FINAL DRAFT/PROPOSED CAAPP PERMIT
Rock Island Arsenal
I.D. No.: 161065AAW
Application No.: 95110023
April 5, 2002

217/782-2113

TITLE V - CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT
and
TITLE I PERMIT[1]

PERMITTEE

Rock Island Arsenal
Attn: SIORI-SEV Environmental Coordinator
Rock Island Arsenal
Rock Island, Illinois 61299

Application No.: 95110023 I.D. No.: 161065AAW
Applicant's Designation: Date Received: November 7, 1995
Operation of: Army Manufacturing and Warehousing Facility
Date Issued: !TO BE DETERMINED! Expiration Date[2]: !DATE!
Source Location: Rock Island Arsenal, Rock Island, Rock Island
Responsible Official: David Foss, Environmental Coordinator

This permit is hereby granted to the above-designated Permittee to OPERATE a army manufacturing and warehousing facility, pursuant to the above referenced permit application. This permit is subject to the conditions contained herein.

If you have any questions concerning this permit, please contact Michael Knobloch at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:MJK:jar

cc: Illinois EPA, FOS, Region 2

[1] This permit may contain terms and conditions which address the applicability, and compliance if determined applicable, of Title I of the CAA and regulations promulgated thereunder, including 40 CFR 52.21 – federal PSD and 35 IAC Part 203 – Major Stationary Sources Construction and Modification. Any such terms and conditions are identified within this permit.

[2] Except as provided in Condition 8.7 of this permit.

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1.0 SOURCE IDENTIFICATION

1.1 Source

Rock Island Arsenal
Rock Island Arsenal
Rock Island, Illinois 61299
309/782-7855

I.D. No.: 161065AAW
Standard Industrial Classification: 3489, 3471, 3325 Ordnance, Plating and Polishing, Steel Foundries

1.2 Owner/Parent Company

Rock Island Arsenal
Rock Island Arsenal
Rock Island , Illinois 61299

1.3 Operator

Rock Island Arsenal
Rock Island Arsenal
Rock Island, Illinois 61299

David Foss, Environmental Coordinator
309/782-7855

1.4 General Source Description

The Rock Island Arsenal is located at Arsenal Island located in the town of Rock Island Illinois. The source manufactures artillery, gun mounts, recoil mechanisms, and small arms. Major air pollution sources at the facility include the central heating plant, material handling, electroplating, foundry, machining, incinerator, and other various industrial processes.

2.0 LIST OF ABBREVIATIONS/ACRONYMS USED IN THIS PERMIT

Act	Illinois Environmental Protection Act [415 ILCS 5/1 et seq.]
AP-42	Compilation of Air Pollutant Emission Factors, Volume 1, Stationary Point and Other Sources (and Supplements A through F), USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711
Btu	British thermal unit
CAA	Clean Air Act [42 U.S.C. Section 7401 et seq.]
CAAPP	Clean Air Act Permit Program
CAM	Compliance Assurance Monitoring
CFR	Code of Federal Regulations
ERMS	Emissions Reduction Market System
HAP	Hazardous Air Pollutant
hr	hour
IAC	Illinois Administrative Code
I.D. No.	Identification Number of Source, assigned by Illinois EPA
ILCS	Illinois Compiled Statutes
Illinois EPA	Illinois Environmental Protection Agency
kW	kilowatts
lb	pound
mmBtu	Million British thermal units
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standards
PM	Particulate Matter
PM_{10}	Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 microns as measured by applicable test or monitoring methods
ppm	parts per million
PSD	Prevention of Significant Deterioration
RMP	Risk Management Plan
SO_2	Sulfur Dioxide
T1	Title I – identifies Title I conditions that have been carried over from an existing permit
T1N	Title I New – identifies Title I conditions that are being established in this permit
T1R	Title I Revised – identifies Title I conditions that have been carried over from an existing permit and subsequently revised in this permit
USEPA	United States Environmental Protection Agency
VOM	Volatile Organic Material

3.0 INSIGNIFICANT ACTIVITIES

3.1 Identification of Insignificant Activities

The following activities at the source constitute insignificant activities as specified in 35 IAC 201.210:

3.1.1 Activities determined by the Illinois EPA to be insignificant activities, pursuant to 35 IAC 201.210(a)(1) and 201.211, as follows:

212P-2 Blasting Machine
212P-3 Blasting Machine
212P-6 Blasting Machine
220-35 Blasting Machine
299-20 Blasting Machine
299-21 Blasting Machine
299-22 Blasting Machine
208-30 Blasting Machine
208-73 Blasting Machine
208-74 Blasting Machine
208-75 Blasting Machine
Oil Fired Boiler at Bldg 25
Oil Fired Boiler at Bldg 38
Oil Fired Boiler at Bldg 38
Oil Fired Boiler at Bldg 334
Oil Fired Furnace at Bldg 335
Oil Fired Furnace at Bldg 336
Lead Pot (220-7)

3.1.2 Activities that are insignificant activities based upon maximum emissions, pursuant to 35 IAC 201.210(a)(2) or (a)(3), as follows:

3 Heat Treating Furnaces (220-42)
1 Electric Oven (208-65)
Car Bottom Furnace (212W-12)
6 Quench Tanks
Inactive landfill
Fluidized beds and rainfall sand cabinets (220-40)
Two Laser Etchers
Laminated Object Manufacturing Machine
4 Electric Discharge Machines (220-1)
Curing Oven (220-15)
Despatch Cure Oven (220-17)
Fume Hood (220-20)
Cure Oven (220-45)
Wastewater Treatment (212T-27, 28, 29)

Electron Beam Welder (212W-9)
2 Electric Ovens (212W-14)
Electric Oven (208-70)
Electric Oven (212F-20.2)
Battery Charging Station (212W-8)
Plastics Booth (212F-23)

3.1.3 Activities that are insignificant activities based upon their type or character, pursuant to 35 IAC 201.210(a)(4) through (18), as follows:

Direct combustion units designed and used for comfort heating purposes and fuel combustion emission units as follows: (A) Units with a rated heat input capacity of less than 2.5 mmBtu/hr that fire only natural gas, propane, or liquefied petroleum gas; (B) Units with a rated heat input capacity of less than 1.0 mmBtu/hr that fire only oil or oil in combination with only natural gas, propane, or liquefied petroleum gas; and (C) Units with a rated heat input capacity of less than 200,000 Btu/hr which never burn refuse, or treated or chemically contaminated wood [35 IAC 201.210(a)(4)].

Extruders used for the extrusion of metals, minerals, plastics, rubber, or wood, excluding extruders used in the manufacture of polymers, provided that volatile organic materials or class I or II substances subject to the requirements of Title VI of the CAA are not used as foaming agents or release agents or were not used as foaming agents in the case of extruders processing scrap material [35 IAC 201.210(a)(5)].

Equipment used for the melting or application of less than 50,000 lbs/year of wax to which no organic solvent has been added [35 IAC 201.210(a)(7)].

Storage tanks of organic liquids with a capacity of less than 10,000 gallons and an annual throughput of less than 100,000 gallons per year, provided the storage tank is not used for the storage of gasoline or any material listed as a HAP pursuant to Section 112(b) of the CAA [35 IAC 201.210(a)(10)].

Die casting machines where a metal or plastic is formed under pressure in a die [35 IAC

201.210(a)(12)].

Printing operations with aggregate organic solvent usage that never exceeds 750 gallons per year from all printing lines at the source, including organic solvent from inks, dilutents, fountain solutions, and cleaning materials [35 IAC 201.210(a)(14)].

Gas turbines and stationary reciprocating internal combustion engines of less than 112 kW (150 horsepower) power output [35 IAC 201.210(a)(15)].

Gas turbines and stationary reciprocating internal combustion engines of between 112 kW and 1,118 kW (150 and 1,500 horsepower) power output that are emergency or standby units [35 IAC 201.210(a)(16)].

Storage tanks of any size containing exclusively soaps, detergents, surfactants, glycerin, waxes, vegetable oils, greases, animal fats, sweeteners, corn syrup, aqueous salt solutions, or aqueous caustic solutions, provided an organic solvent has not been mixed with such materials [35 IAC 201.210(a)(17)].

3.1.4 Activities that are considered insignificant activities pursuant to 35 IAC 201.210(b).

3.2 Compliance with Applicable Requirements

Insignificant activities are subject to applicable requirements notwithstanding status as insignificant activities. In particular, in addition to regulations of general applicability, such as 35 IAC 212.301 and 212.123 (Condition 5.2.2), the Permittee shall comply with the following requirements, as applicable:

3.2.1 For each cold cleaning degreaser, the Permittee shall comply with the applicable equipment and operating requirements of 35 IAC 215.182, 218.182, or 219.182.

3.2.2 For each particulate matter process emission unit, the Permittee shall comply with the applicable particulate matter emission limit of 35 IAC 212.321 or 212.322. For example, the particulate matter emissions from a process emission unit shall not exceed 0.55 pounds per hour if the emission unit’s process weight rate is 100 pounds per hour

or less, pursuant to 35 IAC 266.110.

3.2.3 For each organic material emission unit that uses organic material, e.g., a mixer or printing line, the Permittee shall comply with the applicable VOM emission limit of 35 IAC 215.301, 218.301, or 219.301, which requires that organic material emissions not exceed 8.0 pounds per hour or do not qualify as photochemically reactive material as defined in 35 IAC 211.4690.

3.3 Addition of Insignificant Activities

3.3.1 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type that is identified in Condition 3.1, until the renewal application for this permit is submitted, pursuant to 35 IAC 201.212(a).

3.3.2 The Permittee must notify the Illinois EPA of any proposed addition of a new insignificant activity of a type addressed by 35 IAC 201.210(a) and 201.211 other than those identified in Condition 3.1, pursuant to Section 39.5(12)(b) of the Act.

3.3.3 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type identified in 35 IAC 201.210(b).

4.0 SIGNIFICANT EMISSION UNITS AT THIS SOURCE

Emission Unit	Description	Date Constructed	Emission Control Equipment
01	106-50 212P-1 212P-4 212P-5 220-34	3/93 4/88 4/88 4/88 3/93	Baghouse 106-50A Baghouse 212P-1A Baghouse 212P-3A Baghouse 212P-3A Baghouse 220-34A
02	Ash Handling for Coal Fired Boilers	Unknown	Baghouse for Ash Handling
03	Boiler 1 (120 mmBtu/Hr) Boiler 2 (120 mmBtu/Hr) Boiler 3 (158.5 mmBtu/Hr) Boiler 4 (119 mmBtu/Hr)	1941 1942 1963 1965	Multicyclone and Baghouse 1 Multicyclone and Baghouse 1 Multicyclone and Baghouse 2 Multicyclone and Baghouse 2
04	Coal Crusher Coal Separator Coal Handling Fugitive Emissions	9/78 9/78 N/A	Rotoclone Rotoclone None
05	Rock Salt Handling For Boiler Feed Water (Fugitive)	N/A	Screen
06	T5 Acid Pickle T11 Electro Clean T13 HCL Pickling T22 O.D. Chromatic Seal T17 Cadmium Plating T18 Cadmium Plating T33 Deoxidizer T36 HF Etch Tank T37 Sulfuric Acid T38 Sulfuric Acid T39 Hard Coat Anodize T40 Hard Coat Anodize T91 Passivate Tank T141 Black Chrome T101 O.D. Chrome	Unknown Unknown Unknown Unknown Unknown Unknown Unknown Unknown Unknown Unknown Unknown Unknown Unknown Unknown Unknown	Scrubber 202, SC-2 Scrubber 202, SC-2 Scrubber 202, SC-2 Scrubber 202, SC-2 Scrubber 203, SC-3 Scrubber 203, SC-3 Scrubber 205, SC-5 Scrubber 205, SC-5 Scrubber 205, SC-5 Scrubber 205, SC-5 Scrubber 205, SC-5 Scrubber 205, SC-5 Scrubber 205, SC-5 Scrubber 207, SC-7 Scrubber 208, SC-8

6 Cont:	T102 O.D. Chrome	Unknown	Scrubber 208, SC-8
	T103 O.D. Chrome	Unknown	Scrubber 208, SC-8
	T104 O.D. Chrome	Unknown	Scrubber 208, SC-8
	T105 O.D. Chrome	Unknown	Scrubber 208, SC-8
	T106 O.D. Chrome	Unknown	Scrubber 209, SC-9
	T107 O.D. Chrome	Unknown	Scrubber 209, SC-9
	T124 O.D. Chrome	Unknown	Scrubber 209, SC-9
	T152 Deep Chrome	Unknown	Scrubber 209, SC-9
	T153 Deep Chrome	Unknown	Scrubber 209, SC-9
	T154 Deep Chrome	Unknown	Scrubber 209, SC-9
	T125 I.D. Chrome	1/88	Scrubber 212T-10A
	T126 I.D. Chrome	1/88	Scrubber 212T-10A
	T127 I.D. Chrome	Unknown	Scrubber 210, SC-10
	T128 I.D. Chrome	Unknown	Scrubber 210, SC-10
	T121 Electro Polish	Unknown	Scrubber 211, SC-11
	T160 Electro Polish	Unknown	Scrubber 211, SC-11
	T161 Electro Strip Tank	Unknown	Scrubber 211, SC-11
	T163 Pickle Tank	Unknown	Scrubber 211, SC-11
	T169 Lead Plating Tank	Unknown	Scrubber 211, SC-11
	T166 Copper Plating	Unknown	Fan 221, F-221
	T170 Nickel Plating	Unknown	Fan 221, F-221
	T173 Rinse Tank	Unknown	Fan 221, F-221
07	3 Ton Arc Furnace (212F-1)	1968	Baghouse (212F-1A)
	5 Ton Arc Furnace (212F-2)	1984	Baghouse (212F-2A)
	Casting Machine (212F-7)	9/1944	Baghouse (212F-7A)
	5 Induction Furnaces (212F-4, 5, and 6)	10/1987	Baghouse (212F-7A)
	Core Muller, Sand Heater (212F-8)	10/1987	Cartridge (212F-8A)
	2 Infrared Ovens (212F-9)	10/1987	None
	Spray Booth (212F-9)	10/1987	None

