

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION**

June 18, 2018

**PERMIT TO INSTALL**  
394-07B

**ISSUED TO**  
Industrial Steel Treating Company, Inc.

**LOCATED AT**  
613 Carroll Street  
Jackson, Michigan

**IN THE COUNTY OF**  
Jackson

**STATE REGISTRATION NUMBER**  
A1864

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203:

**May 1, 2018**

DATE PERMIT TO INSTALL APPROVED:

**June 18, 2018**

SIGNATURE:

DATE PERMIT VOIDED:

SIGNATURE:

DATE PERMIT REVOKED:

SIGNATURE:

**PERMIT TO INSTALL**

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**Common Abbreviations / Acronyms**

<b>Common Acronyms</b>		<b>Pollutant / Measurement Abbreviations</b>	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO <sub>2e</sub>	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environmental Quality	°F	Degrees Fahrenheit
EU	Emission Unit	gr	Grains
FG	Flexible Group	HAP	Hazardous Air Pollutant
GACS	Gallons of Applied Coating Solids	Hg	Mercury
GC	General Condition	hr	Hour
GHGs	Greenhouse Gases	HP	Horsepower
HVLP	High Volume Low Pressure*	H <sub>2</sub> S	Hydrogen Sulfide
ID	Identification	kW	Kilowatt
IRSL	Initial Risk Screening Level	lb	Pound
ITSL	Initial Threshold Screening Level	m	Meter
LAER	Lowest Achievable Emission Rate	mg	Milligram
MACT	Maximum Achievable Control Technology	mm	Millimeter
MAERS	Michigan Air Emissions Reporting System	MM	Million
MAP	Malfunction Abatement Plan	MW	Megawatts
MDEQ	Michigan Department of Environmental Quality	NMOC	Non-methane Organic Compounds
MSDS	Material Safety Data Sheet	NO <sub>x</sub>	Oxides of Nitrogen
NA	Not Applicable	ng	Nanogram
NAAQS	National Ambient Air Quality Standards	PM	Particulate Matter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM <sub>10</sub>	Particulate Matter equal to or less than 10 microns in diameter
NSPS	New Source Performance Standards	PM <sub>2.5</sub>	Particulate Matter equal to or less than 2.5 microns in diameter
NSR	New Source Review	pph	Pounds per hour
PS	Performance Specification	ppm	Parts per million
PSD	Prevention of Significant Deterioration	ppmv	Parts per million by volume
PTE	Permanent Total Enclosure	ppmw	Parts per million by weight
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonable Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO <sub>2</sub>	Sulfur Dioxide
SNCR	Selective Non-Catalytic Reduction	TAC	Toxic Air Contaminant
SRN	State Registration Number	Temp	Temperature
TEQ	Toxicity Equivalence Quotient	THC	Total Hydrocarbons
USEPA/EPA	United States Environmental Protection Agency	tpy	Tons per year
VE	Visible Emissions	µg	Microgram
		µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
		yr	Year

\*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

### GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R 336.1303. **(R 336.1301)**
  - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
  - b) A visible emission limit specified by an applicable federal new source performance standard.
  - c) A visible emission limit specified as a condition of this Permit to Install.
  
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R 336.1370(2). **(R 336.1370)**
  
