

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

November 20, 2015

**PERMIT TO INSTALL**  
160-15

**ISSUED TO**  
Commercial Steel Treating Corporation

**LOCATED AT**  
31440 Stephenson Highway  
Madison Heights, Michigan

**IN THE COUNTY OF**  
Oakland

**STATE REGISTRATION NUMBER**  
B5929

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: <b>October 2, 2015</b>	
DATE PERMIT TO INSTALL APPROVED: <b>November 20, 2015</b>	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>2</sub> e	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	PM10	Particulate Matter equal to or less than 10 microns in diameter
NSPS	New Source Performance Standards	PM2.5	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>
EU-AB618	2.94 million Btu/hour natural gas fired atmospheric batch steel hardening furnace with oil quench tank.	Jun 2001	FG-AB618/619
EU-AB619	2.94 million Btu/hour natural gas fired atmospheric batch steel hardening furnace with oil quench tank.	Jun 2001	FG-AB618/619
EU-AB620	2.94 million Btu/hour natural gas fired atmospheric batch steel hardening furnace with oil quench tank.	Jan 1998	FG-AB620/622/623
EU-AB622	2.94 million Btu/hour natural gas fired atmospheric batch steel hardening furnace with oil quench tank.	Jan 1998	FG-AB620/622/623
EU-AB623	2.94 million Btu/hour natural gas fired atmospheric batch steel hardening furnace with oil quench tank.	Jan 1998	FG-AB620/622/623
EU-AC727	8.14 million Btu/hour natural gas fired atmospheric continuous steel hardening furnace with oil quench tank, post-washer, and continuous draw (tempering) furnace.	1994 / Jan 1997	NA
EU-AC734	2.00 million Btu/hour natural gas fired atmospheric continuous rotary steel hardening furnace with oil quench tank, post-washer, and continuous draw (tempering) furnace.	1999	NA
EU-AC735	Natural gas fired furnace line AC735, including a pre-washer, a 4.165 million Btu/hr continuous hardening furnace, oil quench, post washer, and tempering furnace.	Feb 19, 2003 / Jan 2007	FG-AC735/736
EU-AC736	Natural gas fired furnace line AC736, including a pre-washer, a 4.165 million Btu/hr continuous hardening furnace, oil quench, post washer, and tempering furnace.	Feb 16, 2006 / Jan 2007	FG-AC735/736
EU-AC737	Natural gas fired furnace line AC737, including a pre-washer, a 4.165 million Btu/hr continuous hardening furnace, oil quench, post washer, and tempering furnace.	May 2013	NA
EU-AMMONIA	10,000 gallon anhydrous ammonia storage tank	1997	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:**  
**EU-AC727**

**DESCRIPTION:** 8.14 million Btu/hour natural gas fired atmospheric continuous steel hardening furnace with oil quench tank, post-washer, and continuous draw (tempering) furnace.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT:** NA

**I. EMISSION LIMITS**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Testing / Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
1. VOC	2.35 lb/hr	4-week average	EU-AC727	SC VI.1, Appendix A	<b>R 336.1702(c)</b>
2. VOC	10.3 tpy	13 consecutive 4-week time periods, as determined at the end of each 4-week period	EU-AC727	SC VI.1, Appendix A	<b>R 336.1702(c)</b>

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

NA

**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. By the last day of each 4-week period, the permittee shall calculate the average hourly VOC emission rate for EU-AC727 for the previous 4-week period, and the annual VOC emission rate for the previous 13 consecutive 4-week time periods, using a material balance (See Appendix A). The quench oil usage rate, hours of operation, and emission calculation information shall be used for compliance demonstration purposes and shall be kept on file for a period of at least five years and made available to the Air Quality Division upon request. **(R 336.1702(c))**

**VII. REPORTING**

NA

**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).

**The following conditions apply to:**  
**EU-AC734**

**DESCRIPTION:** 2.00 million Btu/hour natural gas fired atmospheric continuous rotary steel hardening furnace with oil quench tank, post-washer, and continuous draw (tempering) furnace.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT:** NA

**I. EMISSION LIMITS**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Testing / Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
1. VOC	1.6 lb/hr	4-week average	EU-AC734	SC VI.1, Appendix A	<b>R 336.1702(c)</b>
2. VOC	7.0 tpy	13 consecutive 4-week time periods, as determined at the end of each 4-week period	EU-AC734	SC VI.1, Appendix A	<b>R 336.1702(c)</b>