7 Cont:	2 Core Ovens (212F-10)	10/1987	None
	Nonferrous Green Sand Molding and Reclaim (212F-11)	10/1987	Cartridge (212F-11A)
	Green Sand Molding (212F-12)	10/1987	Cartridge (212F-12A)
	Small No Bake Mold Preparation (212F-13)	10/1987	None
	Small No Bake Pour and Cool Area (212F-14)	12/1988	None
	Large No Bake Pour and Cool Area (212F-15)	10/1987	None
	Large No Bake Mold Prep (212F-16)	10/1987	None
	No Bake Sand Reclaim System (212F-17)	10/1987	Cartridge (212F-17A)
	2 Blasting Machines (212F-18)	10/1987	Cartridge (212F-18A)
	3 Arc Air Torches (212F-19)	10/1987	Dust Collector (212F-19A)
	4 Chip and Grind Stations (212F-21)	10/1987	Dust Collector (212F-21A)
	Sand Mixer (212F-24)	11/1982	Cartridge (212F-24A)
	Scrap/Charge Pile (Fugitive)		None
8	Car Bottom Furnace	5/1995	Afterburner
	Carbonizing Pit Furnace	11/1989	None
	Billet Forging Furnace	6/1993	None
9	Incinerator (Bldg 332)	3/1992	Afterburner
10	Induction Furnace and	1985	None

	Pouring Hood (220-8)		
11	2 Chip and Grind Tables (212W-7)	02/1989	Cyclone (212W-7A)
	4 Grinding Machines (220-6)	07/1978	Cyclone (220-6A)
	36 Tool Grinding Machine (220-32)	Pre 1980	Cartridge (220-32A)
	2 Deburring Benches (220-33)	Pre 1980	Cyclone (220-30A)
	4 Grinding Machines (222-5)	Pre 1988	Cyclone (222-5A)
	3 Plasma Arc Cutters (230-4)	Pre 1980	Scrubber (230-4A)
12	Paved and Unpaved Roadways (Fugitive)	N/A	None

13	Rubber Mixer (220-18)	09/1992	None
	3 Rubber Mills (220-18)	09/1992	None
	Rubber Mixing Hood (220-18)	09/1992	None
14	Dropping Onto Salt Pile	N/A	None
	Dropping Salt Into Truck	N/A	None
	Dropping Salt Onto Streets	N/A	None
15	Paint Booth (139-6)	Unknown	Dry Filter (139-6A)
	Paint Booth (208-4)	03/1991	Wet Collector (208-4A)
	Paint Booth (208-5)	03/1991	Wet Collector (208-5A)
	Paint Booth (208-6)	03/1991	Wet Collector (208-6A)
	Paint Booth (208-7)	03/1991	Wet Collector (208-7A)
	Paint Booth (208-9)	03/1991	Wet Collector (208-9A)
	Paint Booth (208-10)	03/1991	Wet Collector (208-10A)
	Paint Fume Hood (208-11)	02/1991	None
	Drying Oven (208-12)	08/1966	None
	Powder Coat Drying Oven (208-50)	1977	None
	Epoxy Powder Coating Booth (208-51)	10/1970	Dry Filter (208-51B)
	Paint Booth (208-52)	07/1986	Dry Filter (208-52A)
15 Cont:	Paint Booth (208-53)	07/1986	Dry Filter (208-53A)
	Paint Booth (208-54)	07/1986	Dry Filter (208-54A)
	Paint Booth (208-55)	07/1986	Dry Filter (208-55A)

	Paint Booth Oven (208-56)	04/1987	Oven Filter (208-56A)
	Paint Booth (212P-8)	04/1988	Dry Filter (212P-8A)
	Electric Oven (212P-9)	04/1988	None
	Paint Booth (299-11)	01/1963	Dry Filter (299-11A)
	Paint Booth (299-12)	07/1986	Dry Filter (299-12A)
	Paint Booth (299-13)	07/1986	Dry Filter (299-13A)
	Flash Tunnel (299-14)	07/1986	None
	Drying Oven (299-15)	07/1986	None
16	Tank 22-West	12/1991	None
	Tank 216-4	07/1988	None
	Tank 239-East	1991	None
	Tank 239-West	12/1991	None
17	Test Range 1 (25-6)	1970	Baghouse (25-6A)
	Test Range 2 (25-7)	1970	Baghouse (25-7A)
	Test Range 3 (25-8,9)	1970	Baghouse (25-8A,9A)
	Test Range 4 (25-5)	1970	Baghouse (25-5A)
	4 Welders (106-51)	1989	Portable Filter Unit
	2 Welders (108-1)	1987 and 06/1984	None
	2 Welding Robots (208-71)	10/1995	Cartridge (208-71A)
	Repair Welding Station (208-72)	10/1995	Cartridge (208-72A)
	Welders (211-1)	09/1986	Portable Filter Unit

18	Weld Stations (212F-20.1)	10/1987	Cartridge (212F-20A)
	Overlay Welding (212W-1)	02/1989, 04/1995, 06/1995	Cartridge (212W-1A)
	Welders (212W-2, 3, 4)	02/1989	Filter Unit (212W-2A, 3A, & 4A)
	2 Welders (212W-10)	03 and 11/1986	Portable Filter Unit
	4 Welders (220-1)	1950, 1968, and 1984	Portable Filter Unit
	Welding Station (220-43)	1988	Portable Filter Unit
	3 Weld Overlay Lathes (220-46)	11/1993	Dust Collector (220-46A)
	14 Welders (230-39)	1991	Portable Filter Unit
18 Cont:	Welders (351-1)	1984	None
19	2 Planers, 4 Disc Sanders, Tablesaw, 2 Bandsaws, Jointer, Spindle Sander (212F-22)	10/1987	Baghouse (212F-22A)
	Wood Matcher Planer (299-23)	04/1962	Cyclone (299-23A)
	Planer/Joiner, Dowel Turning Machine, Shaper, Molder Shaper, 3 Radial Arm Saws, Routing Machine, 3 Band Saws, Router, Planer, Auto Cut-off Saw (299-24)	Pre 1988	Cyclone (299-24A)
	Sander, Bandsaw, 2 Auto Cut-off Saw, Rip Saw,	Pre 1988	Cyclone (299-25A)

	2 Table Saw, 2 Planer/Joiner, Band Saw (299-25) Fugitive Processes	N/A	None

5.0 OVERALL SOURCE CONDITIONS

5.1 Source Description

5.1.1 This permit is issued based on the source requiring a CAAPP permit as a major source of NO_x, PM, SO_2, VOM, and HAP emissions.

5.2 Applicable Regulations

5.2.1 Specific emission units at this source are subject to particular regulations as set forth in Section 7 (Unit-Specific Conditions) of this permit.

5.2.2 In addition, emission units at this source are subject to the following regulations of general applicability:

a. No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally overhead at a point beyond the property line of the source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 IAC 212.301 and 212.314.

Compliance with this requirement is considered to be assured by the inherent nature of operations at this source, as demonstrated by historical operation.

b. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 IAC 212.122, pursuant to 35 IAC 212.123(a), except as allowed by 35 IAC 212.123(b) and 212.124.

5.2.3 Ozone Depleting Substances

The Permittee shall comply with the standards for recycling and emissions reduction of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

a. Persons opening appliances for maintenance, service,

repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

5.2.4 Risk Management Plan

Should this stationary source, as defined in 40 CFR Section 68.3, become subject to the Accidental Release Prevention regulations in 40 CFR Part 68, then the owner or operator shall submit [40 CFR 68.215(a)(2)(i) and (ii)]:

a. A compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR 68.10(a); or

b. A certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of the Risk Management Plan (RMP), as part of the annual compliance certification required by 40 CFR Part 70 or 71.

5.2.5 a. Should this stationary source become subject to a regulation under 40 CFR Parts 60, 61, or 63, or 35 IAC after the date issued of this permit, then the owner or operator shall, in accordance with the applicable regulation(s), comply with the applicable requirements by the date(s) specified and shall certify compliance with the applicable requirements of such regulation(s) as part of the annual compliance certification, as required by 40 CFR Part 70 or 71.

b. No later than upon the submittal for renewal of this permit, the owner or operator shall submit, as part of an application, the necessary information to address either the non-applicability of, or demonstrate

compliance with all applicable requirements of any potentially applicable regulation which was promulgated after the date issued of this permit.

5.2.7 Episode Action Plan

a. If the source is required to have an episode action plan pursuant to 35 IAC 244.142, the Permittee shall maintain at the source and have on file with the Illinois EPA a written episode action plan (plan) for reducing the levels of emissions during yellow alerts, red alerts, and emergencies, consistent with safe operating procedures. The plan shall contain the information specified in 35 IAC 244.144.

b. The Permittee shall immediately implement the appropriate steps described in this plan should an air pollution alert or emergency be declared.

c. If a change occurs at the source which requires a revision of the plan (e.g., operational change, change in the source contact person), a copy of the revised plan shall be submitted to the Illinois EPA for review within 30 days of the change. Such plans shall be further revised if disapproved by the Illinois EPA.

d. For sources required to have a plan pursuant to 35 IAC 244.142, a copy of the original plan and any subsequent revisions shall be sent to:

i. Illinois EPA, Compliance Section; and

ii. For sources located in Cook County and outside of the city of Chicago: Cook County Department of Environmental Control; or

iii. For sources located within the city of Chicago: Chicago Department of Environmental Control.

5.2.8 PM_{10} Contingency Measure Plan

Should this stationary source, as defined in 35 IAC 212.700, become subject to the requirement to prepare and submit a contingency measure plan reflecting the PM_{10} emission reductions as set forth in 35 IAC 212.703, then

the owner or operator shall submit such plan to the Illinois EPA for review and approval within ninety (90) days after the date this source becomes subject to this requirement. Such plan will be incorporated by reference into this permit and shall be implemented in accordance with 35 IAC 212.704. The source shall comply with the applicable requirements of 35 IAC Part 212, Subpart U, incorporated herein by reference.

5.2.9 CAM Plan

This stationary source has a pollutant-specific emissions unit that is subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources. The source must submit a CAM plan for each affected pollutant-specific emissions unit upon application for renewal of the initial CAAPP permit, or upon a significant modification to the CAAPP permit for the construction or modification of a large pollutant-specific emissions unit which has the potential post-control device emissions of the applicable regulated air pollutant that equals or exceeds major source threshold levels.

5.3 Non-Applicability of Regulations of Concern

None

5.4 Source-Wide Operational and Production Limits and Work Practices

In addition to the source-wide requirements in the Standard Permit Conditions in Section 9, the Permittee shall fulfill the following source-wide operational and production limitations and/or work practice requirements:

None

5.5 Source-Wide Emission Limitations

5.5.1 Permitted Emissions for Fees

The annual emissions from the source, not considering insignificant activities as addressed by Section 3.0 of this permit, shall not exceed the following limitations. The overall source emissions shall be determined by adding emissions from all emission units. Compliance with these limits shall be determined on a calendar year basis.

These limitations (Condition 5.5.1) are set for the purpose of establishing fees and are not federally enforceable.

Permitted Emissions of Regulated Pollutants

Pollutant	Tons/Year
Volatile Organic Material (VOM)	119.2723
Sulfur Dioxide (SO_2)	1,024.106
Particulate Matter (PM)	144.4219
Nitrogen Oxides (NO_x)	267.6286
HAP, not included in VOM or PM	42.0452
Total	1,597.4740

5.5.2 Emissions of Hazardous Air Pollutants

Source-wide emission limitations for HAPs as listed in Section 112(b) of the CAA are not set. This source is considered to be a major source of HAPs.

5.5.3 Other Source-Wide Emission Limitations

Other source-wide emission limitations are not set for this source pursuant to either the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21, Illinois EPA rules for Major Stationary Sources Construction and Modification, 35 IAC Part 203, or Section 502(b)(10) of the CAA. However, there may be unit specific emission limitations set forth in Section 7 of this permit pursuant to these rules.

5.6 General Recordkeeping Requirements

5.6.1 Emission Records

The Permittee shall maintain records of the following items for the source to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

Total annual emissions on a calendar year basis for the emission units covered by Section 7 (Unit Specific Conditions) of this permit.

5.6.5 Records for Operating Scenarios

N/A

5.6.6 Retention and Availability of Records

a. All records and logs required by this permit shall be retained for at least five years from the date of entry (unless a longer retention period is specified by the particular recordkeeping provision herein), shall be kept at a location at the source that is readily accessible to the Illinois EPA or USEPA, and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request.

b. The Permittee shall retrieve and print, on paper during normal source office hours, any records retained in an electronic format (e.g., computer) in response to an Illinois EPA or USEPA request for records during the course of a source inspection.