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

**SPECIAL CONDITIONS**

**EMISSION UNIT SUMMARY TABLE**

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

<b>Emission Unit ID</b>	<b>Emission Unit Description (Process Equipment &amp; Control Devices)</b>	<b>Installation Date / Modification Date</b>	<b>Flexible Group ID</b>
EU1CHARDENTEMPER	Continuous heat treat belt line consisting of a natural gas-fired hardening furnace with an oil quench tank controlled by four (4) flares, a post-washer, and a natural gas-fired tempering furnace.	April 1992 / February 8, 2017	FG-BELTLINES
EU2CHARDENTEMPER	Continuous heat treat belt line consisting of a natural gas-fired pre-washer, a natural gas-fired hardening furnace with an oil quench tank controlled by two (2) flares, a natural gas-fired post-washer, and a natural gas-fired tempering furnace.	May 2007 / February 8, 2017	FG-BELTLINES
EU4CHARDENTEMPER	Continuous heat treat belt line consisting of a natural gas-fired pre-washer, a natural gas-fired hardening furnace with an oil quench tank controlled by two (2) flares, a post-washer, and a natural gas-fired tempering furnace.	November 1997/ February 8, 2017	FG-BELTLINES
EU5KHARDENTEMPER	Continuous heat treat belt line consisting of a natural gas-fired pre-washer, a natural gas-fired pre-heat furnace, a natural gas-fired hardening furnace with an oil quench tank controlled by two (2) flares, a natural gas-fired post-washer, and a natural gas-fired tempering furnace.	April 2005 / May 8, 2008	FG-BELTLINES
EU1KTEMPER	Continuous natural gas-fired tempering furnace that is used off-line by the belt lines.	January 2000 / May 8, 2008	FG-BELTLINES
EU7AHARDEN	Natural gas-fired heat treat batch furnace with integral oil quench controlled by one (1) flare.	January 1977 / May 8, 2008	FG- BATCHPUSHER
EU8AHARDEN	Natural gas-fired heat treat batch furnace with integral oil quench controlled by one (1) flare.	January 1977 / May 8, 2008	FG- BATCHPUSHER
EU9AHARDEN	Natural gas-fired heat treat batch furnace with integral oil quench controlled by one (1) flare.	January 1997 / May 8, 2008	FG- BATCHPUSHER
EU1ATEMPER	Natural gas-fired batch tempering furnace.	January 1967 / May 8, 2008	FG- BATCHPUSHER
EU2ATEMPER	Natural gas-fired batch tempering furnace.	January 1967 / May 8, 2008	FG- BATCHPUSHER
EU4ATEMPER	Natural gas-fired batch tempering furnace.	January 1985 / May 8, 2008	FG- BATCHPUSHER
EU11ATEMPER	Natural gas-fired batch tempering furnace.	January 1996 / May 8, 2008	FG- BATCHPUSHER
EU1HHARDENTEMPER	Batch pre-washer, natural gas-fired pusher pre-heat furnace, natural gas-fired pusher hardener furnace with integral oil quench controlled by three (3) flares, batch post-washer, and a natural gas-fired pusher tempering furnace.	February 2002 / May 8, 2008	FG- BATCHPUSHER

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EU2HHARDENTEMPER	Batch pre-washer, natural gas-fired pusher pre-heat furnace, natural gas-fired pusher hardener furnace with integral oil quench controlled by three (3) flares, batch post-washer, and a natural gas-fired pusher tempering furnace.	January 2005 / May 8, 2008	FG- BATCHPUSHER
EU9HTEMPER	Natural gas-fired batch tempering furnace.	January 1990 / May 8, 2008	FG- BATCHPUSHER
EU11HTEMPER	Natural gas-fired batch tempering furnace.	January 1990 / May 8, 2008	FG- BATCHPUSHER
EU12ATEMPER	Continuous natural gas-fired tempering furnace that is used off-line by the pusher lines.	January 2000 / May 8, 2008	FG- BATCHPUSHER
EU1SHARDEN	Natural gas-fired heat treat batch furnace with integral oil quench controlled by two (2) flares.	June 2015 / February 8, 2017	FG- BATCHPUSHER
EU2SHARDEN	Natural gas-fired heat treat batch furnace with integral oil quench controlled by two (2) flares.	TBD / NA	FG- BATCHPUSHER
EU1SATEMPER	Natural gas-fired batch tempering furnace.	June 2015/ February 8, 2017	FG- BATCHPUSHER
EU2SATEMPER	Natural gas-fired batch tempering furnace.	June 2015/ February 8, 2017	FG- BATCHPUSHER
EU3SATEMPER	Natural gas-fired batch tempering furnace.	June 2015/ February 8, 2017	FG- BATCHPUSHER
EU4SATEMPER	Natural gas-fired batch tempering furnace.	June 2015/ February 8, 2017	FG- BATCHPUSHER
EUAMMEAST	A single anhydrous ammonia storage tank. The tank storage capacity is 2300 gallons.		NA

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.

