual Total HAP Emissions (tpy) = Annual Throughput (gal/yr) x HAP Content (%) x Coating Density (lb/gal) x Evaporation Loss (%) / 2,000 (lb/ton)

$$\text{Example HAP Emission Rate (tpy)} = \frac{14{,}235\ \text{gal}}{\text{yr}} \quad 3\ \% \quad \frac{11.85\ \text{lb}}{\text{gal}} \quad \frac{\text{ton}}{2{,}000\ \text{lb}} \quad 100\ \% = 2.53\ \text{lb/hr}$$

NSWV - PTE Calculations
Galvanizing Line Stenciling Emissions Calculation

Stenciling Assumptions & Inputs

Emission Point ID	Emission Unit ID	Unit	Description	Annual Throughput (gal/yr)	VOC Content[1] (lb/gal)
CGL1MVA through CGL1MVE	CGL1	Cold Mill	Galvanizing Line 1 Stenciling	820	7.21
CGL2MVA through CGL2MVE	CGL2	Cold Mill	Galvanizing Line 2 Stenciling	820	7.21

[1] SCP-411A Black QD Ink SDS

Stenciling Emissions Calculation

Emission Point ID	Emission Unit ID	Unit	Description	Hourly Emissions[1] VOC (lb/hr)	Annual Emissions[2] VOC (tpy)
CGL1MVA through CGL1MVE	CGL1	Cold Mill	Galvanizing Line 1 Stenciling	0.67	2.96
CGL2MVA through CGL2MVE	CGL2	Cold Mill	Galvanizing Line 2 Stenciling	0.67	2.96

[1] Hourly VOC Emissions (lb/hr) = Annual Throughput (gal/yr) x VOC Content (lb/gal) / 8,760 (hr/yr)

$$\text{Example VOC Emission Rate (lb/hr)} = \frac{820\ \text{gal}}{\text{yr}} \times \frac{7.21\ \text{lb}}{\text{gal}} \times \frac{\text{yr}}{8{,}760\ \text{hr}} = 0.67\ \text{lb/hr}$$

[2] Annual VOC Emissions (tpy) = Annual Throughput (gal/yr) x VOC Content (lb/gal) / 2000 (lb/ton)

$$\text{Example VOC Emission Rate (tpy)} = \frac{820\ \text{gal}}{\text{yr}} \times \frac{7.21\ \text{lb}}{\text{gal}} \times \frac{\text{ton}}{2{,}000\ \text{lb}} = 2.96\ \text{lb/hr}$$

NSWV - PTE Calculations
Parts Washer Emissions Calculation

Material Properties

Product	Density (lb/gal)	Molecular Weight (lb/lbmol)	Vapor Pressure at Maximum Liquid Surface Temperature (mmHg)	Vapor Pressure at Maximum Liquid Surface Temperature (psia)
Solvent	6.7	130	1	0.019

Parts Washer Assumptions & Inputs

Emission Point ID	Emission Unit ID	Unit Location	Description	Width (ft)	Length (ft)	Emission Factor[1] (lb/hr/ft^2)	Throughput	
							Annual (gal/yr)	Monthly (gal/month)
MSMVA through MSMVF	WASH1	Melt Shop	Melt Shop Parts Washer	2.0	3.4	0.08	960	80
HMMVA through HMMVL	WASH2	Hot Mill	Hot Mill Parts Washer 01	2.0	3.4	0.08	960	80
HMMVA through HMMVL	WASH3	Hot Mill	Hot Mill Parts Washer 02	2.0	3.4	0.08	960	80
HMMVA through HMMVL	WASH4	Hot Mill	Hot Mill Parts Washer 03	2.0	3.4	0.08	960	80
HMMVA through HMMVL	WASH5	Hot Mill	Hot Mill Parts Washer 04	2.0	3.4	0.08	960	80
CGL1MVA through CGL1MVE	WASH6	Cold Mill	Cold Mill Parts Washer 01	2.0	3.4	0.08	960	80
CGL1MVA through CGL1MVE	WASH7	Cold Mill	Cold Mill Parts Washer 02	2.0	3.4	0.08	960	80
MSMVA through MSMVF	WASH8	Caster	Caster Parts Washer	2.0	3.4	0.08	960	80
MAUFGA through MAUFGC	WASH9	Crane and Mobile Maintenance	e and Mobile Maintenance Parts Wa	2.0	3.4	0.08	960	80

[1] Emission factors based on AP-42 Chapter 4.6, Solvent Degreasing Table 4.6-2, All Degreasing Operations

Parts Washer Emissions Calculation

Emission Point ID	Emission Unit ID	Unit	Hourly Emissions[1]	Annual Emissions[2]
			VOC (lb/hr)	VOC (tpy)
MSMVA through MSMVF	WASH1	Melt Shop	0.54	0.35
HMMVA through HMMVL	WASH2	Hot Mill	0.54	0.35
HMMVA through HMMVL	WASH3	Hot Mill	0.54	0.35
HMMVA through HMMVL	WASH4	Hot Mill	0.54	0.35
HMMVA through HMMVL	WASH5	Hot Mill	0.54	0.35
CGL1MVA through CGL1MVE	WASH6	Cold Mill	0.54	0.35
CGL1MVA through CGL1MVE	WASH7	Cold Mill	0.54	0.35
MSMVA through MSMVF	WASH8	Caster	0.54	0.35
MAUFGA through MAUFGC	WASH9	Crane and Mobile Maintenance	0.54	0.35

[1] Hourly VOC Emissions (lb/hr) = Length (ft) x Width (ft) x Emission Factor (lb/hr/ft^2)

Example VOC Emission Rate (lb/hr) = 2.00 ft x 3.40 ft x 0.08 lb/hr / ft^2 = 0.54 lb/hr

[2] Annual VOC Emissions (tpy) = Hourly Emissions (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton)

Example VOC Emission Rate (tpy) = 0.54 lb/hr x 8,760 hr/yr x ton/2,000 lb = 0.35 tpy

NSWV - PTE Calculations
Ancillary Storage Tanks Emissions Calculation

Tanks Physical Properties

Emission Point ID	Emission Unit ID	Description	Tank Type	Tank Color	Outdoor/ Indoor [1]	Product Stored	Capacity (gal)	Diameter (ft)	Height/Length (ft)	Maximum Daily Throughput (gal/day)	Maximum Monthly Throughput (gal/month)	Annual Throughput (gal/yr)
T001	T001	Diesel Tank	Horizontal Tank	White	Outdoor	Diesel	15,000	12	18	1,000	10,000	120,000
T002	T002	Diesel Tank	Horizontal Tank	White	Outdoor	Diesel	1,000	5	8	1,000	10,000	120,000
T003	T003	Diesel Tank	Horizontal Tank	White	Outdoor	Diesel	1,000	5	8	1,000	10,000	120,000
T004	T004	Diesel Tank	Horizontal Tank	White	Outdoor	Diesel	1,000	5	8	1,000	10,000	120,000
T005	T005	Diesel Tank	Horizontal Tank	White	Outdoor	Diesel	1,000	5	8	1,000	10,000	120,000
T006	T006	Gasoline Tank	Horizontal Tank	White	Outdoor	Unleaded Gasoline	1,000	5	8	1,000	10,000	120,000
CMTKFUG	T007	HCL Tank #1	Cone	White	Indoor	HCl Acid	40,414	14	35	5,000	50,000	600,000
CMTKFUG	T008	HCL Tank #2	Cone	White	Indoor	HCl Acid	40,414	14	35	5,000	50,000	600,000
CMTKFUG	T009	HCL Tank #3	Cone	White	Indoor	HCl Acid	40,414	14	35	5,000	50,000	600,000
CMTKFUG	T010	HCL Tank #4	Cone	White	Indoor	HCl Acid	40,414	14	35	5,000	50,000	600,000
CMTKFUG	T011	SPL Tank #1	Cone	White	Indoor	Spent Pickle Liquor	40,414	14	35	5,000	50,000	600,000
CMTKFUG	T012	SPL Tank #2	Cone	White	Indoor	Spent Pickle Liquor	40,414	14	35	5,000	50,000	600,000
CMTKFUG	T013	SPL Tank #3	Cone	White	Indoor	Spent Pickle Liquor	40,414	14	35	5,000	50,000	600,000
CMTKFUG	T014	SPL Tank #4	Cone	White	Indoor	Spent Pickle Liquor	40,414	14	35	5,000	50,000	600,000
CMTKFUG	T015	SPL Tank #5	Cone	White	Indoor	Spent Pickle Liquor	40,414	14	35	5,000	50,000	600,000
CMTKFUG	T016	SPL Tank #6	Cone	White	Indoor	Spent Pickle Liquor	40,414	14	35	5,000	50,000	600,000
CMTKFUG	T017	SPL Tank #7	Cone	White	Indoor	Spent Pickle Liquor	40,414	14	35	5,000	50,000	600,000
CMTKFUG	T018	SPL Tank #8	Cone	White	Indoor	Spent Pickle Liquor	40,414	14	35	5,000	50,000	600,000
T019	T019	WOT9.1	Cone	White	Outside	Used Oil	10,000	12	12	250	2,500	30,000
T020	T020	COT6.3	Cone	White	Outside	Used Oil	8,225	10	14	250	2,500	30,000
T021	T021	COT4.3	Cone	White	Outside	Used Oil	8,225	10	14	250	2,500	30,000
T022	T022	COT6.1	Horizontal Tank	White	Outside	Used Oil	1,750	5	12	100	1,000	12,000
T023	T023	COT4.1	Horizontal Tank	White	Outside	Used Oil	1,750	5	12	100	1,000	12,000
HMMVA through HMMVL	T024	Hydraulic Bulk	Cone	White	Indoor	Hydraulic Oil	6,000	8	16	250	2,500	30,000
HMMVA through HMMVL	T025	Hydraulic (Morgoil) Bulk	Horizontal Tank	White	Indoor	Hydraulic Oil	8,000	8	22	250	2,500	30,000
HMMVA through HMMVL	T026	Grease Bulk RM/FM	Cone	White	Indoor	Hydraulic Oil	4,500	8	12	250	2,500	30,000
HMMVA through HMMVL	T027	Grease Bulk Coilers	Cone	White	Indoor	Hydraulic Oil	4,500	8	12	250	2,500	30,000
HMMVA through HMMVL	T028	Grease Bulk RM/FM	Cone	White	Indoor	Hydraulic Oil	1,700	6	8	100	1,000	12,000
HMMVA through HMMVL	T029	Grease Bulk Coilers	Cone	White	Indoor	Hydraulic Oil	1,700	6	8	100	1,000	12,000
HMMVA through HMMVL	T030	Grease Bulk Roll Shop	Cone	White	Indoor	Hydraulic Oil	1,700	6	8	100	1,000	12,000

[1] Outdoor tanks are subject to diurnal temperature changes and therefore include breathing loss emission calculations. Indoor tanks are in a temperature controlled environment and exclude breathing loss emission calculations.