5.7 General Reporting Requirements

5.7.1 General Source-Wide Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the source with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

5.7.2 Annual Emissions Report

The annual emissions report required pursuant to Condition 9.7 shall contain emissions information for the previous calendar year.

5.7.3 Annual Reporting of HAP Emissions

The Permittee shall submit an annual report to the Illinois EPA, Compliance Section, on HAP emissions from the source, including the following information, so as to demonstrate whether the source is being operated as a non-major source of HAP emissions. This report shall be submitted with the Annual Emissions Report (Condition 9.7).

a. The annual emissions of individual HAPs for each month of the previous calendar year sufficient to demonstrate compliance with the 12 month running total of Condition 5.5.2, tons/year, (e.g., for the month of January, the emissions from February of the preceding calendar year through January; for the month of February, the emissions from March of the preceding calendar year through February; 12 months in all); and

b. The total annual emissions of all HAPs combined for each month of the previous calendar year sufficient to demonstrate compliance with the 12 month running total of Condition 5.5.2, tons/year, (e.g., for the month of January, the emissions from February of the preceding calendar year through January; for the month of February, the emissions from March of the preceding calendar year through February; 12 months in all).

5.8 General Operational Flexibility/Anticipated Operating Scenarios

N/A

5.9 General Compliance Procedures

5.9.1 General Procedures for Calculating VARIABLE Emissions

Compliance with the source-wide emission limits specified in Condition 5.5 shall be based on the recordkeeping and reporting requirements of Conditions 5.6 and 5.7, and compliance procedures in Section 7 (Unit Specific Conditions) of this permit.

a. For the purpose of estimating VOM emissions from the storage tanks, the current version of the tanks program is acceptable.

6.0 NOT APPLICABLE TO THIS PERMIT

7.0 UNIT SPECIFIC CONDITIONS

7.1 Unit 01: Abrasive Blasting
Control 01: Baghouses and dust collectors

7.1.1 Abrasive blasting operations are performed in several facilities throughout the Rock Island Arsenal. Blasting media include glass, steel, and aluminum oxide. Emissions from these blasting operations are mainly particulate.

7.1.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
01	4 Blasting Machines (106-50)	Filter (106-50A)
	8 Blasting Machines (212P-1)	Baghouse (212P-1A)
	1 Blasting Machine (212P-4)	Baghouse (212P-3A)
	1 Blasting Machine (212P-5)	Baghouse (212P-3A)
	7 Blasting Machines (220-34)	Baghouse (220-34A)

7.1.3 Applicability Provisions and Applicable Regulations

a. The affected blasting operations for purposes of these unit specific conditions, is the emission unit defined in Condition 7.1.2.

b. The affected blasting operations are subject to 35 IAC 212.123 which states:

i. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to Section 212.122 of this Subpart.

ii. The emission of smoke or other particulate matter from any such emission unit may have an

opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period, providing that such opaque emission permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1000 ft) radius from the center point of any such emission unit owned or operated by such person and provided further that such opaque emissions permitted from each such fuel combustion emission unit shall be limited to 3 times in any 24 hour period. [35 IAC 212.123]

c. The affected blasting operations are subject to 35 IAC 212.301 which states:

No person shall cause the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source. [35 IAC 212.301]

7.1.4 Non-Applicability of Regulations of Concern

N/A

7.1.5 Operational and Production Limits And Work Practices

None

7.1.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected blasting operations are subject to the following:

Pollutant	Emissions (Ton/Yr)
PM	0.176

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1N]

The above limitations are being established in this permit pursuant to Title I of the CAA, specifically 35 IAC Part

203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (PSD). The source has requested that the Illinois EPA establish emission limitations and other appropriate terms and conditions in this permit that limit the particulate emissions from the affected blasting operations below the levels that would trigger the applicability of these rules, consistent with the information provided in the CAAPP application [T1N].

7.1.7 Operating Requirements

None

7.1.8 Inspection Requirements

None

7.1.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected blasting operations to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

a. The Permittee shall maintain records of the amount of blasting media used in the individual blasting machines in Lb/day and Lb/mo.

b. The Permittee shall maintain records of monthly and annual PM emissions in tons/mo and tons/yr.

7.1.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected blasting operations with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

a. If there is an exceedance of the requirements of this permit as determined by the rec9ords required by this permit, the Permittee shall submit a report to the Illinois EPA’s Compliance Section in Springfield, Illinois within 30 days after the exceedance. The

report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences [Section 39.5(7)(f)(ii) of the Act].

7.1.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.1.12 Compliance Procedures

PM Emission Calculations For Blasting Operations

PM Emissions (tons) = [(Blasting Abrasive Used (Lb)) * (Emission factor (lb PM/lb Abrasive)) * (1-Control Efficiency (%))]/2000 Lb/ton

Emission Unit	Media	Emission Factor (Lb PM/Lb Abrasive)	Efficiency (%)
106-50	Steel Shot	.004	95
106-50	Glass Beads	.010	95
212P-1	Steel Shot	.004	98
212P-1	Glass Beads	.010	98
212P-4	Aluminum Oxide	.010	99
212P-5	Aluminum Oxide	.004	99
220-34	Steel Shot	.004	99

7.2 Unit 02: Ash Handling
Control 02: Baghouses and Cyclones

7.2.1 Ash generated by the coal fired boilers is pneumatically conveyed to the ash silo. From the ash silo, the ash drops into a tumbler where water is mixed with the ash. From the tumbler the ash drops into a dump truck which transports the ash to an ash pile for storage. The ash pile is either disposed of in a landfill or used by the local communities for treatment of snow covered roads.

7.2.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
02	Ash Handling System	Baghouse

7.2.3 Applicability Provisions and Applicable Regulations

a. The affected ash handling system for purposes of these unit specific conditions, is the emission unit defined in Condition 7.2.2.

b. The affected ash handling system is subject to 35 IAC 212.123 which states:

i. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to Section 212.122 of this Subpart. [35 IAC 212.123a)]

c. The affected ash handling system is subject to 35 IAC 212.307 which states:

All unloading and transporting operations of materials collected by pollution control equipment shall be enclosed or shall utilize spraying, palletizing, screw conveying, or other equivalent methods. [35 IAC 212.307]

d. The affected ash handling system is subject to 35 IAC 212.313 which states:

If particulate collection equipment is operated

pursuant to Sections 212.304 through 212.310 and 212.312 of this Subpart, emissions from such equipment shall not exceed 68 mg/dscm (0.03 gr/dscf) [35 IAC 212.313]

e. The affected ash handling system is subject to 35 IAC 212.301 which states:

No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source. [35 IAC 212.301]

f. The affected ash handling system is subject to 35 IAC 212.315 which states:

No person shall cause or allow the operation of a vehicle of the second division as defined by 625 ILCS 5/1-217, or a semi-trailer as defined by 625 ILCS 5/1-187, without a covering sufficient to prevent the release of particulate matter into the atmosphere, provided that this rule shall not pertain to automotive exhaust. [35 IAC 212.315]

g. The affected ash handling system is subject to 35 IAC 212.308 which states:

Crushers, grinding mills, screening operations, bucket elevators, conveyor transfer points, conveyors, bagging operations, storage bins, and fine product truck and railcar loading operations shall be sprayed with water or a surfactant solution, utilize choke-feeding, or be treated by an equivalent method in accordance with an operating program. [35 IAC 212.308]

7.2.4 Non-Applicability of Regulations of Concern

N/A

7.2.5 Operational and Production Limits And Work Practices

None

7.2.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected ash handling system is subject to the following:

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.2.7 Operating Requirements

None

7.2.8 Inspection Requirements

None

7.2.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected ash handling system to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

a. The Permittee shall maintain records of the amount of coal burned in the boilers.

b. The Permittee shall maintain records of monthly and annual PM emissions in tons/mo and tons/yr.

7.2.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected ash handling system with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

a. If there is an exceedance of the requirements of this permit as determined by the rec9ords required by this permit, the Permittee shall submit a report to the Illinois EPA’s Compliance Section in Springfield, Illinois within 30 days after the exceedance. The

report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences [Section 39.5(7)(f)(ii) of the Act].

7.2.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.2.12 Compliance Procedures

PM Emission Calculations For Ash Handling System

PM Emissions (tons) = (Coal burned (tons)) * (.10 $_{\text{Ash Content}}$) * (1-Control Efficiency (%))

Fugitive PM Emission Calculations For Ash Handling System

The equation:

$$E = K(0.0032)\frac{[U/5]^{1.3}}{[M/2]^{1.4}} \text{ (pound[lb]/ton)}$$

Where:

E = Emission Factor
K = Particle Size Multiplier (Dimensionless)
(Pm = 1; PM-10 = 0.35)
U = Mean Wind Speed (7.5 Miles/hr from the Midwest Climate Center in Moline, Illinois for 1994)
M = Material Moisture Content (6% for Coal)

Obtained from AP-42 and shall be used to calculate PM and PM-10 emission factors for the following fugitive points:

1. Dropping of ash from an ash tumbler shoot to a 25 ton dump truck.

2. Dropping of ash from a 25 ton dump truck onto the ash pile.

3. Dropping of ash from the pile onto a 25 ton dump truck for disposal off site.

Uncontrolled annual emissions for each of these fugitive points shall be calculated as follows:

Uncontrolled annual emissions = E x R x CF

Where:

E = Emission Factor (lb/ton)
R = Total amount of coal used by the facility (ton/yr)(maximum = 38.500 tons/yr; typical = 35,000 tons/yr)
CF = Conversion Factor (ton/2,000 lbs)

The above equation is also used to estimate fugitive emissions from the ash raking room. PM and PM10 emission factors were calculated assuming a moisture content of 0.5 percent for bottom ash and a wind speed of 5 miles per hour due to the ventilation hoods above each ash raking area. Uncontrolled emissions from ash raking shall be calculated based on the following equation:

Uncontrolled Emissions (tons/yr) = E x R x B x CF

Where:

E = Emission Factor (lb/ton)
R = Total amount of ash generated (3,850 tons/yr max; 3,500 ton/yr)
B = Fraction of total ash that is bottom ash (0.7)
CF = Conversion Factor (ton/2,000 lb)

The Equation:

E = 1.7 {s/1.5} {365-p/235} {f/15} (lb/day/acre)

Where:

E = Emission factor
s = Silt content of ash (80%)
p = Number of days with > 0.25 mm (0.01 in) of precipitation per year (110, from Figure 13.2.2-1 of AP-42)
f = Percentage of time that the unobstructed wind speed exceeds 12 mph at the mean pile height (33 percent from Climatology of the U.S. series 82;

Decennial Census of the U.S. Climate-Summary of Hourly Operations 1951-60)

was obtained from the May 1983 version of AP-42 to calculate PM emissions from wind erosion of the active ash pile. Because this equation does not calculate PM-10 emissions separately, it is assumed that all PM emissions were PM-10. The uncontrolled annual PM and PM-10 emissions for the ash pile were calculated as follows:

Uncontrolled annual emissions (tons/yr) = E x S x CF_1 x CF_2

Where:

E = Emission factor (lb/day/acre)
S = Size of ash pile (acres)(maximum = 0.64 acre; tpy = 0.014 acre)
CF_1 = Conversion factor (ton/2,000 lb)
CF_2 = Conversion factor (365 days/yr)

7.3 Unit 03: Boilers
Control 03: Baghouses and Multicyclones

7.3.1 The central heating plant at the Rock Island Arsenal contains four coal-fired boilers that provide steam for heating, cooking, air conditioning, and manufacturing processes. Emissions from each boiler are ducted to a multicyclone with an estimated particulate matter removal efficiency of 80%. Emissions from the multicyclones for boilers number 1 and 2 are combined and ducted to baghouse 1. Emissions from the multicyclones for boilers 3 and 4 are combined and ducted to baghouse 2.

7.3.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
03	Boiler 1	Multicyclone and Baghouse 1
	Boiler 2	Multicyclone and Baghouse 1
	Boiler 3	Multicyclone and Baghouse 2
	Boiler 4	Multicyclone and Baghouse 2

7.3.3 Applicability Provisions and Applicable Regulations

a. The affected boilers for purposes of these unit specific conditions, is the emission unit defined in Condition 7.3.2.

b. Malfunction and Breakdown Provisions

In the event of a malfunction or breakdown of a affected boiler and associated baghouse controls, the Permittee is authorized to continue operation of the affected boiler and associated baghouse in violation of the applicable requirement of 35 IAC 212.202, as necessary to prevent risk of injury to personnel or severe damage to equipment. This authorization is subject to the following requirements:

i. The Permittee shall repair the damaged feature(s) of the affected boiler or baghouse or remove the affected boiler or baghouse from service as soon as practicable. This shall be accomplished within 6 hours unless the feature(s) can not be repaired within 6 hours and the affected boiler and baghouse can not be removed from service within 6 hours, and

the Permittee obtains an extension, for up to 1 days, from the Illinois EPA. The request for such an extension must document that spare parts are unavailable and specify a schedule of actions the Permittee will take that will assure the feature(s) will be repaired as soon as possible.

ii. The Permittee shall fulfill the applicable recordkeeping and reporting requirements of Conditions 7.3.9(b) and 7.3.10(a).

c. Startup Provisions

The Permittee is authorized to operate an affected boiler in violation of the applicable limit of 35 IAC 216.121 during startup pursuant to 35 IAC 201.262, as the Permittee has affirmatively demonstrated that all reasonable efforts have been made to minimize startup emissions, duration of individual starts, and frequency of startups. This authorization is subject to the following:

i. This authorization only extends for a period of up to 6-hours following initial firing of fuel during each startup event.

ii. The Permittee shall take the following measures to minimize startup emissions, the duration of startups, and minimize the frequency of startups:

A. Implementation of established startup procedures.

iii. The Permittee shall fulfill the applicable recordkeeping requirements of Condition 7.3.9(a).

d. The affected boilers are subject to 35 IAC 212.202 which states:

No person shall cause or allow the emission of particulate matter into the atmosphere from any fuel combustion emission unit for which construction or modification commenced prior to April 14, 1972, using

solid fuel exclusively, which is located outside the Chicago major metropolitan area, to exceed the limitations specified in the table below in any one hour period except as provided in Section 212.303 of this Subpart.