**The following conditions apply to: EUAMMEAST**

**DESCRIPTION:** A single anhydrous ammonia storage tank. The tank storage capacity is 2300 gallons.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT:** NA

**I. EMISSION LIMITS**

NA

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

1. Except where specific requirements of these special conditions are applicable and more stringent, EUAMMEAST shall comply with "Part 78, Storage and Handling of Anhydrous Ammonia" (MIOSHA 1910.111), hereinafter Rule 7801. A copy of this standard, which may be obtained by contacting the Michigan Department of Consumer and Industry Services, Bureau of Safety and Regulations, Safety Standards Division, 7150 Harris Drive, P.O. Box 30643, Lansing, MI 48909-8143, shall be maintained for inspection at the facility. **(R 336.1901)**
2. The permittee shall not operate EUAMMEAST unless the inspection and maintenance program specified in Appendix A has been implemented and maintained. **(R 336.1901)**
3. The permittee shall not operate EUAMMEAST unless an emergency response plan, to be followed in the event of an emergency, has been approved by the local fire department or county emergency response agency and is implemented and maintained. Prior to each spring season, the permittee shall review this plan with the local fire department or emergency response agency and make any necessary updates. **(R 336.1901)**
4. The permittee shall not operate EUAMMEAST unless all transfer operations including transport deliveries are performed by a reliable person properly trained and made responsible for proper compliance with all applicable procedures. **(R 336.1901)**
5. Vapor return lines shall be employed whenever necessary to ensure an accidental release from pressure relief valves will not occur during ammonia transfer operations. **(R 336.1901)**

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. All containers shall be fitted with safety relief valves. Such valves shall be stamped with the date manufactured, and shall be replaced, or re-tested and re-certified, at least every five years or more often if there is evidence of damage or deterioration. **(R 336.1901)**
2. The permittee shall not operate EUAMMEAST unless a remotely operated internal or external positive shut-off valve is installed to allow access for emergency shut-off of all flow from stationary storage containers. **(R 336.1225, R 336.1901)**



3. The permittee shall not operate EUAMMEAST unless any liquid lines in rail and transport transfer areas are equipped with back pressure check valves and all liquid lines not requiring a back check valve and all vapor lines are equipped with properly sized excess flow valves. These valves shall be installed on the main container side of the predictable break point at the bulkhead. **(R 336.1225, R 336.1901)**
4. Any vapor or liquid line, exclusive of couplings, requiring venting after ammonia transfer shall be vented through a water trap of 55 gallons minimum size. Safety water shall not be used for this purpose. **(R 336.1225, R 336.1901)**
5. A sign shall be present and conspicuously placed at the facility entrance stating the emergency phone numbers for the owner, primary operator, local and state police, local fire department, and ambulance service. **(R 336.1901)**

#### **V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

#### **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall keep, in a satisfactory manner, records of the date, duration, and description of any malfunction or spill occurring from EUAMMEAST, including the estimated amount of ammonia released into the atmosphere. Do not include trace amounts from normal hose coupling bleed downs. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1201(3))**
2. The permittee shall keep, in a satisfactory manner, records of the date of annual review and approval of the emergency response plan with the local fire department. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1201(3))**

#### **VII. REPORTING**

1. The permittee shall notify the Pollution Emergency Alert System (PEAS) 1-800-292-4706 and/or the AQD District Supervisor immediately of any abnormal release of anhydrous ammonia from EUAMMEAST. A normal release includes only hose coupling bleed downs, operation of hydrostatic relief valves, and normal pressure relief from the safety relief valve(s). Relief due to overfilling is not normal. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1201(3), R 336.1901)**