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

NA

**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. By the last day of each 4-week period, the permittee shall calculate the average hourly VOC emission rate for EU-AC734 for the previous 4-week period, and annual VOC emission rate for the previous 13 consecutive 4-week time periods, using a material balance (See Appendix A). The quench oil usage rate, hours of operation, and emission calculation information shall be used for compliance demonstration purposes and shall be kept on file for a period of at least five years and made available to the Air Quality Division upon request. **(R 336.1702(c))**

**VII. REPORTING**

NA

**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).

**The following conditions apply to:**  
**EU-AC737**

**DESCRIPTION:** Natural gas fired furnace line AC737, including a pre-washer, a 4.165 million Btu/hr continuous hardening furnace, oil quench, post washer, and tempering furnace.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT:** NA

**I. EMISSION LIMITS**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Testing / Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
1. VOC	12.0 tpy	13 consecutive 4-week time periods, as determined at the end of each 4-week period	EU-AC737	SC VI.3, Appendix A	R 336.1702(a), 40 CFR 52.21(c) & (d)

**II. MATERIAL LIMITS**

<b>Material</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Testing / Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
1. Quench Oil	3,384 gallons per year	13 consecutive 4-week time periods, as determined at the end of each 4-week period	EU-AC737	SC VI.4, Appendix A	R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d)

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

NA

**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 last day of the 4-week time period, for the previous 4-week time period, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.1702(a))

2. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each quench oil, including the weight percent of each component. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1225, R 336.1702(a))**
  
3. The permittee shall calculate the VOC emission rate from EU-AC737 for each 4-week time period using a material balance for quench oil usage as follows:
  - a. Quench oil purchased or usage rate to replenish lost quench oil (Appendix A - column A)
  - b. Amount of spent oil sent off-site for recycling (Appendix A - column B).
  - c. Amount of spent oil or sludge sent off-site for disposal (Appendix A - column C).
  - d. Amount of oil spilled (Appendix A - column D).
  - e. Emission calculations determining the emission rates in tons per 4-week time period (Appendix A - column E).
  - f. Emission calculations determining the annual emission rate in tons per year based on 13 consecutive 4-week time periods, as determined at the end of each 4-week period.

The permittee shall keep the records at the facility in the format specified in Appendix A, or an alternate format that has been approved by the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1702(a))**

4. The permittee shall keep, in a satisfactory manner, quench oil usage records for EU-AC737 for each 4-week time period and annual usage records based on 13 consecutive 4-week time periods, as determined at the end of each 4-week period. The permittee shall keep all records on file and make them 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:

<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. SV-737PREWASH	20	46	<b>R 336.1225, 40 CFR 52.21 (c) &amp; (d)</b>
2. SV-737HARDENER	26	46	<b>R 336.1225, 40 CFR 52.21 (c) &amp; (d)</b>
3. SV-737POSTWASH	18	46	<b>R 336.1225, 40 CFR 52.21 (c) &amp; (d)</b>
4. SV-737TEMPER	20	46	<b>R 336.1225, 40 CFR 52.21 (c) &amp; (d)</b>

**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

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

**The following conditions apply to:**  
**EU-AMMONIA**

**DESCRIPTION:** 10,000 gallon anhydrous ammonia storage tank

**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, EU-AMMONIA 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 Occupational Safety and Health Administration, MIOSHA Standards Section, 7150 Harris Drive, P.O. Box 30643, Lansing, MI 48909-8143, shall be maintained for inspection at the facility.<sup>1</sup> **(R 336.1901)**
2. The permittee shall not operate EU-AMMONIA unless the inspection and maintenance program specified in Appendix A has been implemented and maintained.<sup>1</sup> **(R 336.1901)**
3. The permittee shall not operate EU-AMMONIA 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.<sup>1</sup> **(R 336.1901)**
4. The permittee shall not operate EU-AMMONIA 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.<sup>1</sup> **(R 336.1901)**
5. The ammonia storage tank, EU-AMMONIA, shall be filled to more than 20% water capacity. **(40 CFR Part 68)**

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. All containers shall be fitted with safety relief valves as required by the ANSI standard. Such valves shall be stamped with the date manufactured, and shall be replaced, or retested and recertified, at least every five years or more often if there is evidence of damage or deterioration. Safety relief valves on the stationary storage container shall be installed in a manifold meeting ANSI requirements.<sup>1</sup> **(R 336.1225, R 336.1901)**
2. The permittee shall not operate EU-AMMONIA 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.<sup>1</sup> **(R 336.1225, R 336.1901)**

3. The permittee shall not operate EU-AMMONIA unless a bulkhead, anchorage, or equivalent system is used at each transfer area so that any break resulting from a pull will occur at a predictable location while retaining intact the valves and piping on the plant side of the transfer area. <sup>1</sup> **(R 336.1225, R 336.1901)**
4. The permittee shall not operate EU-AMMONIA 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. <sup>1</sup> **(R 336.1225, R 336.1901)**
5. 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. <sup>1</sup> **(R 336.1225, R 336.1901)**
6. 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. <sup>1</sup> **(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))**

NA

#### **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 EU-AMMONIA. 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. <sup>1</sup> **(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.