METRIC UNITS

H (Range) MW	S Kg/MW
Less than or equal to 2.93	1.55
Greater than 2.93 but Smaller than 73.2	$3.33H^{-0.715}$
Greater than or equal to 73.2	0.155

ENGLISH UNITS

H (Range) mmBtu/hr	S lbs/mmBtu
Less than or equal to 10	1.0
Greater than 10 but Smaller than 250	$5.18H^{-0.715}$
Greater than or equal to 250	0.1

Where:

S = Allowable emission standard in lbs/mmBtu/hr or kg/MW of actual heat input, and
H = Actual heat input in mmBtu/hr or MW-hr [35 IAC 212.202]

e. The affected boilers are subject to 35 IAC 214.142 which states:

This section applies to existing fuel combustion sources with actual heat input less than, or equal to, 73.2 MW (250 mmBtu/hr) located outside the Chicago, St. Louis (Illinois) or Peoria major metropolitan areas. No person shall cause or allow the emission of sulfur dioxide into the atmosphere in any one hour

period from any existing fuel combustion source with actual heat input less than, or equal to, 73.2 MW (250 mmBtu/hr), burning solid fuel exclusively, located outside the Chicago, St. Louis (Illinois) or Peoria major metropolitan areas, to exceed either of the following, whichever such person determines shall apply:

i. 10.5 kg of sulfur dioxide per MW-hr of actual heat input (6.8 lbs/mmBtu), provided such owner or operator complies with all applicable provisions of Section 214.186, or

ii The emission limit provided by Subpart E. [35 IAC 214.142]

f. The affected boilers are subject to 35 IAC 216.121 which states:

No person shall cause or allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission source with actual heat input greater than 2.9 MW (10 mmBtu/hr) to exceed 200 ppm, corrected to 50 percent excess air. [35 IAC 216.121]

g. The affected boilers are subject to 35 IAC 212.123a which states:

i. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to Section 212.122 of this Subpart. [35 IAC 212.123a)]

7.3.4 Non-Applicability of Regulations of Concern

a. The affected boilers are not subject to 35 IAC 217.121 because the boiler firing rates are less than 250 mmBtu/hr.

b. The affected boilers are not subject to 35 IAC 215.301 and 215.302 because of the exemption in 35 IAC 215.303

c. The affected boilers are not subject to 40 CFR 60 Subpart D, because the heat input is less than 250

mmBtu/hr.

d. The affected boilers are not subject to 40 CFR 60 Subpart Db, because the boilers were constructed prior to June 19, 1984.

e. The affected boilers are not subject to 40 CFR 60 Subpart Dc, because the boilers were constructed prior to June 9, 1989.

7.3.5 Operational and Production Limits And Work Practices

None

7.3.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected boilers are subject to the following:

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.3.7 Testing Requirements

a. Monthly Analysis Method. This subsection applies to sources at plants with total fuel-fired heat input capacity exceeding 14.65 MW (50 millions Btu/hr) but not exceeding 146.5 MW (500 million Btu/hr). These plants shall demonstrate compliance or non-compliance with Sections 214.122, 214.141, 214.142(a), 214.162, 214.186, and 214.421 by either an analysis of calendar monthly composites of daily fuel samples or by compliance with subsection (c) of 35 IAC 214.101, at the option of the plant. ASTM procedures incorporated by reference in Section 214.104(c), shall be used for sulfur and heating value determinations. [35 IAC 214.101 e)]

7.3.8 Inspection Requirements

None

7.3.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following for the affected boilers to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

a. Records for Startup

The Permittee shall maintain the following records, pursuant to Section 39.5(7)(b) of the Act, for each affected boiler subject to Condition 7.3.3(c), which at a minimum shall include:

i. The following information for each startup of the affected boilers:

A. Date and duration of the startup, i.e., start time and time normal operation achieved;

B. If normal operation was not achieved within 6 hours, an explanation why startup could not be achieved in 6 hours;

C. A detailed description of the startup;

D. An explanation why established startup procedures could not be performed, if not performed;

E. The nature of opacity, i.e., severity and duration, during the startup and the nature of opacity at the conclusion of startup, if above normal; and

F. Whether exceedance of Condition 5.2.2 may have occurred during startup, with explanation and estimated duration (minutes).

ii. A maintenance and repair log for each affected boiler, listing each activity performed with date.

b. Records for Malfunctions and Breakdowns of affected boilers

The Permittee shall maintain records, pursuant to 35 IAC 201.263, of continued operation of an affected boiler:

i. Date and duration of malfunction or breakdown;

ii. A detailed explanation of the malfunction or breakdown;

iii. An explanation why the damaged feature(s) could not be immediately repaired or the affected boiler removed from service without risk of injury to personnel or severe damage to equipment;

iv. The measures used to reduce the quantity of emissions and the duration of the event;

v. The steps taken to prevent similar malfunctions or breakdowns or reduce their frequency and severity; and

vi. The amount of release above typical emissions during malfunction/breakdown.

c. The Permittee shall maintain records of the amount of coal burned in the boilers in tons/mo and tons/yr.

d. The Permittee shall maintain records of monthly and annual PM, PM_{10}, NO_x, SO_2, CO, and VOM emissions in tons/mo and tons/yr.

e. The Permittee shall maintain records for the analysis of all coal received.

7.3.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected boilers with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

a. Reporting of Malfunctions and Breakdowns for affected boilers

The Permittee shall provide the following notification and reports to the Illinois EPA, Compliance Section and Regional Field Office, pursuant to 35 IAC 201.263, concerning continued operation of a affected boiler subject to Condition 7.3.3(b) during malfunction or breakdown of the control features of the affected boiler.

i. The Permittee shall notify the Illinois EPA's regional office by telephone as soon as possible during normal working hours, but no later than three (3) days, upon the occurrence of noncompliance due to malfunction or breakdown.

ii. Upon achievement of compliance, the Permittee shall give a written follow-up notice to the Illinois EPA, Compliance Section and Regional Field Office, providing a detailed explanation of the event, an explanation why continued operation of the affected boiler was necessary, the length of time during which operation continued under such conditions, the measures taken by the Permittee to minimize and correct deficiencies with chronology, and when the repairs were completed or when the affected boiler was taken out of service.

iii. If compliance is not achieved within 5 working days of the occurrence, the Permittee shall submit interim status reports to the Illinois EPA, Compliance Section and Regional Field Office, within 5 days of the occurrence and

every 14 days thereafter, until compliance is achieved. These interim reports shall provide a brief explanation of the nature of the malfunction or breakdown, corrective actions accomplished to date, actions anticipated to occur with schedule, and the expected date on which repairs will be complete or the affected boiler will be taken out of service.

b. If there is an exceedance of the requirements of this permit as determined by the rec9ords required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences [Section 39.5(7)(f)(ii) of the Act].

7.3.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.3.12 Compliance Procedures

Emission Calculations for Boilers #1 and #2

PM Emissions (tons) = [(Coal Usage (tons)) * (9 Lb PM/ton coal) * (1 – control efficiency (%))]/2000 lb/ton

PM_{10} Emissions (tons) = [(Coal Usage (tons)) * (6 Lb PM_{10}/ton coal) * (1 – control efficiency (%))]/2000 lb/ton

NO_x Emissions (tons) = [(Coal Usage (tons)) * (7.5 Lb NO_x/ton coal)]/2000 lb/ton

SO_2 Emissions (tons) = [(Coal Usage (tons)) * (38*S Lb SO_2/ton coal)]/2000 lb/ton

Where S = sulfur content in %

CO Emissions (tons) = [(Coal Usage (tons)) * (6 Lb CO/ton coal)]/2000 lb/ton

VOM Emissions (tons) = [(Coal Usage (tons)) * (.05 Lb VOM/ton coal)]/2000 lb/ton

Emission Calculations for Boilers #3 and #4

PM Emissions (tons) = [(Coal Usage (tons)) * (17 Lb PM/ton coal) * (1 – control efficiency (%))]/2000 lb/ton

PM_{10} Emissions (tons) = [(Coal Usage (tons)) * (12.4 Lb PM_{10}/ton coal) * (1 – control efficiency (%))]/2000 lb/ton

NO_x Emissions (tons) = [(Coal Usage (tons)) * (13.7 Lb NO_x/ton coal)]/2000 lb/ton

SO_2 Emissions (tons) = [(Coal Usage (tons)) * (38*S Lb SO_2/ton coal)]/2000 lb/ton

Where S = sulfur content in %

CO Emissions (tons) = [(Coal Usage (tons)) * (5 Lb CO/ton coal)]/2000 lb/ton

VOM Emissions (tons) = [(Coal Usage (tons)) * (.05 Lb VOM/ton coal)]/2000 lb/ton

7.4 Unit 04: Coal Handling
Control 04: Rotoclone

7.4.1 Coal handling operations are associated with Building 227, the central heating plant. Coal arrives at the 2.5 acre coal pile by dump truck and compacted by a front end loader to reduce spontaneous combustion. Coal is than transported from the pile on an as needed basis by a 15 yd dump truck to the building hopper. From the hopper coal is than transported to the separator where oversize pieces are removed. These oversize pieces are than transported to a crusher. Emissions from screening and crushing are controlled by a rotoclone. All properly sized coal is than transported to a storage bin located above the boilers by a bucket elevator. Once in the storage bin, the coal is fed to the boilers through a weigh lorry.

7.4.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
04	Coal Crusher	Rotoclone
	Coal Separator	Rotoclone
	Coal Handling Fugitive Emissions	None

7.4.3 Applicability Provisions and Applicable Regulations

a. The affected coal handling operations for purposes of these unit specific conditions, is the emission unit defined in Condition 7.4.2.

b. The affected coal handling emission control equipment (Rotoclone) are subject to 35 IAC 212.313 which states:

If particulate collection equipment is operated pursuant to Sections 212.304 through 212.310 and 212.312 of this Subpart, emissions from such equipment shall not exceed 68 mg/dscm (0.03 gr/dscf). [35 IAC 212.313]

c. The affected coal handling operations are subject to 35 IAC 212.123a which states:

No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to Section 212.122 of this Subpart. [35 IAC 212.123a)]

d. The affected coal handling operations are subject to 35 IAC 212.308 which states:

Crushers, grinding mills, screening operations, bucket elevators, conveyor transfer points, conveyors, bagging operations, storage bins, and fine product truck and railcar loading operations shall be sprayed with water or a surfactant solution, utilize choke-feeding or be treated by an equivalent method in accordance with an operating program. [35 IAC 212.308]

e. The affected coal handling fugitive emission operation listed in 7.4.2 is subject to 35 IAC 212.315 which states:

No person shall cause or allow the operation of a vehicle of the second division as defined by 625 ILCS 5/1-217, or a semi trailer as defined by 625 ILCS 5/1-187, without a covering sufficient to prevent the release of particulate matter into the atmosphere, provided that this rule shall not pertain to automotive exhaust emissions. [35 IAC 212.315]

f. The affected coal handling fugitive emission operation listed in 7.4.2 is subject to 35 IAC 212.301 which states:

No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source. [35 IAC 212.301]

7.4.4 Non-Applicability of Regulations of Concern

N/A

7.4.5 Operational and Production Limits And Work Practices

None

7.4.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected coal handling operations are subject to the following:

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.4.7 Testing Requirements

None

7.4.8 Inspection Requirements

None

7.4.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following for the affected coal handling operations to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

a. The Permittee shall maintain records of the amount of coal crushed and screened in tons/mo and tons/yr.

b. The Permittee shall maintain records of monthly and annual PM, PM_{10} emissions in tons/mo and tons/yr.

7.4.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected coal handling operations with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

a. If there is an exceedance of the requirements of this permit as determined by the rec9ords required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences [Section 39.5(7)(f)(ii) of the Act].