#### **VIII. STACK/VENT RESTRICTIONS**

NA

#### **IX. OTHER REQUIREMENTS**

NA

#### **Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**FLEXIBLE GROUP SUMMARY TABLE**

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

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG-BELTLINES	Continuous heat treating equipment consisting of belt furnace lines with oil quenching. All lines perform the same heat treating process and are used interchangeably. The lines generally include pre-washers, one pre-heat furnace, hardening furnaces with quench tanks, post-washers, and tempering furnaces.	EU1CHARDENTEMPER, EU2CHARDENTEMPER, EU4CHARDENTEMPER, EU5KHARDENTEMPER, EU1KTEMPER
FG-BATCHPUSHER	The batch and pusher equipment has integral quenches and perform the same heat treating process. This flexible group consists of integral-quench batch hardener furnaces, integral-quench pusher hardener furnaces, batch temper furnaces, pusher temper furnaces, batch washers, and batch soluble oil dunk tanks.	EU7AHARDEN, EU8AHARDEN, EU9AHARDEN, EU1ATEMPER, EU2ATEMPER, EU4ATEMPER, EU11ATEMPER, EU1HHARDENTEMPER, EU2HHARDENTEMPER, EU9HTEMPER, EU11HTEMPER, EU12ATEMPER, EU1SAHARDEN, EU2SAHARDEN, EU1SATEMPER, EU2SATEMPER, EU3SATEMPER, EU4SATEMPER

**The following conditions apply to: FG-BELTLINES**

**DESCRIPTION:** Continuous heat treating equipment consisting of belt furnace lines with oil quenching. All lines perform the same heat treating process and are used interchangeably. The lines generally include pre-washers, one pre-heat furnace, hardening furnaces with quench tanks, post-washers, and tempering furnaces.

**Emission Units:** EU1CHARDENTEMPER, EU2CHARDENTEMPER, EU4CHARDENTEMPER, EU5KHARDENTEMPER, EU1KTEMPER

**POLLUTION CONTROL EQUIPMENT:** Flares on the hardening furnaces.

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOCs	15.6 tpy	12-month rolling time period as determined at the end of each calendar month	FG-BELT LINES	SC VI.2	R 336.1702(a)

**II. MATERIAL LIMITS**

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Metal	157,061 tpy	12-month rolling time period as determined at the end of each calendar month	FG-BELT LINES	SC VI.2	R 336.1702(a)

**III. PROCESS/OPERATIONAL RESTRICTIONS**

- The permittee shall not operate FG-BATCHPUSHER unless a malfunction abatement plan (MAP) as described in Rule 911(2), has been submitted within 90 days of permit issuance, and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

**IV. DESIGN/EQUIPMENT PARAMETERS**

- The permittee shall not operate the hardening furnace portions of FG-BELT LINES unless the flares are installed, maintained, and operated in a satisfactory manner. **(R 336.1702(a), R 336.1910)**

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1702(a))**
2. The permittee shall keep the following information on a monthly basis for FG-BELT LINES:
  - a. The tons of metal processed per calendar month.
  - b. The tons of metal processed per 12-month rolling time period as determined at the end of each calendar month.
  - c. The VOC emission factor (in lbs VOC/ton metal) for each heat treating process. (Emission factors are based on testing at the facility and are to be acceptable to the AQD District Supervisor.)
  - d. VOC mass emission calculations determining the monthly emission rate in tons per calendar month.
  - e. VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The records shall be kept in a format acceptable to the AQD District Supervisor. All records shall be kept on file and made available to the Department upon request. **(R 336.1702(a))**

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV1CCHARGEHOOD	18	28.5	40 CFR 52.21(c) & (d)
2. SV1CPREHEATEFF	8	28.5	40 CFR 52.21(c) & (d)
3. SV1CPREHEATBRN	12	23.7	40 CFR 52.21(c) & (d)
4. SV1CQUENCHEFF	12	24.0	40 CFR 52.21(c) & (d)
5. SV1CHARDBURNNO	24	24.0	40 CFR 52.21(c) & (d)
6. SV1CHARDBURNNO	24	23.8	40 CFR 52.21(c) & (d)
7. SV1CTEMPCHRGEX	18	27.0	40 CFR 52.21(c) & (d)
8. SV1CTEMPCHRGIN	18	27.0	40 CFR 52.21(c) & (d)
9. SV1CCOOLEX	24	26.5	40 CFR 52.21(c) & (d)
10. SV1CCOOLIN	24	24.0	40 CFR 52.21(c) & (d)
11. SV2CHARDENEREX	24	30.0	40 CFR 52.21(c) & (d)
12. SV2CQUENCHEFF	12	28.0	40 CFR 52.21(c) & (d)
13. SV2CTEMPEREX	24	30.0	40 CFR 52.21(c) & (d)
14. SV4CPREWASHEX*	12	25.5	40 CFR 52.21(c) & (d)
15. SV4CCHARGEHOOD	21	28.0	40 CFR 52.21(c) & (d)
16. SV4CPREHEATBRN	12	25.5	40 CFR 52.21(c) & (d)
17. SV4CQUENCHEFF	10	25.5	40 CFR 52.21(c) & (d)
18. SV4CHARDBURNNO	24	26.7	40 CFR 52.21(c) & (d)
19. SV4CHARDBURNNO	24	26.7	40 CFR 52.21(c) & (d)
20. SV4CTEMPCHRGEX	18	27.0	40 CFR 52.21(c) & (d)
21. SV4CTEMPCHRGIN	18	27.0	40 CFR 52.21(c) & (d)
22. SV4CCOOLEX	24	28.0	40 CFR 52.21(c) & (d)
23. SV4CCOOLIN	24	28.0	40 CFR 52.21(c) & (d)