<b>Flexible Group ID</b>	<b>Flexible Group Description</b>	<b>Associated Emission Unit IDs</b>
FG-AB618/619	Two natural gas fired atmospheric batch steel hardening furnaces (AB618 & AB619), each with an oil quench tank.	EU-AB618, EU-AB619
FG-AB620/622/623	Three natural gas fired atmospheric batch steel hardening furnaces (AB620, AB622, & AB623), each with an oil quench tank.	EU-AB620, EU-AB622, EU-AB623
FG-AC735/736	Natural gas fired furnace lines AC735 and AC736.	EU-AC735, EU-AC736
FGFACILITY	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.	NA

**The following conditions apply to:**  
**FG-AB618/619**

**DESCRIPTION:** Two natural gas fired atmospheric batch steel hardening furnaces (AB618 & AB619), each with an oil quench tank.

**Emission Units:** EU-AB618, EU-AB619

**POLLUTION CONTROL EQUIPMENT:** NA

**I. EMISSION LIMITS**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period/ Operating Scenario</b>	<b>Equipment</b>	<b>Testing / Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
1. VOC	2.4 tpy	13 consecutive 4-week time periods, as determined at the end of each 4-week period	FG-AB618/619	SC VI.1, Appendix A	<b>R 336.1702(c)</b>

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

NA

**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. By the last day of each 4-week period, the permittee shall calculate the annual VOC emission rate for FG-AB618/619 for the previous 13 consecutive 4-week time periods, using a material balance for quench oil usage (See Appendix A). The quench oil usage rate and emission calculation information shall be used for compliance demonstration purposes and shall be kept on file for a period of at least five years and made available to the Air Quality Division upon request. **(R 336.1702(c))**

**VII. REPORTING**

NA

**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).

**The following conditions apply to:**  
**FG-AB620/622/623**

**DESCRIPTION:** Three natural gas fired atmospheric batch steel hardening furnaces (AB620, AB622, & AB623), each with an oil quench tank.

**Emission Units:** EU-AB620, EU-AB622, EU-AB623

**POLLUTION CONTROL EQUIPMENT:** NA

**I. EMISSION LIMITS**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period/ Operating Scenario</b>	<b>Equipment</b>	<b>Testing / Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
1. VOC	0.80 lb/hr	4-week average	FG-AB620/622/623	SC VI.1, Appendix A	<b>R 336.1702(c)</b>
2. VOC	3.5 tpy	13 consecutive 4-week time periods, as determined at the end of each 4-week period	FG-AB620/622/623	SC VI.1, Appendix A	<b>R 336.1702(c)</b>

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

NA

**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. By the last day of each 4-week period, the permittee shall calculate the average hourly VOC emission rate for FG-AB620/622/623 for the previous 4-week period, and annual VOC emission rate for the previous 13 consecutive 4-week time periods, using a material balance (See Appendix A). The quench oil usage rate, hours of operation, and emission calculation information shall be used for compliance demonstration purposes and shall be kept on file for a period of at least five years and made available to the Air Quality Division upon request. **(R 336.1702(c))**

**VII. REPORTING**

NA

**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).

**The following conditions apply to:**  
**FG-AC735/736**

**DESCRIPTION:** Natural gas fired furnace lines AC735 and AC736.

**Emission Units:** EU-AC735, EU-AC736

**POLLUTION CONTROL EQUIPMENT:** NA

**I. EMISSION LIMITS**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period/ Operating Scenario</b>	<b>Equipment</b>	<b>Testing / Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
1. VOC	12 tpy	13 consecutive 4-week time periods, as determined at the end of each 4-week period	EU-AC735	SC VI.1, Appendix A	<b>R 336.1702(c)</b>
2. VOC	12 tpy	13 consecutive 4-week time periods, as determined at the end of each 4-week period	EU-AC736	SC VI.1, Appendix A	<b>R 336.1702(c)</b>