7.4.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.4.12 Compliance Procedures

Emission Calculations from Crushing Operations

PM Emissions (tons) = [(Coal Crushed (tons)) * (.02 Lb PM/ton crushed) * (1 – control efficiency (%))]/2000 Lb/ton

PM_{10} Emissions (tons) = [(Coal Crushed (tons)) * (.01 Lb PM_{10}/ton crushed) * (1 – control efficiency (%))]/2000 Lb/ton

Emission Calculations from Screening Operations

PM Emissions (tons) = [(Coal Screened (tons)) * (.16 Lb PM/ton screened) * (1 – control efficiency (%))]/2000 Lb/ton

PM_{10} Emissions (tons) = [(Coal Screened (tons)) * (.08 Lb PM_{10}/ton screened) * (1 – control efficiency (%))]/2000 Lb/ton

Emission Calculations from Dropping of Coal

The equation:

$$E = K(0.0032)\frac{[U/5]^{1.3}}{[M/2]^{1.4}} \text{ (pound[lb]/ton)}$$

Where:

E = Emission factor
K = Particle size multiplier (dimensionless)
(Pm = 1; PM-10 = 0.35)
U = Mean wind speed (7.5 miles/hr from the Midwest Climate Center in Moline, Illinois for 1994)
M = Material moisture content (6% for coal)

Obtained from AP-42 and shall be used to calculate PM and PM-10 emission factors for the following fugitive points:

1. Dropping of coal from a 15 cubic yd (yd^3) dump truck onto the coal pile.

2. Dropping of coal from pile onto a 15 yd^3 dump truck.

3. Dropping of coal from truck to coal hopper.

4. Dropping of coal from coal hopper to a coal separator system.

5. Dropping of coal from coal conveying system to coal bunker.

Uncontrolled annual emissions for each of these fugitive points shall be calculated as follows:

Uncontrolled annual emissions = E x R x CF

Where:

E = Emission factor (lb/ton)
R = Total amount of coal used by the facility (ton/yr)(maximum=38500tons/yr;typical=35000tons/yr)
CF = Conversion factor (ton/2000lbs)

Emission Calculations from Compacting Operations

The equation:

$E = K(5.9)[s/12][S/30][W/3]^{0.7}[w/4]^{0.5}[365-p/365]$[lb/vehicle mile travel [vmt]]

Where:

E = Emission factor (lb/VMT)

K = Particle size multiplier (dimensionless)(PM = 1; PM-10 = 0.36)
s = Silt content of road surface material (2.7% for coal)
S = Mean vehicle speed (3 miles per hour [mph])
W = Mean number of wheels (4 wheels on the front end loader)
W = Mean vehicle weight (28.5tons)
P = Number of days with at least 0.254 mm (0.01 in) of precipitation per year (110, from Figure 13.2.2 of AP-42)

Was obtained from AP-42 to calculate PM and PM-10 emission factors for the fugitive emissions generated when the front end loader travels over the coal pile during coal removal or compacting operations.

The uncontrolled annual emissions of PM and PM-10 for these operations shall be calculated as follows:

Uncontrolled annual emissions [tons/yr] = E x V x T x CF

Where:

E = Emission factor (lb/VMT)
V = Vehicle speed (3 VMT/hr)
T = Operation time (Maximum = 2496 hrs/yr; Typical = 2,080 hrs/yr
CF = Conversion factor (ton/2,000 lb)

Emission Calculations from Wind Erosion of Coal Storage Pile

The equation:

E = 1.7 [s/1.5] [365-p/235] [f/15] (lb/day/acre)

Where:

E = Emission factor
s = Silt content of aggregate (2.7% for coal)
p = Number of days with > 0.25 mm (0.01 in.) of precipitation per year (110, from Figure 13.2.2-1 of AP-42)
F = Percentage of time that the unobstructed wind speed exceeds 12 mph at the mean pile height (33% from Climatography of the U.S. Series 82; Decennial Census of the U.S. Climate-Summary of Hourly Operations, 1951-60 [Table B])

was obtained from the May 1983 version of AP-42 to calculate PM emissions form wind erosion of the active coal storage pile. The uncontrolled annual emissions for the coal pile shall be calculated as follows.

Uncontrolled annual emissions [tons/yr] = E x S x CF_1 x CF_2

E = Emission factor (lb/day/acre)
S = Size of coal pile (Maximum = 2.5 acre; Typical = 1.5 acre)
CF_1 = Conversion factor (ton/2000 lb)
CF_2 = Conversion factor (365 days/yr)

PM-10 emissions were assumed to be 35 percent of PM emissions, consistent with the calculation methods for dropping and compacting operations.

Emission Calculations for Truck Travel Over Paved Roads Between Coal Pile and Building 227

The equation:

$E = k\ [SL/2]^{0.65}[W/3]_{1.5}$

Where:

E = Particulate emission factor (lb/VMT)
k = Base emission factor for particle size range and unit of interest (PM = 0.082; PM-10 = 0.016)
SL = Road surface silt loading (0.4 grams per square meter [g/m^2])
W = Average weight of the vehicles traveling the road (tons)(full truck = 36 tons, empty truck = 11 tons)

Was obtained from AP-42 and used to calculate PM and PM-10 emission factors for the fugitive emissions generated when the semi-trailer truck travels from the coal pile to Building 227.

The uncontrolled annual emissions of PM and PM-10 for these operations shall be calculated as follows:

Uncontrolled annual emissions = E x D x T x CF_1 x CF_2 (Tons/yr)

Where:

E = Emission factor (lb/VMT)
D = Vehicle distance traveled per trip (3000 ft/trip)
T = Number of trips between coal pile and Building 227
(Maximum = 1450 trips/yr; Typical = 1,400 trips/yr)
CF1 = Conversion factor (ton/2000 lb)
CF2 = Conversion factor (mi/5,279 ft)

7.5 Unit 05: Rock Salt Handling
Control 05: Screen

7.5.1 Rock salt is used in the boiler feed water treatment system and is stored in a 25 ton plastic outdoor, aboveground storage tank. Rock salt is pneumatically added to this tank from the suppliers truck. When the rock salt is added to the tank, a screen with openings of 1/32 inch in size is placed over the opening of the tank, to prevent rock salt from migrating to the air. Twenty five tons of salt are added to the tank per year.

7.5.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
05	Rock Salt Handling System	Screen

7.5.3 Applicability Provisions and Applicable Regulations

a. The affected rock salt handling system for purposes of these unit specific conditions is the emission unit defined in Condition 7.5.2.

b. The affected rock salt handling system is subject to 35 IAC 212.301 which states:

No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source. [35 IAC 212.301]

c. The affected rock salt handling system is subject to 35 IAC 212.308 which states:

Crushers, grinding mills, screening operations, bucket elevators, conveyor transfer points, conveyors, bagging operations, storage bins and fine product truck and railcar loading operations shall be sprayed with water or surfactant solution, utilize choke-feeding or be treated by an equivalent method in accordance with an operating program. [35 IAC 212.308]

7.5.4 Non-Applicability of Regulations of Concern

N/A

7.5.5 Operational and Production Limits And Work Practices

None

7.5.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected rock salt handling system is subject to the following:

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.5.7 Operating Requirements

None

7.5.8 Inspection Requirements

None

7.5.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected rock salt handling system to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

a. The Permittee shall maintain records of the amount of rock salt conveyed to the storage tank in lb/mo and lb/yr.

b. The Permittee shall maintain records of monthly and annual PM emissions in tons/mo and tons/yr.

7.5.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected rock salt handling equipment with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

a. If there is an exceedance of the requirements of this permit as determined by the rec9ords required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences [Section 39.5(7)(f)(ii) of the Act].

7.5.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.5.12 Compliance Procedures

PM and PM10 Emission Calculations From Rock Salt Handling System

PM and PM_{10} Emissions (tons) = [(Rock Salt Conveyed (lb)) * (.010 lb PM/lb salt conveyed)]/2000 lb/ton

7.6 Unit 06: Electroplating
Control 06: Scrubbers

7.6.1 Cadmium, copper, nickel, chromium, black chromium, and lead electroplating are conducted at the Rock Island Arsenal. 20 tanks are currently used for plating operations. Hard chromium electroplating operations are conducted in 15 tanks. Black chromium electroplating is conducted in 1 tank. The rest of the tanks are used for cadmium, copper, nickel, and lead electroplating. In addition, non-electro process tanks, such as rinse and sealing tanks, are located in the plating shop.

7.6.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
06	T5 Acid Pickle Tank	Scrubber 202, SC-2
	T11 Electro Cleaning Tank	Scrubber 202, SC-2
	T13 HCL Pickling	Scrubber 202, SC-2
	T22 O.D. Chromatic Seal	Scrubber 202, SC-2
	T17 Cadmium Plating	Scrubber 203, SC-3
	T18 Cadmium Plating	Scrubber 203, SC-3
	T33 Deoxidizer	Scrubber 205, SC-5
	T36 HF Etch Tank	Scrubber 205, SC-5
	T37 Sulfuric Acid Anodize	Scrubber 205, SC-5
	T38 Sulfuric Acid Anodize	Scrubber 205, SC-5
	T39 Hard Coat Anodize	Scrubber 205, SC-5
	T40 Hard Coat Anodize	Scrubber 205, SC-5
	T91 Passivate Tank	Scrubber 205, SC-5
	T141 Black Chrome Plating	Scrubber 207, SC-7
	T101 O.D. Chrome Plating	Scrubber 208, SC-8
	T102 O.D. Chrome Plating	Scrubber 208, SC-8
	T103 O.D. Chrome Plating	Scrubber 208, SC-8
	T104 O.D. Chrome Plating	Scrubber 208, SC-8
	T105 O.D. Chrome Plating	Scrubber 208, SC-8
	T106 O.D. Chrome Plating	Scrubber 209, SC-9
	T107 O.D. Chrome Plating	Scrubber 209, SC-9
	T124 O.D. Chrome Plating	Scrubber 209, SC-9
	T152 Deep Chrome Plating	Scrubber 209, SC-9
	T153 Deep Chrome Plating	Scrubber 209, SC-9

	T154 Deep Chrome Plating	Scrubber 209, SC-9
	T125 I.D. Chrome Plating	Scrubber 212T-10A
	T126 I.D. Chrome Plating	Scrubber 212T-10A
	T127 I.D. Chrome Plating	Scrubber 210, SC-10
	T128 I.D. Chrome Plating	Scrubber 210, SC-10

Emission Unit	Description	Emission Control Equipment
6 Cont.	T121 Electro Polish Tank	Scrubber 211, SC-11
	T160 Electro Polish Tank	Scrubber 211, SC-11
	T161 Electro Strip Tank	Scrubber 211, SC-11
	T163 Pickle Tank	Scrubber 211, SC-11
	T169 Lead Plating Tank	Scrubber 211, SC-11
	T166 Copper Plating Tank	Fan 221, F-221
	T170 Nickel Plating Tank	Fan 221, F-221
	T173 Rinse Tank	Fan 221, F-221

7.6.3 Applicability Provisions and Applicable Regulations

a. The affected plating tanks for purposes of these unit specific conditions, are the tanks defined in Condition 7.6.2.

b. Tank T11 Electro Cleaning Tank, Tank T17 Cadmium Plating Tank, Tank T18 Cadmium Plating Tank, Tank T37 Sulfuric Acid Anodize Tank, Tank T38 Sulfuric Acid Anodize Tank, Tank T39 Hard Coat Anodize Tank, Tank T40 Hard Coat Anodize Tank, Tank T141 Black Chrome Plating Tank, Tank T101 O.D. Chrome Plating Tank, Tank T102 O.D. Chrome Plating Tank, Tank T103 O.D. Chrome Plating Tank, Tank T104 O.D. Chrome Plating Tank, Tank T105 O.D. Chrome Plating Tank, Tank T106 O.D. Chrome Plating Tank, Tank T107 O.D. Chrome Plating Tank, Tank T124 I.D. Chrome Plating Tank, Tank T152 Deep Chrome Plating Tank, Tank T153 Deep Chrome Plating Tank, Tank T154 Deep Chrome Plating Tank, Tank T125 I.D. Chrome Plating Tank, Tank T126 I.D. Chrome Plating Tank, Tank T127 I.D. Chrome Plating Tank, Tank T128 I.D. Chrome Plating Tank, Tank T169 Lead Plating Tank, Tank T170 Nickel Plating Tank is subject to 35 IAC 212.321 which states:

i. Except as further provided in this Part, no

person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of this Section.

ii. Interpolated and extrapolated values of the data in subsection (c) of this Section shall be determined by using the equation:

$E = A(P)^B$

Where

P = Process weight rate; and
E = Allowable emission rate; and,

1. Up to process weight rates of 408 MG/hr (450 T/hr)

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	1.214	2.54
B	0.534	0.534

2. For process weight rate greater than or equal to 408 Mg/hr (450 T/hr)

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	11.42	24.8
B	0.16	0.16

[35 IAC 212.321]

c. Tank T11 Electro Cleaning Tank, Tank T17 Cadmium Plating Tank, Tank T18 Cadmium Plating Tank, Tank T37 Sulfuric Acid Anodize Tank, Tank T38 Sulfuric Acid Anodize Tank,