NSWV - PTE Calculations
Ancillary Storage Tanks Emissions Calculation

Working and Breathing Emissions Calculation

Emission Point ID	Emission Unit ID	Description	Product Stored	Maximum Daily Liquid Surface Temperature[1] (°R)	Vapor Pressure at Maximum Liquid Surface Temperature (P_{VA})[2] (psia)	Vapor Molecular Weight (M_V)[3] (lb/lb-mol)	Hourly Emissions[4] (lb/hr)	Annual Emissions[5] (tpy)
T001	T001	Diesel Tank	Diesel	563.67	0.024	130	5.14E-04	2.25E-03
T002	T002	Diesel Tank	Diesel	563.67	0.024	130	5.14E-04	2.25E-03
T003	T003	Diesel Tank	Diesel	563.67	0.024	130	5.14E-04	2.25E-03
T004	T004	Diesel Tank	Diesel	563.67	0.024	130	5.14E-04	2.25E-03
T005	T005	Diesel Tank	Diesel	563.67	0.024	130	5.14E-04	2.25E-03
T006	T006	Gasoline Tank	Unleaded Gasoline	563.67	15.393	62	1.05E-01	4.58E-01
CMTKFUG	T007	HCL Tank #1	HCl Acid	563.67	0.010	36	5.92E-04	2.59E-03
CMTKFUG	T008	HCL Tank #2	HCl Acid	563.67	0.010	36	5.92E-04	2.59E-03
CMTKFUG	T009	HCL Tank #3	HCl Acid	563.67	0.010	36	5.92E-04	2.59E-03
CMTKFUG	T010	HCL Tank #4	HCl Acid	563.67	0.010	36	5.92E-04	2.59E-03
CMTKFUG	T011	SPL Tank #1	Spent Pickle Liquor	563.67	0.010	36	5.92E-04	2.59E-03
CMTKFUG	T012	SPL Tank #2	Spent Pickle Liquor	563.67	0.010	36	5.92E-04	2.59E-03
CMTKFUG	T013	SPL Tank #3	Spent Pickle Liquor	563.67	0.010	36	5.92E-04	2.59E-03
CMTKFUG	T014	SPL Tank #4	Spent Pickle Liquor	563.67	0.010	36	5.92E-04	2.59E-03
CMTKFUG	T015	SPL Tank #5	Spent Pickle Liquor	563.67	0.010	36	5.92E-04	2.59E-03
CMTKFUG	T016	SPL Tank #6	Spent Pickle Liquor	563.67	0.010	36	5.92E-04	2.59E-03
CMTKFUG	T017	SPL Tank #7	Spent Pickle Liquor	563.67	0.010	36	5.92E-04	2.59E-03
CMTKFUG	T018	SPL Tank #8	Spent Pickle Liquor	563.67	0.010	36	5.92E-04	2.59E-03
T019	T019	WOT9.1	Used Oil	563.67	0.000	226	2.83E-06	1.24E-05
T020	T020	COT6.3	Used Oil	563.67	0.000	226	2.83E-06	1.24E-05
T021	T021	COT4.3	Used Oil	563.67	0.000	226	2.83E-06	1.24E-05
T022	T022	COT6.1	Used Oil	563.67	0.000	226	6.66E-07	2.92E-06
T023	T023	COT4.1	Used Oil	563.67	0.000	226	6.66E-07	2.92E-06
HMMVA through HMMVL	T024	Hydraulic Bulk	Hydraulic Oil	563.67	0.000	226	8.04E-07	3.52E-06
HMMVA through HMMVL	T025	Hydraulic (Morgoil) Bulk	Hydraulic Oil	563.67	0.000	226	8.04E-07	3.52E-06
HMMVA through HMMVL	T026	Grease Bulk RM/FM	Hydraulic Oil	563.67	0.000	226	8.04E-07	3.52E-06
HMMVA through HMMVL	T027	Grease Bulk Coilers	Hydraulic Oil	563.67	0.000	226	8.04E-07	3.52E-06
HMMVA through HMMVL	T028	Grease Bulk RM/FM	Hydraulic Oil	563.67	0.000	226	8.04E-07	3.52E-06
HMMVA through HMMVL	T029	Grease Bulk Coilers	Hydraulic Oil	563.67	0.000	226	8.04E-07	3.52E-06
HMMVA through HMMVL	T030	Grease Bulk Roll Shop	Hydraulic Oil	563.67	0.000	226	8.04E-07	3.52E-06

[1] Maximum daily liquid surface temperature is conservatively assumed to be 105°F.

[2] Vapor pressure at maximum liquid surface temperature is calculated based on antoine's coefficients.

[3] Molecular weight of diesel were obtained from AP-42 Table 7.1-2 for distillate fuel oil No. 2 or respective MSDS.

[4] Hourly emissions = Annual Emissions (tpy) x 2,000 (lb/ton) / 8,760 (hr/yr)

$$\text{Maximum Hourly Emissions (lb/hr)} = \frac{2.2\text{E-}03 \text{ ton}}{\text{yr}} \left| \frac{2{,}000 \text{ lb}}{\text{ton}} \right| \frac{1 \text{ yr}}{8{,}760 \text{ hr}} = 5.14\text{E-}04 \text{ lb/hr}$$

[5] Annual emissions are based on AP-42 Section 7.1.3.1 (October 2024). See separate pages.

NSWV - PTE Calculations
Ancillary Diesel Storage Tank Annual Emissions Calculation

Calculation performed in accordance with AP-42, November 2006, Section 7.1.3.1.

Variable	
Tank Identification	T001
CIN	N/A
Discharging to	Atmosphere
EPN	T001
Location for Calculation Purposes	Huntington, West Virginia
Tank/Roof Type	Horizontal Tank
Underground?	Aboveground
Diameter, ft	12.0
Shell Height or Length, ft	18.0
Nominal Capacity, gal	15,000
Breather Vent Type	Combination Vent Valve
Shell Paint Color	White
Shell Paint Condition	Good
Roof Paint Color	White
Roof Paint Condition	Good

	January	February	March	April	May	June	July	August	September	October	November	December
Type of Substance	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid
Contents of Tank	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel
Throughput, gallons/month	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**
Effective Diameter, ft	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6
Effective Height, ft	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
Working Capacity, gal	15,228	15,228	15,228	15,228	15,228	15,228	15,228	15,228	15,228	15,228	15,228	15,228
Maximum Liquid Height, ft	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Liquid Height, ft	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Liquid Height, ft	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Vapor Space Outage, ft	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.71
Vapor Space Volume, ft^3	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018
Average Daily Minimum Ambient Temperature, F	23.20	26.10	35.50	43.80	52.40	60.40	65.00	63.90	57.10	45.00	37.00	28.40
Average Daily Maximum Ambient Temperature, F	40.70	44.20	56.50	66.80	75.20	81.30	84.30	83.10	78.00	67.20	55.90	45.30
Daily Total Solar Insolation Factor, Btu/ft^2/day	619	856	1174	1509	1776	1905	1842	1657	1371	1044	677	526
Daily Average Ambient Temperature, F	32.0	35.2	46.0	55.3	63.8	70.9	74.7	73.5	67.6	56.1	46.5	36.9
Tank Paint Solar Absorbance, dimensionless	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
Daily Vapor Temperature Range, R	15.5	17.1	20.7	23.7	24.9	24.1	22.7	21.7	21.6	21.0	16.8	14.7
Daily Average Liquid Surf. Temperature, F	32.8	36.3	47.6	57.3	66.2	73.4	77.1	75.7	69.4	57.5	47.4	37.6
Daily Minimum Liquid Surf. Temperature, F	28.9	32.0	42.4	51.4	60.0	67.4	71.5	70.3	64.0	52.3	43.2	33.9
Daily Maximum Liquid Surf. Temperature, F	36.7	40.6	52.8	63.3	72.4	79.4	82.8	81.2	74.8	62.8	51.6	41.2
Liquid Bulk Temperature	32.0	35.2	46.0	55.3	63.8	70.9	74.7	73.5	67.6	56.1	46.5	36.9
Vapor Molecular Weight, lb/lbmol	130.00	130.00	130.00	130.00	130.00	130.00	130.00	130.00	130.00	130.00	130.00	130.00
Antoine's Coefficient A	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80
Antoine's Coefficient B	686.26	686.26	686.26	686.26	686.26	686.26	686.26	686.26	686.26	686.26	686.26	686.26
Antoine's Coefficient C	144.92	144.92	144.92	144.92	144.92	144.92	144.92	144.92	144.92	144.92	144.92	144.92
Vapor Pressure at Daily Av. Liquid Surf. Temp., psia	0.0023	0.0027	0.0041	0.0059	0.0079	0.0100	0.0112	0.0107	0.0088	0.0059	0.0041	0.0028
Vapor Pressure at Daily Min. Liquid Surf. Temp., psia	0.0020	0.0022	0.0034	0.0048	0.0064	0.0082	0.0094	0.0090	0.0074	0.0049	0.0035	0.0024
Vapor Pressure at Daily Max. Liquid Surf. Temp., psia	0.0027	0.0032	0.0050	0.0072	0.0097	0.0120	0.0132	0.0126	0.0104	0.0071	0.0048	0.0033
Vapor Density, lb/ft^3	0.00006	0.00007	0.00010	0.00014	0.00018	0.00023	0.00025	0.00024	0.00020	0.00014	0.00010	0.00007
Daily Vapor Pressure range, psi	0.0007	0.0009	0.0016	0.0024	0.0032	0.0038	0.0039	0.0036	0.0030	0.0022	0.0013	0.0008
Breather Vent Pressure Setting, psig	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300
Breather Vent Vacuum Setting, psig	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300
Breather Vent Pressure Setting Range, psi	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Ambient Pressure, psia	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
Vapor Space Expansion Factor	0.028	0.0308	0.0373	0.0427	0.0448	0.0434	0.0408	0.0391	0.0388	0.0377	0.0303	0.0264
Vented Vapor Saturation Factor	0.999	0.999	0.999	0.999	0.998	0.998	0.997	0.997	0.998	0.999	0.999	0.999
Annual Turnovers	7.88	7.88	7.88	7.88	7.88	7.88	7.88	7.88	7.88	7.88	7.88	7.88
Turnover Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Working Loss Product Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Standing Storage Loss, lb/mo	0.0502	0.0573	0.1162	0.1795	0.2573	0.2997	0.3239	0.2982	0.2381	0.1646	0.0907	0.0570
Working Loss, lb/mo	0.0716	0.0827	0.1282	0.1820	0.2452	0.3088	0.3461	0.3317	0.2720	0.1831	0.1271	0.0870
Total Losses, lb/mo	0.1219	0.1400	0.2444	0.3615	0.5025	0.6085	0.6701	0.6298	0.5101	0.3477	0.2178	0.1441

Standing Storage Loss, lb/yr	2.1328
Working Loss, lb/yr	2.3656
Total Losses, lb/yr	4.4984

NSWV - PTE Calculations
Ancillary Diesel Storage Tank Annual Emissions Calculation

Calculation performed in accordance with AP-42, November 2006, Section 7.1.3.1.