**II. MATERIAL LIMITS**

<b>Material</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Testing / Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
1. Quench Oil	3,384 gallons per year	13 consecutive 4-week time periods, as determined at the end of each 4-week period	EU-AC735	SC VI.1, Appendix A	<b>R 336.1702(c)</b>
2. Quench Oil	3,384 gallons per year	13 consecutive 4-week time periods, as determined at the end of each 4-week period	EU-AC736	SC VI.1, Appendix A	<b>R 336.1702(c)</b>

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

NA

**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. By the last day of each 4-week period, the permittee shall calculate the annual VOC emission rate for EU-AC735 and EU-AC736 for the previous 13 consecutive 4-week time periods, using a material balance (See Appendix A). The quench oil usage rate, hours of operation, and emission calculation information shall be used for compliance demonstration purposes and shall be kept on file for a period of at least five years and made available to the Air Quality Division upon request. **(R 336.1702(c))**

**VII. REPORTING**

NA

**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).

**The following conditions apply Source-Wide to:  
 FGFACILITY**

**DESCRIPTION:** All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.

**I. EMISSION LIMITS**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Testing / Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
1. VOC	82.4 tpy	13 consecutive 4-week time periods, as determined at the end of each 4-week period	FGFACILITY	SC VI.3, Appendix A	R 336.1205(3)

**II. MATERIAL LIMITS**

<b>Material</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Testing / Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
1. Quench Oil	22,000 gallons per year	13 consecutive 4-week time periods, as determined at the end of each 4-week period	FGFACILITY	SC VI.4	R 336.1205(1)(a) & (3)

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

NA

**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 last day of the 4-week time period, for the previous 4-week time period, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.1205(3))

2. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each quench oil, including the weight percent of each component. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3))**
  
3. The permittee shall keep the following information on a 4-week time period basis for FGFACILITY:
  - a. Quench oil purchased or usage rate to replenish lost quench oil (Appendix A - column A)
  - b. Amount of spent oil sent off-site for recycling (Appendix A - column B).
  - c. Amount of spent oil or sludge sent off-site for disposal (Appendix A - column C).
  - d. Amount of oil spilled (Appendix A - column D).
  - e. Emission calculations from quench oil usage determining the emission rate in tons per 4-week time period (Appendix A - column E).
  - f. Emission calculations for natural gas combustion using emission factors or other method approved by the AQD District Supervisor.
  - f. Emission calculations for FGFACILITY determining the annual emission rate in tons per year based on 13 consecutive 4-week time periods, as determined at the end of each 4-week period.The permittee shall keep all records on file at the facility in a manner acceptable to the AQD District Supervisor and make them available to the Department upon request. **(R 336.1205(3))**
  
4. The permittee shall keep, in a satisfactory manner, quench oil usage records for FGFACILITY for each 4-week time period and annual usage records based on 13 consecutive 4-week time periods, as determined at the end of each 4-week period. The permittee shall keep all records on file and make them available to the department upon request. **(R 336.1205(3))**

**VII. REPORTING**

NA

**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).

**APPENDIX A**

**QUENCH OIL MATERIAL BALANCE  
 AND VOC EMISSION CALCULATION**

4-Week Time Period	A <sup>(1)</sup> <u>Oil Addition</u>		B <sup>(2)</sup> <u>Reclaimed</u>		C <sup>(3)</sup> <u>Disposed</u>		D <sup>(4)</sup> <u>Spill/Clean-Up</u>		E <sup>(5)</sup> <u>VOC Emitted</u>	
	Gal.	Lbs.	Gal.	Lbs.	Gal.	Lbs.	Gal.	Lbs.	Gal.	Lbs.
<b><u>VOC Emitted</u></b> tons per 4-week time period, <b>F = E/2000</b>									F:	
<b><u>VOC Emitted</u></b> tons per year (13 consecutive 4-week time periods), <b>G = F + TOTAL OF 12 PREVIOUS 4-WEEK TIME PERIODS</b>									G:	

(1) New oil added/used to replenish lost quench oil.

(2) Spent oil transported to off-site reclamation.

(3) Oil in sludge generated from tank cleaning; sent to off-site disposal facility.

(4) Oil lost to spill or used for clean-up.

(5) Balance of oil lost in air emissions:  $E = A - B - C - D$ .

**Note:** A, B, C, and D are the amounts or volumes of liquid oil only and should not include any solid content or residues. "Lbs." in A, B, C, D, and E are determined as follows:  $Lbs. = Usage (gal.) \times Density (lbs/gal)$