Tank T39 Hard Coat Anodize Tank, Tank T40 Hard Coat Anodize Tank, Tank T141 Black Chrome Plating Tank, Tank T101 O.D. Chrome Plating Tank, Tank T102 O.D. Chrome Plating Tank, Tank T103 O.D. Chrome Plating Tank, Tank T104 O.D. Chrome Plating Tank, Tank T105 O.D. Chrome Plating Tank, Tank T106 O.D. Chrome Plating Tank, Tank T107 Chrome Plating Tank, Tank T124 I.D. Chrome Plating Tank, Tank T152 Deep Chrome Plating Tank, Tank T153 Deep Chrome Plating Tank, Tank T154 Deep Chrome Plating Tank, Tank T125 I.D. Chrome Plating, Tank T126 I.D. Chrome Plating Tank, Tank T127 I.D. Chrome Plating Tank, Tank T128 I.D. Chrome Plating Tank, Tank T169 Lead Plating Tank, Tank T170 Nickel Plating Tank is subject to 35 IAC 212.123 which states:

i. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to Section 212.122 of this Subpart.

ii. The emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period, providing that such opaque emission permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1000 ft) radius from the center point of any other such emission unit owned or operated by such person and provided further that such opaque emissions permitted from each such fuel combustion emission unit shall be limited to 3 times in any 24 hour period. [35 IAC 212.123]

d. Tank T37 Sulfuric Acid Anodize Tank, Tank T38 Sulfuric Acid Anodize Tank, Tank T39 Hard Coat Anodize Tank, and Tank T40 Hard Coat Anodize Tank is subject to 35 IAC 214.303 which states:

With the exception of fuel combustion emission sources and acid manufacturing, no person using sulfuric acid shall cause or allow the emission of sulfuric acid

and/or sulfur trioxide from all other similar emission sources at a plant or premises to exceed:

i. 45.4 grams in any one hour period for sulfuric acid usage less than 1180 MG/yr (100 percent acid basis)(0.10 lbs/hr up to 1300 T/yr):

ii. 250 grams per metric ton of acid used for sulfuric acid usage greater than or equal to 1180 Mg/yr (100 percent acid basis)(0.50 lbs/T over 1300 T/yr). [35 IAC 214.303]

e. Tank T141 Black Chrome Plating Tank, Tank T101 O.D. Chrome Plating Tank, Tank T102 O.D. Chrome Plating Tank, T103 O.D. Chrome Plating Tank, Tank T104 O.D. Chrome Plating Tank, Tank T105 O.D. Chrome Plating Tank, Tank T106 O.D. Chrome Plating Tank, Tank T107 O.D. Chrome Plating Tank, Tank T152 Deep Chrome Plating Tank, Tank T153 Deep Chrome Plating Tank, Tank T154 Deep Chrome Plating Tank, Tank T125 I.D. Chrome Plating Tank, Tank T126 I.D. Chrome Plating Tank, Tank T127 I.D. Chrome Plating Tank, Tank T128 I.D. Chrome Plating Tank is subject to 40 CFR 63.342(c)(1) which states:

During tank operation, each owner or operator of an existing, new, or reconstructed affected source shall control chromium emissions discharged to the atmosphere from that affected source by not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.015 mg/dscm of total chromium of ventilation air (6.6 x 10^{-6} gr/dscf) [40 CFR 63.342(c)(1)(i)].

7.6.4 Non-Applicability of Regulations of Concern

N/A

7.6.5 Operational and Production Limits And Work Practices

a. The amp-hours from the chrome plating operations shall be limited to the values in the table below.

Electroplating Operation	Tank Number(s)	Amp-hr/day
Black Chrome	141	15,000

Chrome Plate	101, 102, 103, 104, 105	120,000
O.D. Chrome Plate	106, 107	50,000
I.D. Chrome Plate	124	70,000
Deep Chrome Plate	152, 153, 154	150,000
I.D. Chrome Plate	125	70,000
I.D. Chrome Plate	126, 127, 128	10,240
Electropolish	121	960
Chrome Strip	161	7,000

7.6.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected plating tanks are subject to the following:

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.6.7 Testing Requirements

Pursuant to Section 39.5(7)(b) of the Act, testing for chromium emissions from the affected plating tanks shall be performed upon reasonable request by the Illinois EPA as follows:

a. Pursuant to 40 CFR 63.344(a), performance tests shall be conducted using the test methods and procedures in 40 CFR 63.344 and 40 CFR 63.7.

b. Pursuant to 40 CFR 63.344(c), each owner or operator subject to the provisions of 40 CFR 63 Subpart N shall use the test methods identified in 40 CFR 63.344) to demonstrate compliance with the standards in 40 CFR 63.342).

i. Method 306 or Method 306A "Determination of Chromium Emissions From Decorative and Hard Chromium Electroplating and Anodizing Operations," appendix A of 40 CFR Part 63 shall be used to determine the chromium concentration from hard or decorative chromium electroplating tanks or chromium anodizing tanks. The sampling time and sample volume for each run of Methods 306 and 306A, appendix

A of 40 CFR Part 63 shall be at least 120 minutes and 1.70 dscm (60 dscf), respectively. Methods 306 and 306A, appendix A of 40 CFR Part 63 a measurement of either total chromium or hexavalent chromium emissions. For the purposes of this standard, sources using chromic acid baths can demonstrate compliance with the emission limits of 40 CFR 63.342) by measuring either total chromium or hexavalent chromium. Hence, the hexavalent chromium concentration measured by these methods is equal to the total chromium concentration for the affected operations [40 CFR 63.344(c)(1)].

ii. Pursuant to 40 CFR 63.344(c)(2), the California Air Resources Board (CARB) Method 425 (which is available by contacting the California Air Resources Board, 1102 Q Street, Sacramento, California 95814) may be used to determine the chromium concentration from hard and decorative chromium electroplating tanks and chromium anodizing tanks if the following conditions are met:

A. If a colorimetric analysis method is used, the sampling time and volume shall be sufficient to result in 33 to 66 micrograms of catch in the sampling train [40 CFR 63.344(c)(2)(i)].

B. If Atomic Absorption Graphite Furnace (AAGF) or Ion Chromatography with a Post-column Reactor (ICPCR) analyses were used, the sampling time and volume should be sufficient to result in a sample catch that is 5 to 10 times the minimum detection limit of the analytical method (i.e., 1.0 microgram per liter of sample for AAGF and 0.5 microgram per liter of sample for ICPCR) [40 CFR 63.344(c)(2)(ii)].

C. In the case of 40 CFR 63.344(c)(2) (i) or (ii)), a minimum of 3 separate runs must be conducted. The other requirements of 40 CFR 63.7 that apply to affected sources, as indicated in Table 1 of 40 CFR 63 Subpart N, must also be met [40 CFR 63.344(c)(2)(iii)].

iii. Alternate test methods may also be used if the method has been validated using Method 301, appendix A of 40 CFR Part 63 and if approved by the Illinois EPA and/or USEPA. Procedures for requesting and obtaining approval are contained in 40 CFR 63.7(f) [40 CFR 63.344(c)(4)].

7.6.8 Monitoring Requirements

a. Pursuant to 40 CFR 63.343(c), the owner or operator of an affected source subject to the emission limitations of 40 CFR 63 Subpart N shall conduct monitoring according to the type of air pollution control technique that is used to comply with the emission limitation. The monitoring required to demonstrate continuous compliance with the emission limitations is identified in this section for the air pollution control techniques expected to be used by the owners or operators of affected sources.

i. During the initial performance test, the owner or operator of an affected source, or group of affected sources under common control, complying with the emission limitations in 40 CFR 63.342 through the use of a packed-bed scrubber system shall determine the outlet chromium concentration using the procedures in 40 CFR 63.344(c), and shall establish as site-specific operating parameters the pressure drop across the system and the velocity pressure at the common inlet of the control device, setting the value that corresponds to compliance with the applicable emission limitation using the procedures in 40 CFR 63.344(d)(4) and (5)). An owner or operator may conduct multiple performance tests to establish a range of compliant operating

parameter values. Alternatively, the owner or operator may set as the compliant value the average pressure drop and inlet velocity pressure measured over the three test runs of one performance test, and accept ±1 inch of water column from the pressure drop value and ±10 percent from the velocity pressure value as the compliant range [40 CFR 63.343(c)(2)(i)].

ii. On and after the date on which the initial performance test is required to be completed under 40 CFR 63.7, the owner or operator of an affected source, or group of affected sources under common control, shall monitor and record the velocity pressure at the inlet to the packed-bed system and the pressure drop across the scrubber system once each day that any affected source is operating. To be in compliance with the standards, the scrubber system shall be operated within ±10 percent of the velocity pressure value established during the initial performance test, and within ±1 inch of water column of the pressure drop value established during the initial performance test, or within the range of compliant operating parameter values established during multiple performance tests [40 CFR 63.343(c)(2)(ii)].

iii. If the owner or operator of an affected source uses both a fume suppressant and add-on control device and both are needed to comply with the applicable emission limit, monitoring requirements as identified in 40 CFR 63.343(c)(2)), and the work practice standards of Table 1 of 40 CFR 63.342), apply for each of the control techniques used [40 CFR 63.343(c)(7)(i)].

iv. If the owner or operator of an affected source uses both a fume suppressant and add-on control device, but only one of these techniques is needed to comply with the applicable emission limit, monitoring requirements as identified in 40 CFR

63.343(c)(2)), and work practice standards of Table 1 of 40 CFR 63.342), apply only for the control technique used to achieve compliance [40 CFR 63.343(c)(7)(ii)].

7.6.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected plating tanks to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

a. The Permittee shall maintain records of the amount of operating hours in hr/mo and hr/yr for the electroplating tanks.

b. The Permittee shall maintain records of monthly and annual PM emissions in tons/mo and tons/yr from the electroplating tanks.

c. Tank T141 Black Chrome Plating Tank, Tank T101 O.D. Chrome Plating Tank, Tank T102 O.D. Chrome Plating Tank, Tank T103 O.D. Chrome Plating Tank, Tank T104 O.D. Chrome Plating Tank, Tank T105 O.D. Chrome Plating Tank, Tank T106 O.D. Chrome Plating Tank, Tank T107 Chrome Plating Tank, Tank T124 Chrome Plating Tank, Tank T152 Deep Chrome Plating Tank, Tank T153 Deep Chrome Plating Tank, Tank T154 Deep Chrome Plating Tank, Tank T125 I.D. Chrome Plating Tank, Tank T126 I.D. Chrome Plating Tank, Tank T127 I.D. Chrome Plating Tank, Tank T128 I.D. Chrome Plating Tank is subject to 40 CFR 63.346 which states:

Pursuant to 40 CFR 63.346(b), the owner or operator of an affected source subject to the provisions of this subpart shall maintain the following records for such source:

i. Inspection records for the add-on air pollution control device, if such a device is used, and monitoring equipment, to document that the inspection and maintenance required by the work practice standards of 40 CFR 63.342(f) and Table 1 of 40 CFR 63.342) have taken place. The record can take the form of a checklist and should identify the device inspected, the date of inspection, a brief description of the working condition of the device during the inspection, and any actions taken to correct deficiencies found during the inspection [40 CFR 63.346(b)(1)];

ii. Records of all maintenance performed on the affected source, the add-on air pollution control device, and monitoring equipment [40 CFR 63.346(b)(2)];

iii. Records of the occurrence, duration, and cause (if known) of each malfunction of process,

add-on air pollution control, and monitoring equipment [40 CFR 63.346(b)(3)];

iv. Records of actions taken during periods of malfunction when such actions are inconsistent with the operation and maintenance plan [40 CFR 63.346(b)(4)];

v. Other records, which may take the form of checklists, necessary to demonstrate consistency with the provisions of the operation and maintenance plan required by 40 CFR 63.342(f)(3) [40 CFR 63.346(b)(5)];

vi. Test reports documenting results of all performance tests [40 CFR 63.346(b)(6)];

vii. All measurements as may be necessary to determine the conditions of performance tests, including measurements necessary to determine compliance with the special compliance procedures of 40 CFR 63.344(e) [40 CFR 63.346(b)(7)];

viii. Records of monitoring data required by 40 CFR 63.343(c) that are used to demonstrate compliance with the standard including the date and time the data are collected [40 CFR 63.346(b)(8)];

ix. The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions, as indicated by monitoring data, that occurs during malfunction of the process, add-on air pollution control, or monitoring equipment [40 CFR 63.346(b)(9)];

x. The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions, as indicated by monitoring data, that occurs during periods other than malfunction of the process, add-on air pollution control, or monitoring equipment [40 CFR 63.346(b)(10)];

xi. The total process operating time of the affected source during the reporting period [40 CFR 63.346(b)(11)];

xii. For sources using fume suppressants to comply with the standards, records of the date and time that fume suppressants are added to the electroplating or anodizing bath [40 CFR 63.346(b)(13)];

xiii. All documentation supporting the notifications and reports required by 40 CFR 63.9, 40 CFR 63.10, and 40 CFR 63.347 [40 CFR 63.346(b)(16)].