Sample Calculations

Emissions were calculated on a pounds per month basis. The emissions for each month were then summed in order to estimate annual emissions. Monthly emissions were calculated according to the calculation methodology for fixed roof tanks explained in EPA AP-42 Chapter 7 for Organic Liquid Storage Tanks.

A sample calculation has been provided for the tank, material, and month which had the highest emissions. All Input data and intermediate calculation information has been provided.

Estimating Monthly Emissions from Fixed Roof Tanks

[LT] = [LS] + [LW]

[LS] = [MD] x [VV] x [WV] x [KE] x [KS]

[LW] = 0.001 x [MV] x [PVA] x [Q] x [KN] x [KP]

Where:

LT	Total Losses, lb/mo
LS	Standing Storage Loss, lb/mo
LW	Working Loss, lb/mo
MD	Days in month
VV	Vapor Space Volume, ft^3
WV	Vapor Density, lb/ft^3
KE	Vapor Space Expansion Factor

Where:

KS	Vented Vapor Saturation Factor
MV	Vapor Molecular Weight, lb/lbmol
PVA	Vapor Pressure at Daily Av. Liquid Surf. Temp., psia
Q	Throughput, gallons/month
KN	Turnover Factor
KP	Working Loss Product Factor

Maximum Monthly Emissions:

Material	Diesel
Month	July

Values for Sample Calculation

LT	0.6701	KS	0.9972
LS	0.3239	MV	130
LW	0.3461	PVA	0.0112
MD	31	Q	10,000
VV	1017.8760	KN	1.0000
WV	0.0003	KP	1
KE	0.0408		

[LT] = [0.3239] + [0.3461] = 0.6701 lbs

[LS] = [31] x [1017.8760] x [0.0003] x [0.0408] x [0.9972] = 0.3239 lbs

[LW] = 0.001 x [130] x [0.0112] x [10,000] x [1.0000] x [1] = 0.3461 lbs

NSWV - PTE Calculations
Ancillary Diesel Storage Tank Annual Emissions Calculation

Calculation performed in accordance with AP-42, November 2006, Section 7.1.3.1.

Variable	
Tank Identification	T002 - T005
CIN	N/A
Discharging to	Atmosphere
EPN	T002 - T005
Location for Calculation Purposes	Huntington, West Virginia
Tank/Roof Type	Horizontal Tank
Underground?	Aboveground
Diameter, ft	12.0
Shell Height or Length, ft	18.0
Nominal Capacity, gal	1,000
Breather Vent Type	Combination Vent Valve
Shell Paint Color	White
Shell Paint Condition	Good
Roof Paint Color	White
Roof Paint Condition	Good

	January	February	March	April	May	June	July	August	September	October	November	December
Type of Substance	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid
Contents of Tank	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel
Throughput, gallons/month	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**
Effective Diameter, ft	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6
Effective Height, ft	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
Working Capacity, gal	15,228	15,228	15,228	15,228	15,228	15,228	15,228	15,228	15,228	15,228	15,228	15,228
Maximum Liquid Height, ft	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Liquid Height, ft	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Liquid Height, ft	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Vapor Space Outage, ft	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.71
Vapor Space Volume, ft^3	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018
Average Daily Minimum Ambient Temperature, F	23.20	26.10	35.50	43.80	52.40	60.40	65.00	63.90	57.10	45.00	37.00	28.40
Average Daily Maximum Ambient Temperature, F	40.70	44.20	56.50	66.80	75.20	81.30	84.30	83.10	78.00	67.20	55.90	45.30
Daily Total Solar Insolation Factor, Btu/ft^2/day	619	856	1174	1509	1776	1905	1842	1657	1371	1044	677	526
Daily Average Ambient Temperature, F	32.0	35.2	46.0	55.3	63.8	70.9	74.7	73.5	67.6	56.1	46.5	36.9
Tank Paint Solar Absorbance, dimensionless	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
Daily Vapor Temperature Range, R	15.5	17.1	20.7	23.7	24.9	24.1	22.7	21.7	21.6	21.0	16.8	14.7
Daily Average Liquid Surf. Temperature, F	32.8	36.3	47.6	57.3	66.2	73.4	77.1	75.7	69.4	57.5	47.4	37.6
Daily Minimum Liquid Surf. Temperature, F	28.9	32.0	42.4	51.4	60.0	67.4	71.5	70.3	64.0	52.3	43.2	33.9
Daily Maximum Liquid Surf. Temperature, F	36.7	40.6	52.8	63.3	72.4	79.4	82.8	81.2	74.8	62.8	51.6	41.2
Liquid Bulk Temperature	32.0	35.2	46.0	55.3	63.8	70.9	74.7	73.5	67.6	56.1	46.5	36.9
Vapor Molecular Weight, lb/lbmol	130.00	130.00	130.00	130.00	130.00	130.00	130.00	130.00	130.00	130.00	130.00	130.00
Antoine's Coefficient A	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80
Antoine's Coefficient B	686.26	686.26	686.26	686.26	686.26	686.26	686.26	686.26	686.26	686.26	686.26	686.26
Antoine's Coefficient C	144.92	144.92	144.92	144.92	144.92	144.92	144.92	144.92	144.92	144.92	144.92	144.92
Vapor Pressure at Daily Av. Liquid Surf. Temp., psia	0.0023	0.0027	0.0041	0.0059	0.0079	0.0100	0.0112	0.0107	0.0088	0.0059	0.0041	0.0028
Vapor Pressure at Daily Min. Liquid Surf. Temp., psia	0.0020	0.0022	0.0034	0.0048	0.0064	0.0082	0.0094	0.0090	0.0074	0.0049	0.0035	0.0024
Vapor Pressure at Daily Max. Liquid Surf. Temp., psia	0.0027	0.0032	0.0050	0.0072	0.0097	0.0120	0.0132	0.0126	0.0104	0.0071	0.0048	0.0033
Vapor Density, lb/ft^3	0.00006	0.00007	0.00010	0.00014	0.00018	0.00023	0.00025	0.00024	0.00020	0.00014	0.00010	0.00007
Daily Vapor Pressure range, psi	0.0007	0.0009	0.0016	0.0024	0.0032	0.0038	0.0039	0.0036	0.0030	0.0022	0.0013	0.0008
Breather Vent Pressure Setting, psig	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300
Breather Vent Vacuum Setting, psig	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300
Breather Vent Pressure Setting Range, psi	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Ambient Pressure, psia	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
Vapor Space Expansion Factor	0.028	0.0308	0.0373	0.0427	0.0448	0.0434	0.0408	0.0391	0.0388	0.0377	0.0303	0.0264
Vented Vapor Saturation Factor	0.999	0.999	0.999	0.999	0.998	0.998	0.997	0.997	0.998	0.999	0.999	0.999
Annual Turnovers	7.88	7.88	7.88	7.88	7.88	7.88	7.88	7.88	7.88	7.88	7.88	7.88
Turnover Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Working Loss Product Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Standing Storage Loss, lb/mo	0.0502	0.0573	0.1162	0.1795	0.2573	0.2997	0.3239	0.2982	0.2381	0.1646	0.0907	0.0570
Working Loss, lb/mo	0.0716	0.0827	0.1282	0.1820	0.2452	0.3088	0.3461	0.3317	0.2720	0.1831	0.1271	0.0870
Total Losses, lb/mo	0.1219	0.1400	0.2444	0.3615	0.5025	0.6085	0.6701	0.6298	0.5101	0.3477	0.2178	0.1441

Standing Storage Loss, lb/yr	2.1328
Working Loss, lb/yr	2.3656
Total Losses, lb/yr	4.4984

NSWV - PTE Calculations
Ancillary Diesel Storage Tank Annual Emissions Calculation

Calculation performed in accordance with AP-42, November 2006, Section 7.1.3.1.

Sample Calculations

Emissions were calculated on a pounds per month basis. The emissions for each month were then summed in order to estimate annual emissions. Monthly emissions were calculated according to the calculation methodology for fixed roof tanks explained in EPA AP-42 Chapter 7 for Organic Liquid Storage Tanks.

A sample calculation has been provided for the tank, material, and month which had the highest emissions. All Input data and intermediate calculation information has been provided.

Estimating Monthly Emissions from Fixed Roof Tanks

[LT] = [LS] + [LW]

[LS] = [MD] x [VV] x [WV] x [KE] x [KS]

[LW] = 0.001 x [MV] x [PVA] x [Q] x [KN] x [KP]

Where:

LT	Total Losses, lb/mo
LS	Standing Storage Loss, lb/mo
LW	Working Loss, lb/mo
MD	Days in month
VV	Vapor Space Volume, ft^3
WV	Vapor Density, lb/ft^3
KE	Vapor Space Expansion Factor

Where:

KS	Vented Vapor Saturation Factor
MV	Vapor Molecular Weight, lb/lbmol
PVA	Vapor Pressure at Daily Av. Liquid Surf. Temp., psia
Q	Throughput, gallons/month
KN	Turnover Factor
KP	Working Loss Product Factor

Maximum Monthly Emissions:

Material	Diesel
Month	July

Values for Sample Calculation

[LT] = [0.3239] + [0.3461] = 0.6701 lbs

[LS] = [31] x [1017.8760] x [0.0003] x [0.0408] x [0.9972] = 0.3239 lbs

[LW] = 0.001 x [130] x [0.0112] x [10,000] x [1.0000] x [1] = 0.3461 lbs

LT	0.6701	KS	0.9972
LS	0.3239	MV	130
LW	0.3461	PVA	0.0112
MD	31	Q	10,000
VV	1017.8760	KN	1.0000
WV	0.0003	KP	1
KE	0.0408		

NSWV - PTE Calculations
Ancillary Gasoline Storage Tank Annual Emissions Calculation

Calculation performed in accordance with AP-42, November 2006, Section 7.1.3.1.