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter/Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
24. SV5KPREWASHEX	12	35.3	40 CFR 52.21(c) & (d)
25. SV5KPREWASHBRN	8	35.3	40 CFR 52.21(c) & (d)
26. SV5KPREWSHHOOD	20	36.5	40 CFR 52.21(c) & (d)
27. SV5KHARDCHARGE	24	35.0	40 CFR 52.21(c) & (d)
28. SV5KQUENCHEFF	10	35.3	40 CFR 52.21(c) & (d)
29. SV5KHARDBRNNO	24	38.0	40 CFR 52.21(c) & (d)
30. SV5KHARDBRNSO	24	38.0	40 CFR 52.21(c) & (d)
31. SV5KPOSTWSHEX	18	35.3	40 CFR 52.21(c) & (d)
32. SV5KPOSTWSHBRN	8	35.3	40 CFR 52.21(c) & (d)
33. SV5KTEMPCHGHD	21	35.3	40 CFR 52.21(c) & (d)
34. SV5KTEMPDISCHD	24	35.3	40 CFR 52.21(c) & (d)
35. SV5KCOOLEX	24	35.3	40 CFR 52.21(c) & (d)
36. SV5KCOOLIN	24	35.3	40 CFR 52.21(c) & (d)
37. SV1KCHRGHOOD	24	36.2	40 CFR 52.21(c) & (d)
38. SV1KDISCHHOOD	18	34.2	40 CFR 52.21(c) & (d)
* - Stack has raincap.			

**IX. OTHER REQUIREMENTS**

NA

**The following conditions apply to: FG-BATCHPUSHER**

**DESCRIPTION:** Continuous heat treating equipment consisting of belt furnace lines with oil quenching. All lines perform the same heat treating process and are used interchangeably. The lines generally include pre-washers, one pre-heat furnace, hardening furnaces with quench tanks, post-washers, and tempering furnaces.

**Emission Units:** EU7AHARDEN, EU8AHARDEN, EU9AHARDEN, EU1ATEMPER, EU2ATEMPER, EU4ATEMPER, EU11ATEMPER, EU1HHARDENTEMPER, EU2HHARDENTEMPER, EU9HTEMPER, EU11HTEMPER, EU12ATEMPER, EU1SAHARDEN, EU2SAHARDEN, EU1SATEMPER, EU2SATEMPER, EU3SATEMPER, EU4SATEMPER

**POLLUTION CONTROL EQUIPMENT:** Flares on the hardening furnaces.

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOCs	3.8 tpy	12-month rolling time period as determined at the end of each calendar month	FG-BATCHPUSHER	SC VI.2	R 336.1702(a)

**II. MATERIAL LIMITS**

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Metal	50,447 tpy	12-month rolling time period as determined at the end of each calendar month	FG-BATCHPUSHER	SC VI.2	R 336.1702(a)
2. Metal	9.6 tons per 8-hr time period	8-hr Time Period	EU1SAHARDEN and EU2SAHARDEN, combined	SC VI.3	R 336.1225

**III. PROCESS/OPERATIONAL RESTRICTIONS**

- The permittee shall not operate FG-BATCHPUSHER unless a malfunction abatement plan (MAP), as described in Rule 911(2), has been submitted within 90 days of permit issuance, and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