7.6.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected plating tanks with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

a. Tank T141 Black Chrome Plating Tank, Tank T101 O.D. Chrome Plating Tank, Tank T102 O.D. Chrome Plating Tank, Tank T103 O.D. Chrome Plating Tank, Tank T104 O.D. Chrome Plating Tank, Tank T105 O.D. Chrome Plating Tank, Tank T106 O.D. Chrome Plating Tank, Tank T107 Chrome Plating Tank, Tank T124 Chrome Plating Tank, Tank T152, Tank T153 Deep Chrome Plating Tank, Tank T154 Deep Chrome Plating Tank, Tank T125 I.D. Chrome Plating Tank, Tank T126 I.D. Chrome Plating Tank, Tank T127 I.D. Chrome Plating Tank, Tank T128 I.D. Chrome Plating Tank is subject to 40 CFR 63.347 which states:

Pursuant to 40 CFR 63.347(g)(1), the owner or operator of an affected source that is located at a major source site shall submit a summary report to the Illinois EPA and/or USEPA to document the ongoing compliance status of the affected source. The report shall contain the information identified in 40 CFR 63.347(g)(3)), and shall be submitted semiannually except when:

i. The Illinois EPA and/or USEPA determines on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the source [40 CFR 63.347(g)(1)(i)]; or

ii. The monitoring data collected by the owner or operator of the affected source in accordance with 40 CFR 63.343(c)) show that the emission limit has been exceeded, in which case quarterly reports shall be submitted. Once an owner or operator of an affected source reports an exceedance, ongoing compliance status reports shall be submitted quarterly until a request to reduce reporting frequency under 40 CFR 63.347(g)(2)) is approved [40 CFR 63.347(g)(1)(ii)].

b. Request to reduce frequency of ongoing compliance status reports:

i. Pursuant to 40 CFR 63.347(g)(2)(i), an owner or operator who is required to submit ongoing compliance status reports on a quarterly (or more frequent basis) may reduce the frequency of reporting to semiannual if all of the following conditions are met:

A. For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods), the ongoing compliance status reports demonstrate that the affected source is in compliance with the relevant emission limit [40 CFR 63.347(g)(2)(i)(A)];

B. The owner or operator continues to comply with all applicable recordkeeping and monitoring requirements of 40 CFR 63 Subpart A and 40 CFR 63 Subpart N) [40 CFR 63.347(g)(2)(i)(B)]; and

C. The Illinois EPA and/or the USEPA does not object to a reduced reporting frequency for the affected source, as provided in 40 CFR 63.347(g)(2)(ii) and (iii)) [40 CFR 63.347(g)(2)(i)(C)].

ii. The frequency of submitting ongoing compliance status reports may be reduced only after the owner or operator notifies the Illinois EPA and/or USEPA in writing of his or her intention to make such a change, and the Illinois EPA and/or USEPA does not object to the intended change. In deciding whether to approve a reduced reporting frequency, the Illinois EPA and/or USEPA may review information concerning the source's entire previous performance history during the 5-year recordkeeping period prior to the intended change, or the recordkeeping period since the source's compliance date, whichever is shorter. Records subject to review may include performance test results, monitoring data, and evaluations of an owner or operator's conformance with emission limitations and work practice standards. Such information may be used by the Illinois EPA and/or USEPA to make a judgment about the source's potential for noncompliance in the future. If the Illinois EPA and/or USEPA disapproves the owner or operator's request to reduce reporting frequency, the Illinois EPA and/or USEPA will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Illinois EPA and/or USEPA to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted [40 CFR 63.347(g)(2)(ii)].

iii. As soon as the monitoring data required by 40 CFR 63.343(c)) show that the source is not in compliance with the relevant emission limit, the frequency of reporting shall revert to quarterly, and the owner shall state this exceedance in the ongoing compliance status report for the next reporting period. After demonstrating ongoing compliance with the relevant emission limit for another full year, the owner or operator may again request

approval from the Illinois EPA and/or USEPA to reduce the reporting frequency as allowed by 40 CFR 63.347(g)(2)) [40 CFR 63.347(g)(2)(iii)].

c. Pursuant to 40 CFR 63.347(g)(3), contents of ongoing compliance status reports. The owner or operator of an affected source for which compliance monitoring is required in accordance with 40 CFR 63.343(c)) shall prepare a summary report to document the ongoing compliance status of the source. The report must contain the following information:

i. The company name and address of the affected source [40 CFR 63.347(g)(3)(i)];

ii. An identification of the operating parameter that is monitored for compliance determination, as required by 40 CFR 63.343(c)) [40 CFR 63.347(g)(3)(ii)];

iii. The relevant emission limitation for the affected source, and the operating parameter value, or range of values, that correspond to compliance with this emission limitation as specified in the notification of compliance status required by 40 CFR 63.347(e) [40 CFR 63.347(g)(3)(iii)];

iv. The beginning and ending dates of the reporting period [40 CFR 63.347(g)(3)(iv)];

v. A description of the type of process performed in the affected source [40 CFR 63.347(g)(3)(v)];

vi. The total operating time of the affected source during the reporting period [40 CFR 63.347(g)(3)(vi)];

vii. A summary of operating parameter values, including the total duration of excess emissions during the reporting period as indicated by those values, the total duration of excess emissions expressed as a percent of the total source operating time during that

reporting period, and a breakdown of the total duration of excess emissions during the reporting period into those that are due to process upsets, control equipment malfunctions, other known causes, and unknown causes [40 CFR 63.347(g)(3)(viii)];

viii. A certification by a responsible official, as defined in 40 CFR 63.2, that the work practice standards in 40 CFR 63.342(f)) were followed in accordance with the operation and maintenance plan for the source [40 CFR 63.347(g)(3)(ix)];

ix. If the operation and maintenance plan required by 40 CFR 63.342(f)(3)) was not followed, an explanation of the reasons for not following the provisions, an assessment of whether any excess emission and/or parameter monitoring exceedances are believed to have occurred, and a copy of the report(s) required by 40 CFR 63.342(f)(3)(iv)) documenting that the operation and maintenance plan was not followed [40 CFR 63.347(g)(3)(x)];

x. A description of any changes in monitoring, processes, or controls since the last reporting period [40 CFR 63.347(g)(3)(xi)];

xi. The name, title, and signature of the responsible official who is certifying the accuracy of the report [40 CFR 63.347(g)(3)(xii)]; and

xii. The date of the report [40 CFR 63.347(g)(3)(xiii)].

d. If there is an exceedance of the requirements of this permit as determined by the rec9ords required by this permit, the Permittee shall submit a report to the Illinois EPA’s Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce

emissions and future occurrences [Section 39.5(7)(f)(ii) of the Act].

7.6.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.6.12 Compliance Procedures

Emission Calculations For Plating Tanks

Emissions (tons) = [(Total Amperage (A)) * (Emission Factor (mg/A-hr)) * (1- Scrubber Efficiency (%)) * ($2.20E^{-6}$ lb/mg)]/(2000 lb/ton) * (Operating Hours (hr))

Tank Number	Rated Capacity (Amps)	Compound of Concern	Emission Factor (mg/A-hr)
11	4000	PM	0.74
11	4000	Zinc	0.0001
17	1000	PM	0.74
18	1000	PM	0.74
17	1000	Cadmium	1.43
18	1000	Zinc	0.0001
141	4000	PM	0.27
141	4000	Chromium	0.13
101	8000	PM	0.27
102	8000	PM	0.27
103	8000	PM	0.27
104	8000	PM	0.27
105	8000	PM	0.27
101	8000	Chromium	0.13
102	8000	Chromium	0.13
103	8000	Chromium	0.13
104	8000	Chromium	0.13
105	8000	Chromium	0.13
106	8000	PM	0.27
107	8000	PM	0.27
124	8000	PM	0.27
152	8000	PM	0.27
153	8000	PM	0.27
154	8000	PM	0.27
106	8000	Chromium	0.13
107	8000	Chromium	0.13
124	8000	Chromium	0.13

152	8000	Chromium	0.13
153	8000	Chromium	0.13
154	8000	Chromium	0.13
125	8000	PM	0.27
126	8000	PM	0.27
127	8000	PM	0.27
128	8000	PM	0.27
125	8000	Chromium	0.13
126	8000	Chromium	0.13
127	8000	Chromium	0.13
128	8000	Chromium	0.13
169	4000	PM	0.27
121	4800	Chromium	0.13
160	4000	Chromium	0.13
161	7400	Chromium	0.13
169	4000	Lead	1.74E-10
166	2000	PM	0.74
170	4000	PM	0.74
166	2000	Copper	0.00043
170	40000	Nickel	0.0024

Particulate Emission Calculations For Tanks T37, T38, T39, and T40

PM Emissions (tons) = [(Sulfuric Acid Usage (gal)) * (density (lb/gal)) * ((Acid concentration (%))/100) * (1-Scrubber Efficiency(%))]/2000 lb/ton

7.7 Unit 07: Foundry Operations
Control 07: Baghouses, Cartridge Filters, Dust Collectors

7.7.1 Foundry operations at the Rock Island Arsenal include melting, alloying, and molding steel and iron to produce ferrous castings and aluminum and bronze to produce nonferrous castings. The following seven major operations comprise the production process: scrap/charge handling and heating, furnace operations, core making and baking, sand handling, pouring and cooling, shakeout, and cleaning and finishing.

7.7.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
07	3 Ton Arc Furnace (212F-1)	Baghouse (212F-1A)
	5 Ton Arc Furnace (212F-2)	Baghouse (212F-2A)
	Casting Machine (212F-7)	Baghouse (212F-7A)
	5 Induction Furnaces (212F-4, 5, and 6)	Baghouse (212F-7A)
	Core Muller, Sand Heater (212F-8)	Cartridge (212F-8A)
	2 Infrared Ovens (212F-9)	None
	Spray Booth (212F-9)	None
	2 Core Ovens (212F-10)	None
	Nonferrous Green Sand Molding and Reclaim (212F-11)	Cartridge (212F-11A)
	Green Sand Molding (212F-12)	Cartridge (212F-12A)
	Small No Bake Mold Preparation (212F-13)	None
	Small No Bake Pour and Cool Area (212F-14)	None
	Large No Bake Pour and Cool Area (212F-15)	None

	Large No Bake Mold Prep (212F-16)	None
	No Bake Sand Reclaim System (212F-17)	Cartridge (212F-17A)
	2 Blasting Machines (212F-18)	Cartridge (212F-18A)
	Arc Air Torches (212F-19)	Dust Collector (212F-19A)
7 Cont:	4 Chip and Grind Stations (212F-21)	Dust Collector (212F-21A)
	Sand Mixer (212F-24)	Cartridge (212F-24A)
	Scrap/Charge Piles (Fugitive)	None

7.7.3 Applicability Provisions and Applicable Regulations

a. The affected foundry operations for purposes of these unit specific conditions are the emission unit defined in Condition 7.7.2.

b. The 3 ton electric arc furnace (212F-1), 5 induction furnaces (212F-4, 5, and 6), centrifugal casting machine (212F-7), core muller and sand heater (212F-8), 2 infrared ovens and spray booth (212F-9) (212F-9), nonferrous green sand molding and reclaim (212F-11) (212F-12), small no bake mold preparation (212F-13), large no bake mold preparation (212F-16), no bake sand reclaim system (212F-17), sand mixer (212F-24), small no bake pour and cool area (212F-14), large no bake pour and cool area (212F-15), 2 blasting machines (212F-18), arc air torches (212F-19), 4 chip and grind stations (212F-21) and scrap/charge piles are subject to 35 IAC 212.123 which states:

i. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than

those emission units subject to Section 212.122 of this Subpart.

ii. The emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period, providing that such opaque emission permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1000 ft) radius from the

center point of any other such emission unit owned or operated by such person and provided further that such opaque emissions permitted from each such fuel combustion emission unit shall be limited to 3 times in any 24 hour period. [35 IAC 212.123]

c. The 3 ton electric arc furnace (212F-1), centrifugal casting machine (212F-7), and scrap/charge piles is subject to 35 IAC 212.322 which states:

i. Except as further provided in this Part, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any process emission unit for which construction or modification commenced prior to April 14, 1972, which, either alone or in combination with the emission of particulate matter from all other similar process emission units at a source or premises, exceeds the allowable emission rates specified in subsection (c) of this Section.

ii. Interpolated and extrapolated values of the data in subsection (c) of this Section shall be determined by using the equation:

$$E = C + A(P)^B$$

Where:

P = Process weight rate; and,

E = Allowable emission rate; and,

1. For process weight rates up to 27.2 Mg/hr (30 T/hr)

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	1.985	4.10
B	0.67	0.67
C	0	0

2. For process weight rates in excess of 27.2 Mg/hr (30 T/hr):

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	25.21	55.0
B	0.11	0.11
C	- 18.4	- 40.0

[35 IAC 212.322]

d. The 3 ton electric arc furnace (212F-1) is subject to 35 IAC 212.448 which states:

The total particulate emissions from meltdown and refining, charging, tapping, slagging, electrode port leakage and ladle lancing shall not exceed the allowable emission rate specified by Section 212.321 or 212.322 of this Part, whichever is applicable. [35 IAC 212.448]

e. The 5 ton electric arc furnace (212F-2) is subject to 40 CFR 60.272(a)(3) which limits shop opacity from an electric arc furnace to 6 percent or less. [40 CFR 60.272(a)(3)]

f. The 5 ton electric arc furnace (212F-2) is subject to 40 CFR 60.272(b) which limits opacity from dust handling equipment to 10 percent or less. [40 CFR 60.272(b)]

g. The 5 ton electric arc furnace baghouse control is subject to 40 CFR 60.272(a)(1) which limits particulate matter exiting the baghouse control to 12 mg/dscm (0.0052 gr/dscf). [40 CFR 60.272(a)(1)]

h. The 5 ton electric arc furnace baghouse control is subject to 40 CFR 60.272(a)(2) which limits opacity exiting the baghouse control to 3 percent or less. [40 CFR 60.272(a)(2)]

i. The 5 induction furnaces (212F-4, 5, and 6), core muller and sand heater (212F-8), 2 infrared ovens and spray booth (212F-9), nonferrous green sand molding

and reclaim (212F-11), small no bake mold preparation (212F-13), large no bake mold preparation (212F-16), no bake sand reclaim system (212F-17), sand mixer (212F-24), small no bake pour and cool area (212F-14), large no bake pour and cool area (212F-15), 2 blasting machines (212F-18), arc air torches (212F-19), and 4 chip and grind stations (212F-21) are subject to 35 IAC 212.321 which states:

i. Except as further provided in this Part, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of this Section.

ii. Interpolated and extrapolated values of the data in subsection (c) of this Section shall be determined by using the equation:

$E = A(P)^B$

Where:

P = Process weight rate; and
E = Allowable emission rate; and,

1. Up to process weight rates of 408 MG/hr (450 T/hr):

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	1.214	2.54
B	0.534	0.534

2. For process weight rate greater than or equal to 408 Mg/hr (450 T/hr):

Metric English

P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	11.42	24.8
B	0.16	0.16

[35 IAC 212.321]

7.7.4 Non-Applicability of Regulations of Concern

N/A

7.7.5 Operational and Production Limits And Work Practices

None

7.7.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected foundry operations are subject to the following:

Particulate matter emissions from the following emission units shall not exceed the following limits: 212F-1, 212F-4, 212F-5, 212F-6, 212F-7, 212F-8, 212F-9, 212F-10, 212F-12, 212F-11, 212F-13, 212F-14, 212F-15, 212F-16, 212F-17, 212F-18, 212F-19, and 212F-21

(Ton/Year)

15.2

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1].