Variable	
Tank Identification	T006
CIN	N/A
Discharging to	Atmosphere
EPN	T006
Location for Calculation Purposes	Huntington, West Virginia
Tank/Roof Type	Horizontal Tank
Underground?	Aboveground
Diameter, ft	5.0
Shell Height or Length, ft	8.0
Nominal Capacity, gal	1,000
Breather Vent Type	Combination Vent Valve
Shell Paint Color	White
Shell Paint Condition	Good
Roof Paint Color	White
Roof Paint Condition	Good

	January	February	March	April	May	June	July	August	September	October	November	December
Type of Substance	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid
Contents of Tank	Unleaded Gasoline	Unleaded Gasoline	Unleaded Gasoline	Unleaded Gasoline	Unleaded Gasoline	Unleaded Gasoline	Unleaded Gasoline	Unleaded Gasoline	Unleaded Gasoline	Unleaded Gasoline	Unleaded Gasoline	Unleaded Gasoline
Throughput, gallons/month	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**
Effective Diameter, ft	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Effective Height, ft	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Working Capacity, gal	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175
Maximum Liquid Height, ft	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Liquid Height, ft	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Liquid Height, ft	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Vapor Space Outage, ft	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96
Vapor Space Volume, ft^3	79	79	79	79	79	79	79	79	79	79	79	79
Average Daily Minimum Ambient Temperature, F	23.20	26.10	35.50	43.80	52.40	60.40	65.00	63.90	57.10	45.00	37.00	28.40
Average Daily Maximum Ambient Temperature, F	40.70	44.20	56.50	66.80	75.20	81.30	84.30	83.10	78.00	67.20	55.90	45.30
Daily Total Solar Insolation Factor, Btu/ft^2/day	619	856	1174	1509	1776	1905	1842	1657	1371	1044	677	526
Daily Average Ambient Temperature, F	32.0	35.2	46.0	55.3	63.8	70.9	74.7	73.5	67.6	56.1	46.5	36.9
Tank Paint Solar Absorbance, dimensionless	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
Daily Vapor Temperature Range, R	15.5	17.1	20.7	23.7	24.9	24.1	22.7	21.7	21.6	21.0	16.8	14.7
Daily Average Liquid Surf. Temperature, F	32.8	36.3	47.6	57.3	66.2	73.4	77.1	75.7	69.4	57.5	47.4	37.6
Daily Minimum Liquid Surf. Temperature, F	28.9	32.0	42.4	51.4	60.0	67.4	71.5	70.3	64.0	52.3	43.2	33.9
Daily Maximum Liquid Surf. Temperature, F	36.7	40.6	52.8	63.3	72.4	79.4	82.8	81.2	74.8	62.8	51.6	41.2
Liquid Bulk Temperature	32.0	35.2	46.0	55.3	63.8	70.9	74.7	73.5	67.6	56.1	46.5	36.9
Vapor Molecular Weight, lb/lbmol	62.00	62.00	62.00	62.00	62.00	62.00	62.00	62.00	62.00	62.00	62.00	62.00
Antoine's Coefficient A	6.77	6.77	6.77	6.77	6.77	6.77	6.77	6.77	6.77	6.77	6.77	6.77
Antoine's Coefficient B	1209.97	1209.97	1209.97	1209.97	1209.97	1209.97	1209.97	1209.97	1209.97	1209.97	1209.97	1209.97
Antoine's Coefficient C	273.11	273.11	273.11	273.11	273.11	273.11	273.11	273.11	273.11	273.11	273.11	273.11
Vapor Pressure at Daily Av. Liquid Surf. Temp., psia	4.2509	4.5694	5.7215	6.8945	8.1186	9.2388	9.8605	9.6227	8.6018	6.9171	5.6972	4.6877
Vapor Pressure at Daily Min. Liquid Surf. Temp., psia	3.9200	4.1846	5.1669	6.1597	7.2430	8.2960	8.9250	8.7424	7.8015	6.2637	5.2446	4.3491
Vapor Pressure at Daily Max. Liquid Surf. Temp., psia	4.6038	4.9820	6.3227	7.6972	9.0758	10.2640	10.8714	10.5714	9.4655	7.6236	6.1805	5.0471
Vapor Density, lb/ft^3	0.04987	0.05323	0.06517	0.07705	0.08920	0.10013	0.10613	0.10384	0.09393	0.07727	0.06492	0.05447
Daily Vapor Pressure range, psi	0.6838	0.7974	1.1559	1.5375	1.8329	1.9679	1.9464	1.8290	1.6640	1.3599	0.9359	0.6979
Breather Vent Pressure Setting, psig	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300
Breather Vent Vacuum Setting, psig	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300
Breather Vent Pressure Setting Range, psi	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Ambient Pressure, psia	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
Vapor Space Expansion Factor	0.093	0.1101	0.1682	0.2447	0.3329	0.4203	0.4646	0.4167	0.3210	0.2160	0.1347	0.0957
Vented Vapor Saturation Factor	0.693	0.678	0.627	0.582	0.542	0.510	0.494	0.500	0.528	0.581	0.628	0.672
Annual Turnovers	102.12	102.12	102.12	102.12	102.12	102.12	102.12	102.12	102.12	102.12	102.12	102.12
Turnover Factor	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Working Loss Product Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Standing Storage Loss, lb/mo	7.8700	8.7316	16.7263	25.8692	39.1881	50.5522	59.2570	52.6365	37.4878	23.6250	12.9348	8.5294
Working Loss, lb/mo	28.8923	31.0569	38.8879	46.8604	55.1802	62.7939	67.0194	65.4035	58.4646	47.0140	38.7228	31.8611
Total Losses, lb/mo	36.7623	39.7885	55.6142	72.7296	94.3683	113.3461	126.2765	118.0400	95.9523	70.6390	51.6576	40.3905

Standing Storage Loss, lb/yr	343.4079
Working Loss, lb/yr	572.1571
Total Losses, lb/yr	915.5651

NSWV - PTE Calculations
Ancillary Gasoline Storage Tank Annual Emissions Calculation

Calculation performed in accordance with AP-42, November 2006, Section 7.1.3.1.
Sample Calculations

Emissions were calculated on a pounds per month basis. The emissions for each month were then summed in order to estimate annual emissions. Monthly emissions were calculated according to the calculation methodology for fixed roof tanks explained in EPA AP-42 Chapter 7 for Organic Liquid Storage Tanks.

A sample calculation has been provided for the tank, material, and month which had the highest emissions. All Input data and intermediate calculation information has been provided.

Estimating Monthly Emissions from Fixed Roof Tanks

[LT] = [LS] + [LW]

[LS] = [MD] x [VV] x [WV] x [KE] x [KS]

[LW] = 0.001 x [MV] x [PVA] x [Q] x [KN] x [KP]

Maximum Monthly Emissions:

Material	Unleaded Gasoline
Month	July

[LT] = [59.2570] + [67.0194] = 126.2765 lbs

[LS] = [31] x [78.5398] x [0.1061] x [0.4646] x [0.4936] = 59.2570 lbs

[LW] = 0.001 x [62] x [9.8605] x [10,000] x [0.4604] x [1] = 67.0194 lbs

Where:

LT	Total Losses, lb/mo
LS	Standing Storage Loss, lb/mo
LW	Working Loss, lb/mo
MD	Days in month
VV	Vapor Space Volume, ft^3
WV	Vapor Density, lb/ft^3
KE	Vapor Space Expansion Factor

Where:

KS	Vented Vapor Saturation Factor
MV	Vapor Molecular Weight, lb/lbmol
PVA	Vapor Pressure at Daily Av. Liquid Surf. Temp., psia
Q	Throughput, gallons/month
KN	Turnover Factor
KP	Working Loss Product Factor

Values for Sample Calculation

LT	126.2765	KS	0.4936
LS	59.2570	MV	62
LW	67.0194	PVA	9.8605
MD	31	Q	10,000
VV	78.5398	KN	0.4604
WV	0.1061	KP	1
KE	0.4646		

NSWV - PTE Calculations
Ancillary HCL Storage Tank Annual Emissions Calculation

Calculation performed in accordance with AP-42, November 2006, Section 7.1.3.1.

Variable	
Tank Identification	T007 - T010
CIN	N/A
Discharging to	Atmosphere
EPN	T007 - T010
Location for Calculation Purposes	Huntington, West Virginia
Tank/Roof Type	Cone
Underground?	Aboveground
Diameter, ft	14.0
Shell Height or Length, ft	35.0
Nominal Capacity, gal	40,414
Breather Vent Type	Combination Vent Valve
Shell Paint Color	White
Shell Paint Condition	Good
Roof Paint Color	White
Roof Paint Condition	Good