#### **IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall not operate the hardening furnace portions of FG-BATCH PUSHER unless the flares are installed, maintained, and operated in a satisfactory manner. **(R 336.1702(a), R 336.1910)**

#### **V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

#### **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1225, R 336.1702(a))**
2. The permittee shall keep the following information on a monthly basis for FG-BATCH PUSHER:
  - a. The tons of metal processed per calendar month.
  - b. The tons of metal processed per 12-month rolling time period as determined at the end of each calendar month.
  - c. The VOC emission factor (in lbs VOC/ton metal) for each heat treating process. (Emission factors are based on testing at the facility and are to be acceptable to the AQD District Supervisor.)
  - d. VOC mass emission calculations determining the monthly emission rate in tons per calendar month.
  - e. VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The records shall be kept in a format acceptable to the AQD District Supervisor. All records shall be kept on file and made available to the Department upon request. **(R 336.1702(a))**

3. The permittee shall keep records of the tons of metal processed per 8-hour time period for EU1SAHARDEN and EU2SAHARDEN, combined. The records shall be kept in a format acceptable to the AQD District Supervisor. All records shall be kept on file and made available to the Department upon request.<sup>1</sup> **(R 336.1225)**

#### **VII. REPORTING**

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EU2SAHARDEN. **(R 336.1201(7)(a))**

#### **VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter/Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SV7AHARDBRNREX	18	25.3	40 CFR 52.21(c) & (d)
2. SV7ACHARGEFF	24	26.0	40 CFR 52.21(c) & (d)
3. SV8AHARDBRNREX	18	25.3	40 CFR 52.21(c) & (d)

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
4. SV8ACHARGEFF	24	26.0	40 CFR 52.21(c) & (d)
5. SV9AHARDBRNEX	18	25.3	40 CFR 52.21(c) & (d)
6. SV9ACHARGEFF	24	24.5	40 CFR 52.21(c) & (d)
7. SV1ATEMPEX	12	26.9	40 CFR 52.21(c) & (d)
8. SV2ATEMPEX	12	26.9	40 CFR 52.21(c) & (d)
9. SV4ATEMPEX	12	26.4	40 CFR 52.21(c) & (d)
10. SV11ATEMPEX	12	29.0	40 CFR 52.21(c) & (d)
11. SV1HPREWASHEX	16	35.3	40 CFR 52.21(c) & (d)
12. SV1HCHARGEFF	10	33.2	40 CFR 52.21(c) & (d)
13. SV1HPRECHRGHOD	12	30.8	40 CFR 52.21(c) & (d)
14. SV1HPREFLUE	12	33.0	40 CFR 52.21(c) & (d)
15. SV1HHARDCHRGHD	18	31.5	40 CFR 52.21(c) & (d)
16. SV1HHARDZ1EFF	10	32.1	40 CFR 52.21(c) & (d)
17. SV1HHARDBURN	24	33.8	40 CFR 52.21(c) & (d)
18. SV1HQUENCHEFF	12	30.8	40 CFR 52.21(c) & (d)
19. SV1HDISCRGHOD	24	33.8	40 CFR 52.21(c) & (d)
20. SV1HPOSTWSHEX	16	33.0	40 CFR 52.21(c) & (d)
21. SV1HTEMPCHRGHD	18	32.7	40 CFR 52.21(c) & (d)
22. SV1HTEMPDISHD	18	32.7	40 CFR 52.21(c) & (d)
23. SV2HPREWASHEX	16	35.3	40 CFR 52.21(c) & (d)
24. SV2HCHARGEFF	12	35.3	40 CFR 52.21(c) & (d)
25. SV2HPRECHRGHOD	12	35.3	40 CFR 52.21(c) & (d)
26. SV2HPREFLUE	18	34.8	40 CFR 52.21(c) & (d)
27. SV2HHARDCHRGHD	18	34.8	40 CFR 52.21(c) & (d)
28. SV2HHARDZ1EFF	10	35.3	40 CFR 52.21(c) & (d)
29. SV2HHARDBURN	24	35.3	40 CFR 52.21(c) & (d)
30. SV2HQUENCHEFF	12	35.3	40 CFR 52.21(c) & (d)
31. SV2HDISCRGHOD	24	35.3	40 CFR 52.21(c) & (d)
32. SV2HPOSTWSHEX	16	35.3	40 CFR 52.21(c) & (d)
33. SV2HTEMPCHRGHD	21	35.3	40 CFR 52.21(c) & (d)
34. SV2HTEMPDISCHD	21	35.3	40 CFR 52.21(c) & (d)
35. SV9HTEMPEX	12	29.8	40 CFR 52.21(c) & (d)
36. SV11HTEMPEX	12	30.8	40 CFR 52.21(c) & (d)
37. SV12ACHRGHOOD	12	29.4	40 CFR 52.21(c) & (d)
38. SV12ABURNFLUE	12	30.0	40 CFR 52.21(c) & (d)
39. SV12ADISHOODX	12	28.8	40 CFR 52.21(c) & (d)
40. SV12ADISHOODIN	12	27.1	40 CFR 52.21(c) & (d)
41. SV1SAHARDBRNEX*	24	27.3	40 CFR 52.21(c) & (d)
42. SV1SACHARGEFF	29	25.6	R336.1225, 40 CFR 52.21(c) & (d)
43. SV2SAHARDBRNEX*	24	27.3	40 CFR 52.21(c) & (d)
44. SV2SACHARGEFF	29	25.6	R336.1225, 40 CFR 52.21(c) & (d)
45. SV1SATEMPEX	9	30	R336.1225, 40 CFR 52.21(c) & (d)
46. SV1SATEMPHOOD*	29	27.3	R336.1225, 40 CFR 52.21(c) & (d)
47. SV2SATEMPEX	9	30	R336.1225, 40 CFR 52.21(c) & (d)
48. SV2SATEMPHOOD*	29	27.3	R336.1225, 40 CFR 52.21(c) & (d)
49. SV3SATEMPEX	9	30	R336.1225, 40 CFR 52.21(c) & (d)