	January	February	March	April	May	June	July	August	September	October	November	December
Type of Substance	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid
Contents of Tank	HCl Acid	HCl Acid	HCl Acid	HCl Acid	HCl Acid	HCl Acid	HCl Acid	HCl Acid	HCl Acid	HCl Acid	HCl Acid	HCl Acid
Throughput, gallons/month	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**
Effective Diameter, ft	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
Effective Height, ft	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Working Capacity, gal	40,304	40,304	40,304	40,304	40,304	40,304	40,304	40,304	40,304	40,304	40,304	40,304
Maximum Liquid Height, ft	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Minimum Liquid Height, ft	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Liquid Height, ft	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50
Vapor Space Outage, ft	17.65	17.65	17.65	17.65	17.65	17.65	17.65	17.65	17.65	17.65	17.65	17.65
Vapor Space Volume, ft^3	2716	2716	2716	2716	2716	2716	2716	2716	2716	2716	2716	2716
Average Daily Minimum Ambient Temperature, F	23.20	26.10	35.50	43.80	52.40	60.40	65.00	63.90	57.10	45.00	37.00	28.40
Average Daily Maximum Ambient Temperature, F	40.70	44.20	56.50	66.80	75.20	81.30	84.30	83.10	78.00	67.20	55.90	45.30
Daily Total Solar Insolation Factor, Btu/ft^2/day	619	856	1174	1509	1776	1905	1842	1657	1371	1044	677	526
Daily Average Ambient Temperature, F	32.0	35.2	46.0	55.3	63.8	70.9	74.7	73.5	67.6	56.1	46.5	36.9
Tank Paint Solar Absorbance, dimensionless	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
Daily Vapor Temperature Range, R	15.5	17.1	20.7	23.7	24.9	24.1	22.7	21.7	21.6	21.0	16.8	14.7
Daily Average Liquid Surf. Temperature, F	32.8	36.3	47.6	57.3	66.2	73.4	77.1	75.7	69.4	57.5	47.4	37.6
Daily Minimum Liquid Surf. Temperature, F	28.9	32.0	42.4	51.4	60.0	67.4	71.5	70.3	64.0	52.3	43.2	33.9
Daily Maximum Liquid Surf. Temperature, F	36.7	40.6	52.8	63.3	72.4	79.4	82.8	81.2	74.8	62.8	51.6	41.2
Liquid Bulk Temperature	32.0	35.2	46.0	55.3	63.8	70.9	74.7	73.5	67.6	56.1	46.5	36.9
Vapor Molecular Weight, lb/lbmol	36.46	36.46	36.46	36.46	36.46	36.46	36.46	36.46	36.46	36.46	36.46	36.46
Antoine's Coefficient A	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25
Antoine's Coefficient B	764.84	764.84	764.84	764.84	764.84	764.84	764.84	764.84	764.84	764.84	764.84	764.84
Antoine's Coefficient C	259.93	259.93	259.93	259.93	259.93	259.93	259.93	259.93	259.93	259.93	259.93	259.93
Vapor Pressure at Daily Av. Liquid Surf. Temp., psia	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100
Vapor Pressure at Daily Min. Liquid Surf. Temp., psia	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100
Vapor Pressure at Daily Max. Liquid Surf. Temp., psia	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100
Vapor Density, lb/ft^3	0.00007	0.00007	0.00007	0.00007	0.00006	0.00006	0.00006	0.00006	0.00006	0.00007	0.00007	0.00007
Daily Vapor Pressure range, psi	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Breather Vent Pressure Setting, psig	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300
Breather Vent Vacuum Setting, psig	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300
Breather Vent Pressure Setting Range, psi	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Ambient Pressure, psia	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
Vapor Space Expansion Factor	0.028	0.0308	0.0373	0.0427	0.0448	0.0434	0.0408	0.0391	0.0388	0.0377	0.0303	0.0264
Vented Vapor Saturation Factor	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991
Annual Turnovers	14.89	14.89	14.89	14.89	14.89	14.89	14.89	14.89	14.89	14.89	14.89	14.89
Turnover Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Working Loss Product Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Standing Storage Loss, lb/mo	0.1604	0.1583	0.2074	0.2258	0.2403	0.2224	0.2145	0.2060	0.2005	0.2058	0.1632	0.1499
Working Loss, lb/mo	0.4322	0.4322	0.4322	0.4322	0.4322	0.4322	0.4322	0.4322	0.4322	0.4322	0.4322	0.4322
Total Losses, lb/mo	0.5926	0.5905	0.6397	0.6581	0.6725	0.6547	0.6468	0.6383	0.6328	0.6381	0.5955	0.5822

Standing Storage Loss, lb/yr	2.3547
Working Loss, lb/yr	5.1869
Total Losses, lb/yr	7.5416

NSWV - PTE Calculations
Ancillary HCL Storage Tank Annual Emissions Calculation

Calculation performed in accordance with AP-42, November 2006, Section 7.1.3.1.

Sample Calculations

Emissions were calculated on a pounds per month basis. The emissions for each month were then summed in order to estimate annual emissions. Monthly emissions were calculated according to the calculation methodology for fixed roof tanks explained in EPA AP-42 Chapter 7 for Organic Liquid Storage Tanks.

A sample calculation has been provided for the tank, material, and month which had the highest emissions. All Input data and intermediate calculation information has been provided.

Estimating Monthly Emissions from Fixed Roof Tanks

[LT] = [LS] + [LW]

[LS] = [MD] x [VV] x [WV] x [KE] x [KS]

[LW] = 0.001 x [MV] x [PVA] x [Q] x [KN] x [KP]

Where:

LT	Total Losses, lb/mo
LS	Standing Storage Loss, lb/mo
LW	Working Loss, lb/mo
MD	Days in month
VV	Vapor Space Volume, ft^3
WV	Vapor Density, lb/ft^3
KE	Vapor Space Expansion Factor

Where:

KS	Vented Vapor Saturation Factor
MV	Vapor Molecular Weight, lb/lbmol
PVA	Vapor Pressure at Daily Av. Liquid Surf. Temp., psia
Q	Throughput, gallons/month
KN	Turnover Factor
KP	Working Loss Product Factor

Maximum Monthly Emissions:

Material	HCl Acid
Month	July

Values for Sample Calculation

LT	0.6468	KS	0.9908
LS	0.2145	MV	36.46
LW	0.4322	PVA	0.0100
MD	31	Q	50,000
VV	2716.3650	KN	1.0000
WV	0.0001	KP	1
KE	0.0408		

[LT] = [0.2145] + [0.4322] = 0.6468 lbs

[LS] = [31] x [2716.3650] x [0.0001] x [0.0408] x [0.9908] = 0.2145 lbs

[LW] = 0.001 x [36.46] x [0.0100] x [50,000] x [1.0000] x [1] = 0.4322 lbs

NSWV - PTE Calculations
Spent Pickle Liquor Tank Annual Emissions Calculation

Calculation performed in accordance with AP-42, November 2006, Section 7.1.3.1.

Variable	
Tank Identification	T011 - T018
CIN	N/A
Discharging to	Atmosphere
EPN	T011 - T018
Location for Calculation Purposes	Huntington, West Virginia
Tank/Roof Type	Cone
Underground?	Aboveground
Diameter, ft	14.0
Shell Height or Length, ft	35.0
Nominal Capacity, gal	40,414
Breather Vent Type	Combination Vent Valve
Shell Paint Color	White
Shell Paint Condition	Good
Roof Paint Color	White
Roof Paint Condition	Good

	January	February	March	April	May	June	July	August	September	October	November	December
Type of Substance	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid
Contents of Tank	Spent Pickle Liquor	Spent Pickle Liquor	Spent Pickle Liquor	Spent Pickle Liquor	Spent Pickle Liquor	Spent Pickle Liquor	Spent Pickle Liquor	Spent Pickle Liquor	Spent Pickle Liquor	Spent Pickle Liquor	Spent Pickle Liquor	Spent Pickle Liquor
Throughput, gallons/month	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**
Effective Diameter, ft	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
Effective Height, ft	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Working Capacity, gal	40,304	40,304	40,304	40,304	40,304	40,304	40,304	40,304	40,304	40,304	40,304	40,304
Maximum Liquid Height, ft	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Minimum Liquid Height, ft	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Liquid Height, ft	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50
Vapor Space Outage, ft	17.65	17.65	17.65	17.65	17.65	17.65	17.65	17.65	17.65	17.65	17.65	17.65
Vapor Space Volume, ft^3	2716	2716	2716	2716	2716	2716	2716	2716	2716	2716	2716	2716
Average Daily Minimum Ambient Temperature, F	23.20	26.10	35.50	43.80	52.40	60.40	65.00	63.90	57.10	45.00	37.00	28.40
Average Daily Maximum Ambient Temperature, F	40.70	44.20	56.50	66.80	75.20	81.30	84.30	83.10	78.00	67.20	55.90	45.30
Daily Total Solar Insolation Factor, Btu/ft^2/day	619	856	1174	1509	1776	1905	1842	1657	1371	1044	677	526
Daily Average Ambient Temperature, F	32.0	35.2	46.0	55.3	63.8	70.9	74.7	73.5	67.6	56.1	46.5	36.9
Tank Paint Solar Absorbance, dimensionless	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
Daily Vapor Temperature Range, R	15.5	17.1	20.7	23.7	24.9	24.1	22.7	21.7	21.6	21.0	16.8	14.7
Daily Average Liquid Surf. Temperature, F	32.8	36.3	47.6	57.3	66.2	73.4	77.1	75.7	69.4	57.5	47.4	37.6
Daily Minimum Liquid Surf. Temperature, F	28.9	32.0	42.4	51.4	60.0	67.4	71.5	70.3	64.0	52.3	43.2	33.9
Daily Maximum Liquid Surf. Temperature, F	36.7	40.6	52.8	63.3	72.4	79.4	82.8	81.2	74.8	62.8	51.6	41.2
Liquid Bulk Temperature	32.0	35.2	46.0	55.3	63.8	70.9	74.7	73.5	67.6	56.1	46.5	36.9
Vapor Molecular Weight, lb/lbmol	36.46	36.46	36.46	36.46	36.46	36.46	36.46	36.46	36.46	36.46	36.46	36.46
Antoine's Coefficient A	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25
Antoine's Coefficient B	764.84	764.84	764.84	764.84	764.84	764.84	764.84	764.84	764.84	764.84	764.84	764.84
Antoine's Coefficient C	259.93	259.93	259.93	259.93	259.93	259.93	259.93	259.93	259.93	259.93	259.93	259.93
Vapor Pressure at Daily Av. Liquid Surf. Temp., psia	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100
Vapor Pressure at Daily Min. Liquid Surf. Temp., psia	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100
Vapor Pressure at Daily Max. Liquid Surf. Temp., psia	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100
Vapor Density, lb/ft^3	0.00007	0.00007	0.00007	0.00007	0.00006	0.00006	0.00006	0.00006	0.00006	0.00007	0.00007	0.00007
Daily Vapor Pressure range, psi	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Breather Vent Pressure Setting, psig	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300
Breather Vent Vacuum Setting, psig	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300
Breather Vent Pressure Setting Range, psi	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Ambient Pressure, psia	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
Vapor Space Expansion Factor	0.028	0.0308	0.0373	0.0427	0.0448	0.0434	0.0408	0.0391	0.0388	0.0377	0.0303	0.0264
Vented Vapor Saturation Factor	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991
Annual Turnovers	14.89	14.89	14.89	14.89	14.89	14.89	14.89	14.89	14.89	14.89	14.89	14.89
Turnover Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Working Loss Product Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Standing Storage Loss, lb/mo	0.1604	0.1583	0.2074	0.2258	0.2403	0.2224	0.2145	0.2060	0.2005	0.2058	0.1632	0.1499
Working Loss, lb/mo	0.4322	0.4322	0.4322	0.4322	0.4322	0.4322	0.4322	0.4322	0.4322	0.4322	0.4322	0.4322
Total Losses, lb/mo	0.5926	0.5905	0.6397	0.6581	0.6725	0.6547	0.6468	0.6383	0.6328	0.6381	0.5955	0.5822

Standing Storage Loss, lb/yr	2.3547
Working Loss, lb/yr	5.1869
Total Losses, lb/yr	7.5416

NSWV - PTE Calculations
Spent Pickle Liquor Tank Annual Emissions Calculation

Calculation performed in accordance with AP-42, November 2006, Section 7.1.3.1.

Sample Calculations

Emissions were calculated on a pounds per month basis. The emissions for each month were then summed in order to estimate annual emissions. Monthly emissions were calculated according to the calculation methodology for fixed roof tanks explained in EPA AP-42 Chapter 7 for Organic Liquid Storage Tanks.

A sample calculation has been provided for the tank, material, and month which had the highest emissions. All Input data and intermediate calculation information has been provided.

Estimating Monthly Emissions from Fixed Roof Tanks

[LT] = [LS] + [LW]

[LS] = [MD] x [VV] x [WV] x [KE] x [KS]

[LW] = 0.001 x [MV] x [PVA] x [Q] x [KN] x [KP]

Where:

LT	Total Losses, lb/mo
LS	Standing Storage Loss, lb/mo
LW	Working Loss, lb/mo
MD	Days in month
VV	Vapor Space Volume, ft^3
WV	Vapor Density, lb/ft^3
KE	Vapor Space Expansion Factor

Where:

KS	Vented Vapor Saturation Factor
MV	Vapor Molecular Weight, lb/lbmol
PVA	Vapor Pressure at Daily Av. Liquid Surf. Temp., psia
Q	Throughput, gallons/month
KN	Turnover Factor
KP	Working Loss Product Factor

Maximum Monthly Emissions:

Material	Spent Pickle Liquor
Month	July

[LT] = [0.2145] + [0.4322] = 0.6468 lbs

[LS] = [31] x [2716.3650] x [0.0001] x [0.0408] x [0.9908] = 0.2145 lbs

[LW] = 0.001 x [36.46] x [0.0100] x [50,000] x [1.0000] x [1] = 0.4322 lbs

Values for Sample Calculation

LT	0.6468	KS	0.9908
LS	0.2145	MV	36.46
LW	0.4322	PVA	0.0100
MD	31	Q	50,000
VV	2716.3650	KN	1.0000
WV	0.0001	KP	1
KE	0.0408		

NSWV - PTE Calculations
Ancillary Oil/Grease Storage Tank Annual Emissions Calculation

Calculation performed in accordance with AP-42, November 2006, Section 7.1.3.1.

Variable	
Tank Identification	T019 - T021
CIN	N/A
Discharging to	Atmosphere
EPN	T019 - T021
Location for Calculation Purposes	Huntington, West Virginia
Tank/Roof Type	Cone
Underground?	Aboveground
Diameter, ft	12.0
Shell Height or Length, ft	12.0
Nominal Capacity, gal	10,000
Breather Vent Type	Combination Vent Valve
Shell Paint Color	White
Shell Paint Condition	Good
Roof Paint Color	White
Roof Paint Condition	Good

	January	February	March	April	May	June	July	August	September	October	November	December
Type of Substance	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid
Contents of Tank	Used Oil	Used Oil	Used Oil	Used Oil	Used Oil	Used Oil	Used Oil	Used Oil	Used Oil	Used Oil	Used Oil	Used Oil
Throughput, gallons/month	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**
Effective Diameter, ft	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Effective Height, ft	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Working Capacity, gal	10,152	10,152	10,152	10,152	10,152	10,152	10,152	10,152	10,152	10,152	10,152	10,152
Maximum Liquid Height, ft	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Liquid Height, ft	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Liquid Height, ft	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Vapor Space Outage, ft	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13
Vapor Space Volume, ft^3	693	693	693	693	693	693	693	693	693	693	693	693
Average Daily Minimum Ambient Temperature, F	23.20	26.10	35.50	43.80	52.40	60.40	65.00	63.90	57.10	45.00	37.00	28.40
Average Daily Maximum Ambient Temperature, F	40.70	44.20	56.50	66.80	75.20	81.30	84.30	83.10	78.00	67.20	55.90	45.30
Daily Total Solar Insolation Factor, Btu/ft^2/day	619	856	1174	1509	1776	1905	1842	1657	1371	1044	677	526
Daily Average Ambient Temperature, F	32.0	35.2	46.0	55.3	63.8	70.9	74.7	73.5	67.6	56.1	46.5	36.9
Tank Paint Solar Absorbance, dimensionless	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
Daily Vapor Temperature Range, R	15.5	17.1	20.7	23.7	24.9	24.1	22.7	21.7	21.6	21.0	16.8	14.7
Daily Average Liquid Surf. Temperature, F	32.8	36.3	47.6	57.3	66.2	73.4	77.1	75.7	69.4	57.5	47.4	37.6
Daily Minimum Liquid Surf. Temperature, F	28.9	32.0	42.4	51.4	60.0	67.4	71.5	70.3	64.0	52.3	43.2	33.9
Daily Maximum Liquid Surf. Temperature, F	36.7	40.6	52.8	63.3	72.4	79.4	82.8	81.2	74.8	62.8	51.6	41.2
Liquid Bulk Temperature	32.0	35.2	46.0	55.3	63.8	70.9	74.7	73.5	67.6	56.1	46.5	36.9
Vapor Molecular Weight, lb/lbmol	226.45	226.45	226.45	226.45	226.45	226.45	226.45	226.45	226.45	226.45	226.45	226.45
Antoine's Coefficient A	7.59	7.59	7.59	7.59	7.59	7.59	7.59	7.59	7.59	7.59	7.59	7.59
Antoine's Coefficient B	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60
Antoine's Coefficient C	185.27	185.27	185.27	185.27	185.27	185.27	185.27	185.27	185.27	185.27	185.27	185.27
Vapor Pressure at Daily Av. Liquid Surf. Temp., psia	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	0.0000	0.0000
Vapor Pressure at Daily Min. Liquid Surf. Temp., psia	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000
Vapor Pressure at Daily Max. Liquid Surf. Temp., psia	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	0.0000	0.0000
Vapor Density, lb/ft^3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily Vapor Pressure range, psi	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000
Breather Vent Pressure Setting, psig	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300
Breather Vent Vacuum Setting, psig	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300
Breather Vent Pressure Setting Range, psi	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Ambient Pressure, psia	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
Vapor Space Expansion Factor	0.028	0.0308	0.0373	0.0427	0.0448	0.0434	0.0408	0.0391	0.0388	0.0377	0.0303	0.0264
Vented Vapor Saturation Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Annual Turnovers	2.95	2.95	2.95	2.95	2.95	2.95	2.95	2.95	2.95	2.95	2.95	2.95
Turnover Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Working Loss Product Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Standing Storage Loss, lb/mo	0.0001	0.0002	0.0005	0.0011	0.0021	0.0030	0.0037	0.0032	0.0021	0.0010	0.0004	0.0002
Working Loss, lb/mo	0.0001	0.0001	0.0002	0.0004	0.0007	0.0011	0.0014	0.0013	0.0009	0.0004	0.0002	0.0001
Total Losses, lb/mo	0.0002	0.0003	0.0007	0.0015	0.0028	0.0042	0.0051	0.0046	0.0030	0.0014	0.0006	0.0003

Standing Storage Loss, lb/yr	0.0177
Working Loss, lb/yr	0.0070
Total Losses, lb/yr	0.0248

NSWV - PTE Calculations
Ancillary Oil/Grease Storage Tank Annual Emissions Calculation

Calculation performed in accordance with AP-42, November 2006, Section 7.1.3.1.

Sample Calculations

Emissions were calculated on a pounds per month basis. The emissions for each month were then summed in order to estimate annual emissions. Monthly emissions were calculated according to the calculation methodology for fixed roof tanks explained in EPA AP-42 Chapter 7 for Organic Liquid Storage Tanks.

A sample calculation has been provided for the tank, material, and month which had the highest emissions. All Input data and intermediate calculation information has been provided.

Estimating Monthly Emissions from Fixed Roof Tanks

[LT] = [LS] + [LW]

[LS] = [MD] x [VV] x [WV] x [KE] x [KS]

[LW] = 0.001 x [MV] x [PVA] x [Q] x [KN] x [KP]

Where:

LT	Total Losses, lb/mo	
LS	Standing Storage Loss, lb/mo	
LW	Working Loss, lb/mo	
MD	Days in month	
VV	Vapor Space Volume, ft^3	
WV	Vapor Density, lb/ft^3	
KE	Vapor Space Expansion Factor	

Where:

KS	Vented Vapor Saturation Factor
MV	Vapor Molecular Weight, lb/lbmol
PVA	Vapor Pressure at Daily Av. Liquid Surf. Temp., psia
Q	Throughput, gallons/month
KN	Turnover Factor
KP	Working Loss Product Factor

Maximum Monthly Emissions:

Material	Used Oil
Month	July

[LT] = [0.0037] + [0.0014] = 0.0051 lbs

[LS] = [31] x [692.7212] x [0.0000] x [0.0408] x [1.0000] = 0.0037 lbs

[LW] = 0.001 x [226.45] x [0.0001] x [2,500] x [1.0000] x [1] = 0.0014 lbs

Values for Sample Calculation

LT	0.0051	KS	1.0000
LS	0.0037	MV	226.45
LW	0.0014	PVA	0.0001
MD	31	Q	2,500
VV	692.7212	KN	1.0000
WV	0.0000	KP	1
KE	0.0408		

NSWV - PTE Calculations
Ancillary Oil/Grease Storage Tank Annual Emissions Calculation

Calculation performed in accordance with AP-42, November 2006, Section 7.1.3.1.

Variable	
Tank Identification	T022 - T023
CIN	N/A
Discharging to	Atmosphere
EPN	T022 - T023
Location for Calculation Purposes	Huntington, West Virginia
Tank/Roof Type	Horizontal Tank
Underground?	Aboveground
Diameter, ft	5.0
Shell Height or Length, ft	12.0
Nominal Capacity, gal	1,750
Breather Vent Type	Combination Vent Valve
Shell Paint Color	White
Shell Paint Condition	Good
Roof Paint Color	White
Roof Paint Condition	Good