<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter/Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
50. SV3SATEMPHOOD*	29	27.3	R336.1225, 40 CFR 52.21(c) & (d)
51. SV4SATEMPEX	9	30	R336.1225, 40 CFR 52.21(c) & (d)
52. SV4SATEMPHOOD*	29	27.3	R336.1225, 40 CFR 52.21(c) & (d)
* Stack has raincap.			

**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**APPENDIX A**  
**Inspection and Maintenance Program**  
 Permanent Ammonia Storage Tank

Permittee shall conduct inspections and complete form at least twice per year, prior to spring and fall application seasons.

Tank Identification:	Satisfactory?				Satisfactory?		
	Yes	No	Date*		Yes	No	Date*
1. Tank free of leaks				14. Unused equipment stored out of the way			
2. Tank supports in good condition (no cracked or crumbled concrete, etc.)				15. Chemical safety goggles available and in good condition			
3. Paint in good condition				16. Protective gloves, boots, suits or slickers available and in good condition			
4. Equipment locked when not in use				17. Gas masks with ammonia type canisters and refill canisters within date limits available			
5. Tank properly labeled				18. Emergency clean water, shower or 75 gallon tank available nearby			
6. Valves and fittings free from leaks and in good condition				19. Gages, pressure and liquid level, operable			
7. Piping properly supported and guards in place				20. Valves properly labeled "liquid" and "vapor"			
8. Pipes free of physical damage and rust and properly painted				21. Safety relief valves within five years of manufacture or recertification and marked			
9. Employees trained in proper filling procedures				22. Outlet openings on valves and lines free of dirt and rust with protective caps in place			
10. Provisions provided for bleeding of transfer hose from the transport truck				23. Safety relief valves free of debris with rain caps installed			
11. Wheels properly chocked on the transport truck or rail tank car while unloading				24. Safety relief valve manifold operable			
12. Information and warning signs displayed and in good condition				25. Remote shut-off valve in working order			
13. Area free of weeds, trash and other unsafe conditions							

Date Inspected: \_\_\_\_\_

Inspector: \_\_\_\_\_

\*For each item, check if condition is satisfactory. If condition is not satisfactory, include date when corrected. If condition is not applicable, write NA.