	January	February	March	April	May	June	July	August	September	October	November	December
Type of Substance	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid
Contents of Tank	Used Oil	Used Oil	Used Oil	Used Oil	Used Oil	Used Oil	Used Oil	Used Oil	Used Oil	Used Oil	Used Oil	Used Oil
Throughput, gallons/month	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**
Effective Diameter, ft	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
Effective Height, ft	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Working Capacity, gal	1,763	1,763	1,763	1,763	1,763	1,763	1,763	1,763	1,763	1,763	1,763	1,763
Maximum Liquid Height, ft	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Liquid Height, ft	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Liquid Height, ft	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Vapor Space Outage, ft	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96
Vapor Space Volume, ft^3	118	118	118	118	118	118	118	118	118	118	118	118
Average Daily Minimum Ambient Temperature, F	23.20	26.10	35.50	43.80	52.40	60.40	65.00	63.90	57.10	45.00	37.00	28.40
Average Daily Maximum Ambient Temperature, F	40.70	44.20	56.50	66.80	75.20	81.30	84.30	83.10	78.00	67.20	55.90	45.30
Daily Total Solar Insolation Factor, Btu/ft^2/day	619	856	1174	1509	1776	1905	1842	1657	1371	1044	677	526
Daily Average Ambient Temperature, F	32.0	35.2	46.0	55.3	63.8	70.9	74.7	73.5	67.6	56.1	46.5	36.9
Tank Paint Solar Absorbance, dimensionless	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
Daily Vapor Temperature Range, R	15.5	17.1	20.7	23.7	24.9	24.1	22.7	21.7	21.6	21.0	16.8	14.7
Daily Average Liquid Surf. Temperature, F	32.8	36.3	47.6	57.3	66.2	73.4	77.1	75.7	69.4	57.5	47.4	37.6
Daily Minimum Liquid Surf. Temperature, F	28.9	32.0	42.4	51.4	60.0	67.4	71.5	70.3	64.0	52.3	43.2	33.9
Daily Maximum Liquid Surf. Temperature, F	36.7	40.6	52.8	63.3	72.4	79.4	82.8	81.2	74.8	62.8	51.6	41.2
Liquid Bulk Temperature	32.0	35.2	46.0	55.3	63.8	70.9	74.7	73.5	67.6	56.1	46.5	36.9
Vapor Molecular Weight, lb/lbmol	226.45	226.45	226.45	226.45	226.45	226.45	226.45	226.45	226.45	226.45	226.45	226.45
Antoine's Coefficient A	7.59	7.59	7.59	7.59	7.59	7.59	7.59	7.59	7.59	7.59	7.59	7.59
Antoine's Coefficient B	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60
Antoine's Coefficient C	185.27	185.27	185.27	185.27	185.27	185.27	185.27	185.27	185.27	185.27	185.27	185.27
Vapor Pressure at Daily Av. Liquid Surf. Temp., psia	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	0.0000	0.0000
Vapor Pressure at Daily Min. Liquid Surf. Temp., psia	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000
Vapor Pressure at Daily Max. Liquid Surf. Temp., psia	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	0.0000	0.0000
Vapor Density, lb/ft^3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily Vapor Pressure range, psi	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000
Breather Vent Pressure Setting, psig	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300
Breather Vent Vacuum Setting, psig	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300
Breather Vent Pressure Setting Range, psi	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Ambient Pressure, psia	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
Vapor Space Expansion Factor	0.028	0.0308	0.0373	0.0427	0.0448	0.0434	0.0408	0.0391	0.0388	0.0377	0.0303	0.0264
Vented Vapor Saturation Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Annual Turnovers	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.81
Turnover Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Working Loss Product Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Standing Storage Loss, lb/mo	0.0000	0.0000	0.0001	0.0002	0.0004	0.0005	0.0006	0.0006	0.0004	0.0002	0.0001	0.0000
Working Loss, lb/mo	0.0000	0.0000	0.0001	0.0002	0.0003	0.0005	0.0006	0.0005	0.0004	0.0002	0.0001	0.0000
Total Losses, lb/mo	0.0001	0.0001	0.0002	0.0004	0.0006	0.0010	0.0012	0.0011	0.0007	0.0003	0.0002	0.0001

Standing Storage Loss, lb/yr	0.0030
Working Loss, lb/yr	0.0028
Total Losses, lb/yr	0.0058

NSWV - PTE Calculations
Ancillary Oil/Grease Storage Tank Annual Emissions Calculation

Calculation performed in accordance with AP-42, November 2006, Section 7.1.3.1.

Sample Calculations

Emissions were calculated on a pounds per month basis. The emissions for each month were then summed in order to estimate annual emissions. Monthly emissions were calculated according to the calculation methodology for fixed roof tanks explained in EPA AP-42 Chapter 7 for Organic Liquid Storage Tanks.

A sample calculation has been provided for the tank, material, and month which had the highest emissions. All Input data and intermediate calculation information has been provided.

Estimating Monthly Emissions from Fixed Roof Tanks

[LT] = [LS] + [LW]

[LS] = [MD] x [VV] x [WV] x [KE] x [KS]

[LW] = 0.001 x [MV] x [PVA] x [Q] x [KN] x [KP]

Where:

LT	Total Losses, lb/mo
LS	Standing Storage Loss, lb/mo
LW	Working Loss, lb/mo
MD	Days in month
VV	Vapor Space Volume, ft^3
WV	Vapor Density, lb/ft^3
KE	Vapor Space Expansion Factor

Where:

KS	Vented Vapor Saturation Factor
MV	Vapor Molecular Weight, lb/lbmol
PVA	Vapor Pressure at Daily Av. Liquid Surf. Temp., psia
Q	Throughput, gallons/month
KN	Turnover Factor
KP	Working Loss Product Factor

Maximum Monthly Emissions:

Material	Used Oil
Month	July

Values for Sample Calculation

LT	0.0012	KS	1.0000
LS	0.0006	MV	226.45
LW	0.0006	PVA	0.0001
MD	31	Q	1,000
VV	117.8097	KN	1.0000
WV	0.0000	KP	1
KE	0.0408		

[LT] = [0.0006] + [0.0006] = 0.0012 lbs

[LS] = [31] x [117.8097] x [0.0000] x [0.0408] x [1.0000] = 0.0006 lbs

[LW] = 0.001 x [226.45] x [0.0001] x [1,000] x [1.0000] x [1] = 0.0006 lbs

NSWV - PTE Calculations
Ancillary Oil/Grease Storage Tank Annual Emissions Calculation

Calculation performed in accordance with AP-42, November 2006, Section 7.1.3.1.

Variable	
Tank Identification	T024 , T026 - T030
CIN	N/A
Discharging to	Atmosphere
EPN	T024 , T026 - T030
Location for Calculation Purposes	Huntington, West Virginia
Tank/Roof Type	Cone
Underground?	Aboveground
Diameter, ft	8.0
Shell Height or Length, ft	16.0
Nominal Capacity, gal	6000.0
Breather Vent Type	Combination Vent Valve
Shell Paint Color	White
Shell Paint Condition	Good
Roof Paint Color	White
Roof Paint Condition	Good

	January	February	March	April	May	June	July	August	September	October	November	December
Type of Substance	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid
Contents of Tank	Hydraulic Oil	Hydraulic Oil	Hydraulic Oil	Hydraulic Oil	Hydraulic Oil	Hydraulic Oil	Hydraulic Oil	Hydraulic Oil	Hydraulic Oil	Hydraulic Oil	Hydraulic Oil	Hydraulic Oil
Throughput, gallons/month	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**
Effective Diameter, ft	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Effective Height, ft	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
Working Capacity, gal	6,016	6,016	6,016	6,016	6,016	6,016	6,016	6,016	6,016	6,016	6,016	6,016
Maximum Liquid Height, ft	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
Minimum Liquid Height, ft	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Liquid Height, ft	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Vapor Space Outage, ft	8.08	8.08	8.08	8.08	8.08	8.08	8.08	8.08	8.08	8.08	8.08	8.08
Vapor Space Volume, ft^3	406	406	406	406	406	406	406	406	406	406	406	406
Average Daily Minimum Ambient Temperature, F	23.20	26.10	35.50	43.80	52.40	60.40	65.00	63.90	57.10	45.00	37.00	28.40
Average Daily Maximum Ambient Temperature, F	40.70	44.20	56.50	66.80	75.20	81.30	84.30	83.10	78.00	67.20	55.90	45.30
Daily Total Solar Insolation Factor, Btu/ft^2/day	619	856	1174	1509	1776	1905	1842	1657	1371	1044	677	526
Daily Average Ambient Temperature, F	32.0	35.2	46.0	55.3	63.8	70.9	74.7	73.5	67.6	56.1	46.5	36.9
Tank Paint Solar Absorbance, dimensionless	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
Daily Vapor Temperature Range, R	15.5	17.1	20.7	23.7	24.9	24.1	22.7	21.7	21.6	21.0	16.8	14.7
Daily Average Liquid Surf. Temperature, F	32.8	36.3	47.6	57.3	66.2	73.4	77.1	75.7	69.4	57.5	47.4	37.6
Daily Minimum Liquid Surf. Temperature, F	28.9	32.0	42.4	51.4	60.0	67.4	71.5	70.3	64.0	52.3	43.2	33.9
Daily Maximum Liquid Surf. Temperature, F	36.7	40.6	52.8	63.3	72.4	79.4	82.8	81.2	74.8	62.8	51.6	41.2
Liquid Bulk Temperature	32.0	35.2	46.0	55.3	63.8	70.9	74.7	73.5	67.6	56.1	46.5	36.9
Vapor Molecular Weight, lb/lbmol	226.45	226.45	226.45	226.45	226.45	226.45	226.45	226.45	226.45	226.45	226.45	226.45
Antoine's Coefficient A	7.59	7.59	7.59	7.59	7.59	7.59	7.59	7.59	7.59	7.59	7.59	7.59
Antoine's Coefficient B	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60
Antoine's Coefficient C	185.27	185.27	185.27	185.27	185.27	185.27	185.27	185.27	185.27	185.27	185.27	185.27
Vapor Pressure at Daily Av. Liquid Surf. Temp., psia	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	0.0000	0.0000
Vapor Pressure at Daily Min. Liquid Surf. Temp., psia	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000
Vapor Pressure at Daily Max. Liquid Surf. Temp., psia	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	0.0000	0.0000
Vapor Density, lb/ft^3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily Vapor Pressure range, psi	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000
Breather Vent Pressure Setting, psig	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300
Breather Vent Vacuum Setting, psig	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300
Breather Vent Pressure Setting Range, psi	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Ambient Pressure, psia	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
Vapor Space Expansion Factor	0.028	0.0308	0.0373	0.0427	0.0448	0.0434	0.0408	0.0391	0.0388	0.0377	0.0303	0.0264
Vented Vapor Saturation Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Annual Turnovers	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99
Turnover Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Working Loss Product Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Standing Storage Loss, lb/mo	0.0001	0.0001	0.0003	0.0006	0.0012	0.0018	0.0022	0.0019	0.0013	0.0006	0.0002	0.0001
Working Loss, lb/mo	0.0001	0.0001	0.0002	0.0004	0.0007	0.0011	0.0014	0.0013	0.0009	0.0004	0.0002	0.0001
Total Losses, lb/mo	0.0002	0.0002	0.0005	0.0011	0.0020	0.0029	0.0036	0.0032	0.0022	0.0010	0.0004	0.0002

Standing Storage Loss, lb/yr	0.0104
Working Loss, lb/yr	0.0070
Total Losses, lb/yr	0.0174

NSWV - PTE Calculations
Ancillary Oil/Grease Storage Tank Annual Emissions Calculation

Calculation performed in accordance with AP-42, November 2006, Section 7.1.3.1.

Sample Calculations

Emissions were calculated on a pounds per month basis. The emissions for each month were then summed in order to estimate annual emissions. Monthly emissions were calculated according to the calculation methodology for fixed roof tanks explained in EPA AP-42 Chapter 7 for Organic Liquid Storage Tanks.

A sample calculation has been provided for the tank, material, and month which had the highest emissions. All Input data and intermediate calculation information has been provided.

Estimating Monthly Emissions from Fixed Roof Tanks

[LT] = [LS] + [LW]

[LS] = [MD] x [VV] x [WV] x [KE] x [KS]

[LW] = 0.001 x [MV] x [PVA] x [Q] x [KN] x [KP]

Where:

LT	Total Losses, lb/mo
LS	Standing Storage Loss, lb/mo
LW	Working Loss, lb/mo
MD	Days in month
VV	Vapor Space Volume, ft^3
WV	Vapor Density, lb/ft^3
KE	Vapor Space Expansion Factor

Where:

KS	Vented Vapor Saturation Factor
MV	Vapor Molecular Weight, lb/lbmol
PVA	Vapor Pressure at Daily Av. Liquid Surf. Temp., psia
Q	Throughput, gallons/month
KN	Turnover Factor
KP	Working Loss Product Factor

Maximum Monthly Emissions:

Material	Hydraulic Oil
Month	July

[LT] = [0.0022] + [0.0014] = 0.0036 lbs

[LS] = [31] x [406.3126] x [0.0000] x [0.0408] x [1.0000] = 0.0022 lbs

[LW] = 0.001 x [226.45] x [0.0001] x [2,500] x [1.0000] x [1] = 0.0014 lbs

Values for Sample Calculation

LT	0.0036	KS	1.0000
LS	0.0022	MV	226.45
LW	0.0014	PVA	0.0001
MD	31	Q	2,500
VV	406.3126	KN	1.0000
WV	0.0000	KP	1
KE	0.0408		

NSWV - PTE Calculations
Ancillary Oil/Grease Storage Tank Annual Emissions Calculation

Calculation performed in accordance with AP-42, November 2006, Section 7.1.3.1.

Variable	
Tank Identification	T025
CIN	N/A
Discharging to	Atmosphere
EPN	T025
Location for Calculation Purposes	Huntington, West Virginia
Tank/Roof Type	Horizontal Tank
Underground?	Aboveground
Diameter, ft	8.0
Shell Height or Length, ft	22.0
Nominal Capacity, gal	8000.0
Breather Vent Type	Combination Vent Valve
Shell Paint Color	White
Shell Paint Condition	Good
Roof Paint Color	White
Roof Paint Condition	Good

	January	February	March	April	May	June	July	August	September	October	November	December
Type of Substance	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid	Organic Liquid
Contents of Tank	Hydraulic Oil	Hydraulic Oil	Hydraulic Oil	Hydraulic Oil	Hydraulic Oil	Hydraulic Oil	Hydraulic Oil	Hydraulic Oil	Hydraulic Oil	Hydraulic Oil	Hydraulic Oil	Hydraulic Oil
Throughput, gallons/month	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**	**2,500**
Effective Diameter, ft	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Effective Height, ft	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Working Capacity, gal	8,272	8,272	8,272	8,272	8,272	8,272	8,272	8,272	8,272	8,272	8,272	8,272
Maximum Liquid Height, ft	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Liquid Height, ft	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Liquid Height, ft	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Vapor Space Outage, ft	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14	3.14
Vapor Space Volume, ft^3	553	553	553	553	553	553	553	553	553	553	553	553
Average Daily Minimum Ambient Temperature, F	23.20	26.10	35.50	43.80	52.40	60.40	65.00	63.90	57.10	45.00	37.00	28.40
Average Daily Maximum Ambient Temperature, F	40.70	44.20	56.50	66.80	75.20	81.30	84.30	83.10	78.00	67.20	55.90	45.30
Daily Total Solar Insolation Factor, Btu/ft^2/day	619	856	1174	1509	1776	1905	1842	1657	1371	1044	677	526
Daily Average Ambient Temperature, F	32.0	35.2	46.0	55.3	63.8	70.9	74.7	73.5	67.6	56.1	46.5	36.9
Tank Paint Solar Absorbance, dimensionless	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
Daily Vapor Temperature Range, R	15.5	17.1	20.7	23.7	24.9	24.1	22.7	21.7	21.6	21.0	16.8	14.7
Daily Average Liquid Surf. Temperature, F	32.8	36.3	47.6	57.3	66.2	73.4	77.1	75.7	69.4	57.5	47.4	37.6
Daily Minimum Liquid Surf. Temperature, F	28.9	32.0	42.4	51.4	60.0	67.4	71.5	70.3	64.0	52.3	43.2	33.9
Daily Maximum Liquid Surf. Temperature, F	36.7	40.6	52.8	63.3	72.4	79.4	82.8	81.2	74.8	62.8	51.6	41.2
Liquid Bulk Temperature	32.0	35.2	46.0	55.3	63.8	70.9	74.7	73.5	67.6	56.1	46.5	36.9
Vapor Molecular Weight, lb/lbmol	226.45	226.45	226.45	226.45	226.45	226.45	226.45	226.45	226.45	226.45	226.45	226.45
Antoine's Coefficient A	7.59	7.59	7.59	7.59	7.59	7.59	7.59	7.59	7.59	7.59	7.59	7.59
Antoine's Coefficient B	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60	2071.60
Antoine's Coefficient C	185.27	185.27	185.27	185.27	185.27	185.27	185.27	185.27	185.27	185.27	185.27	185.27
Vapor Pressure at Daily Av. Liquid Surf. Temp., psia	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	0.0000	0.0000
Vapor Pressure at Daily Min. Liquid Surf. Temp., psia	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000
Vapor Pressure at Daily Max. Liquid Surf. Temp., psia	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	0.0000	0.0000
Vapor Density, lb/ft^3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily Vapor Pressure range, psi	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000
Breather Vent Pressure Setting, psig	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300
Breather Vent Vacuum Setting, psig	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300	-0.0300
Breather Vent Pressure Setting Range, psi	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Ambient Pressure, psia	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
Vapor Space Expansion Factor	0.028	0.0308	0.0373	0.0427	0.0448	0.0434	0.0408	0.0391	0.0388	0.0377	0.0303	0.0264
Vented Vapor Saturation Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Annual Turnovers	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63
Turnover Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Working Loss Product Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Standing Storage Loss, lb/mo	0.0001	0.0001	0.0004	0.0009	0.0017	0.0024	0.0029	0.0026	0.0017	0.0008	0.0003	0.0001
Working Loss, lb/mo	0.0001	0.0001	0.0002	0.0004	0.0007	0.0011	0.0014	0.0013	0.0009	0.0004	0.0002	0.0001
Total Losses, lb/mo	0.0002	0.0002	0.0006	0.0013	0.0024	0.0036	0.0044	0.0039	0.0026	0.0012	0.0005	0.0002

Standing Storage Loss, lb/yr	0.0142
Working Loss, lb/yr	0.0070
Total Losses, lb/yr	0.0212

NSWV - PTE Calculations
Ancillary Oil/Grease Storage Tank Annual Emissions Calculation

Calculation performed in accordance with AP-42, November 2006, Section 7.1.3.1.

Sample Calculations

Emissions were calculated on a pounds per month basis. The emissions for each month were then summed in order to estimate annual emissions. Monthly emissions were calculated according to the calculation methodology for fixed roof tanks explained in EPA AP-42 Chapter 7 for Organic Liquid Storage Tanks.

A sample calculation has been provided for the tank, material, and month which had the highest emissions. All Input data and intermediate calculation information has been provided.

Estimating Monthly Emissions from Fixed Roof Tanks

[LT] = [LS] + [LW]

[LS] = [MD] x [VV] x [WV] x [KE] x [KS]

[LW] = 0.001 x [MV] x [PVA] x [Q] x [KN] x [KP]

Where:

LT	Total Losses, lb/mo
LS	Standing Storage Loss, lb/mo
LW	Working Loss, lb/mo
MD	Days in month
VV	Vapor Space Volume, ft^3
WV	Vapor Density, lb/ft^3
KE	Vapor Space Expansion Factor

Where:

KS	Vented Vapor Saturation Factor
MV	Vapor Molecular Weight, lb/lbmol
PVA	Vapor Pressure at Daily Av. Liquid Surf. Temp., psia
Q	Throughput, gallons/month
KN	Turnover Factor
KP	Working Loss Product Factor

Maximum Monthly Emissions:

Material	Hydraulic Oil
Month	July

[LT] = [0.0029] + [0.0014] = 0.0044 lbs

[LS] = [31] x [552.9203] x [0.0000] x [0.0408] x [1.0000] = 0.0029 lbs

[LW] = 0.001 x [226.45] x [0.0001] x [2,500] x [1.0000] x [1] = 0.0014 lbs

Values for Sample Calculation

LT	0.0044	KS	1.0000
LS	0.0029	MV	226.45
LW	0.0014	PVA	0.0001
MD	31	Q	2,500
VV	552.9203	KN	1.0000
WV	0.0000	KP	1
KE	0.0408		

Attachment O: Monitoring/Recordkeeping/Testing Plans

Section 3 of the application narrative provides an updated state and federal regulatory applicability analysis and summary of compliance requirements that apply to NSWV.

Attachment P – Public Notice

NSWV will submit the following legal advertisement to appear a minimum of one (1) day in *The Point Pleasant Register*. The notice will be published no earlier than five (5) working days of submittal of the R14 permit application. The original affidavit of publication will be submitted no later than the last day of the public comment period.

NOTICE OF APPLICATION

Notice is given that Nucor Steel West Virginia LLC has submitted a reconciliation application to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Modification Permit for a sheet steel mill that is located at 29618 Huntington Road near Apple Grove, in Mason County, West Virginia. The latitude and longitude coordinates are: 38.655361 degrees latitude and -82.168528 degrees longitude. The applicant estimates the potential to discharge the following Regulated Air Pollutants will be: 556 tons of particulate matter, 818 tons of particulate matter 10 microns or less in aerodynamic diameter, 766 tons of particulate matter 2.5 microns or less in aerodynamic diameter, 1,000 tons of nitrogen oxides, 3,688 tons of carbon monoxide, 396 tons of sulfur dioxide, 313 tons of volatile organic compounds, 19.6 tons of hazardous air pollutants, and 0.74 tons of lead per year. Construction commenced in May 2022 and startup of operation is planned to begin in the fourth quarter of 2025. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air 601 57th Street, SE, Charleston, West Virginia, 25304, for at least 30 calendar days from the date of publication of this notice. Written comments will also be received via email at DEPAirQualityPermitting@WV.gov. Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 41281 during normal business hours.

Dated this the 17th day of June 2025.

By:
Johnny E. Jacobs
Vice President & General Manager
Nucor Steel West Virginia, LLC
67 Hereford Lane
Apple Grove, WV 25502