The above limitations were established in Permit 87090054, pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].

7.7.7 Operating Requirements

None

7.7.8 Testing and Monitoring Requirements

a. The 5 ton electric arc furnace is subject to the testing and monitoring requirements of 40 CFR Subpart AA – Standards of Performance for Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974, and On or Before August 17, 1983.

7.7.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected foundry operations to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

a. The Permittee shall maintain records of the hours of operation for the foundry operations in hr/mo and hr/yr.

b. The Permittee shall maintain records of the amount of individual ferrous and nonferrous metal production in tons/mo and tons/yr.

c. The 5 ton electric arc furnace is subject to the recordkeeping requirements of 40 CFR Subpart AA – Standards of Performance for Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974, and On or Before August 17, 1983.

d. The Permittee shall maintain records of emissions in tons/mo and tons/yr.

e. The Permittee shall maintain records of opacity observations.

f. The Permittee shall maintain records of filter inspection and replacement.

g. The Permittee shall maintain records of sand and binder usage and wash usage.

7.7.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the foundry operations with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

a. The 5 ton electric arc furnace is subject to the reporting requirements of 40 CFR Subpart AA – Standards of Performance for Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974, and On or Before August 17, 1983.

b. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences [Section 39.5(7)(f)(ii) of the Act].

7.7.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.7.12 Compliance Procedures

Emission Calculations for Arc Furnaces

Emissions (tons) = [(metal production (tons)) * (appropriate emission factor (lbs/ton)) * (1 – control efficiency (%)]/2,000 lb/ton

Appropriate Emission Factors

VOC	0.3 lbs/ton
NO_x	0.2 lbs/ton
CO	37 lbs/ton
TSP	13 lbs/ton
PM_{10}	11.6 lbs/ton
Lead	1.6 lbs/ton
Manganese	0.52 lbs/ton
Nickel	0.3 lbs/ton
Chromium	5.6 lbs/ton

Emission Calculations for Induction Furnaces

Emissions (tons) = [(metal production (tons)) * (appropriate emission factor (lbs/ton)) * (1 – control efficiency (%)]/2000 lb/ton

Appropriate Emission Factors

TSP	0.2 lbs/ton (aluminum)
PM_{10}	0.2 lbs/ton (aluminum)
TSP	0.2 lbs/ton (bronze)
PM_{10}	20 lbs/ton (bronze)
Lead	0.1 lbs/ton (bronze)
TSP	0.2 lbs/ton (stainless)
PM_{10}	0.2 lbs/ton (stainless)
Lead	0.1 lbs/ton (stainless)
Manganese	0.004 lbs/ton (stainless)
TSP	0.2 lbs/ton (ductile)
PM_{10}	0.2 lbs/ton (ductile)
Lead	0.1 lbs/ton (ductile)
Manganese	0.004 lbs/ton (ductile)

Emission Calculations for Induction Furnaces (pouring and cooling)

Emissions (tons) = [(metal production (tons)) * (appropriate emission factor (lbs/ton)) * (1 – control efficiency (%)]/2000 lb/ton

Appropriate Emission Factors

TSP	4.2 lbs/ton
PM_{10}	2.06 lbs/ton

Emission Calculations for Core Muller and Sand Heater

Emissions (tons) = [(metal production (tons)) * (appropriate emission factor (lbs/ton)) * (1 – control efficiency (%)]/2000 lb/ton

Appropriate Emission Factors

TSP	0.2 lbs/ton
PM_{10}	0.2 lbs/ton

Emission Calculations for Sand Handling

Emissions (tons) = [(metal production (tons)) * (appropriate emission factor (lbs/ton)) * (1 – control efficiency (%)]/2000 lb/ton

Appropriate Emission Factors

TSP	3.6 lbs/ton
PM_{10}	3.6 lbs/ton

Emission Calculations for Sand Shakeout

Emissions (tons) = [(metal production (tons)) * (appropriate emission factor (lbs/ton)) * (1 – control efficiency (%)]/2000 lb/ton

Appropriate Emission Factors

TSP	3.2 lbs/ton
PM_{10}	2.24 lbs/ton

Emission Calculations for Pouring and Cooling (Arc Furnaces)

Emissions (tons) = [(metal production (tons)) * (appropriate emission factor (lbs/ton)) * (1 – control efficiency (%)]/2000 lb/ton

Appropriate Emission Factors

TSP	4.2 lbs/ton
PM_{10}	4.2 lbs/ton

Emission Calculations for Blast Machines, arc air torches, and chip and grind stations

Emissions (tons) = [(metal production (tons)) * (appropriate emission factor (lbs/ton)) * (1 – control efficiency (%)]/2000 lb/ton

Appropriate Emission Factors

TSP	17 lbs/ton
PM_{10}	17 lbs/ton

Fugitive Emission Calculations for Scrap Charge Pile

Emissions (tons) = [(metal production (tons)) * (appropriate emission factor (lbs/ton))]/2000 lb/ton

Appropriate Emission Factors

TSP	0.6 lbs/ton
PM_{10}	0.6 lbs/ton

7.8 Unit 08: Heat Treatment and Forging
Control 08: Afterburner

7.8.1 Heat treatment and forging operations occur in Building 222 at the Rock Island Arsenal. These operations are used to impart certain desirable metallurgical properties to a workpiece (primarily steel parts) that can be obtained in any other fashion. During heat treatment, the workpiece is first heated to a specified hardening temperature. Next, the workpiece is quenched in a water-or-oil based solution and cleaned with a water and detergent solution. During the forging process, the workpiece is first placed in a forging furnace and heated to a specified forging temperature. Next, the workpiece is placed in a forging hammer where the workpiece is given its final shape. The workpiece is then placed in a trimming press to trim flash off the workpiece, and finally, the piece is allowed to cool. All of these processes occur inn Building 222 at the Rock Island Arsenal.

7.8.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
08	Car Bottom Furnace (222-10)	Afterburner (222-10A)
	Carbonizing Pit Furnace (222-11)	None
	Billet Forging Furnace (222-14)	None

7.8.3 Applicability Provisions and Applicable Regulations

a. The affected heat treatment and forging operations for purposes of these unit specific conditions, is the emission unit defined in Condition 7.8.2.

b. The affected heat treatment and forging operations are subject to 35 IAC 212.123 which states:

i. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than

those emission units subject to Section 212.122 of this Subpart.

ii. The emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period, providing that such opaque emission permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1,000 ft) radius from the center point of any such emission unit owned or operated by such person and provided further that such opaque emissions permitted from each such fuel combustion emission unit shall be limited to 3 times in any 24 hour period. [35 IAC 212.123)]

c. The affected heat treatment and forging operations are subject to 35 IAC 212.321 which states:

i. Except as further provided in this Part, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of this Section.

ii. Interpolated and extrapolated values of the data in subsection (c) of this Section shall be determined by using the equation:

$E = A(P)^B$

Where:

P = Process weight rate; and
E = Allowable emission rate; and,

1. Up to process weight rates of 408 MG/hr

(450 T/hr):

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	1.214	2.54
B	0.534	0.534

2. For process weight rate greater than or equal to 408 Mg/hr (450 T/hr):

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	11.42	24.8
B	0.16	0.16

[35 IAC 212.321]

7.8.4 Non-Applicability of Regulations of Concern

N/A

7.8.5 Operational and Production Limits And Work Practices

a. The afterburner combustion chamber shall be preheated to the manufacturers recommended temperature but not lower than 1400 degrees F, before the carbottom furnace (222-10) process is begun; this temperature shall be maintained during the carbottom furnace (222-10) process.

7.8.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected heat treatment and forging operations is subject to the following:

NO_x Emissions from the affected Forging Furnace (222-14), Car Bottom Furnace (222-10), and Carbonizing Pit Furnace (222-11), shall not exceed the following limits:

Equipment	NO_x Emissions (Lb/hr)	NO_x Emissions (tons/yr)
Forging Furnace (222-14)	0.4	1.2
Car Bottom Furnace (222-10)	0.65	1.56
Carbonizing Pit Furnace (222-11)	0.32	1.34

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1]

The above limitations were established in Permit 78070015, pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].

7.8.7 Operating Requirements

a. Natural gas shall be the only fuel fired in the Furnaces.

b. Billet Forging Furnace (222-14) operating hours shall be limited to 6000 hour/yr or less.

c. The Car Bottom Furnace (222-10) operating hours shall be limited to 400 hr/yr.

d. The carbonizing Pit Furnace (222-11) operating hours shall be limited to 4000 hr/yr.

7.8.8 Inspection Requirements

None

7.8.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected heat treatment and forging operations to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

a. The Permittee shall maintain records of the amount of natural gas combusted in the individual furnaces in mmscf/mo and mmscf/yr.

b. The Permittee shall maintain records of monthly and annual emissions in tons/mo and tons/yr.

c. Afterburner (222-10A) shall be equipped with a continuous temperature indicator and strip chart recorder or disc storage for the afterburner

combustion chamber temperature.

7.8.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the heat treatment and forging operations with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

a. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences [Section 39.5(7)(f)(ii) of the Act].

7.8.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.8.12 Compliance Procedures

Emission Calculations for the Car Bottom Furnace

Emissions (tons) = [(Natural Gas Combusted (mmscf)) * (appropriate emission factor (lb/mmscf) * (1-Control Efficiency (%))]/2000 lb/ton

Appropriate Emission Factors

PM	12 lb/mmscf
SO_2	0.6 lb/mmscf
NO_x	100 lb/mmscf
CO	27 lb/mmscf
VOM	5.3 lb/mmscf

Emission Calculations for the Carbonizing Pit and Billet Forging Furnaces

Emissions (tons) = [(Natural Gas Combusted (mmscf)) * (appropriate emission factor (lb/mmscf))]/2000 lb/ton

Appropriate Emission Factors

PM	12 lb/mmscf
SO_2	0.6 lb/mmscf
NO_x	100 lb/mmscf
CO	27 lb/mmscf
VOM	5.3 lb/mmscf

7.9 Unit 09: Incinerator
Control 09: Afterburner

7.9.1 The Rock Island Arsenal operates an incinerator inside Building 332. The incinerator has been predominantly used by the security department for the destruction of classified documents. The incinerator is a multichamber unit rated at 100,000 Btu/hr and is fired on propane. A 150,000 Btu/hr afterburner is also used during unit operation.

7.9.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
09	Incinerator	Afterburner

7.9.3 Applicability Provisions and Applicable Regulations

a. The affected incinerator for purposes of these unit specific conditions, is the emission unit defined in Condition 7.9.2.

b. The affected incinerator is subject to 35 IAC 212.181(d) which states:

No person shall cause or allow the emission of particulate matter into the atmosphere from all other incinerators for which construction or modification commenced on or after April 14, 1972, to exceed 229 mg/scm (0.1 gr/scf) of effluent gases corrected to 12 percent carbon dioxide. [35 IAC 212.181(d)]

c. The affected incinerator is subject to 35 IAC 212.123 which states:

i. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to Section 212.122 of this Subpart.

ii. The emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not

greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period, providing that such opaque emission permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1000 ft) radius from the center point of any such emission unit owned or operated by such person and provided further that such opaque emissions permitted from each such fuel combustion emission unit shall be limited to 3 times in any 24 hour period. [35 IAC 212.123)]

d. The affected incinerator is subject to 35 IAC 216.141 which states:

No person shall cause or allow the emission or carbon monoxide into the atmosphere from any incinerator to exceed 500 ppm, corrected to 50 percent excess air. [35 IAC 216.141]

7.9.4 Non-Applicability of Regulations of Concern

N/A

7.9.5 Operational and Production Limits And Work Practices

a. Operation of the incinerator shall not exceed 104 hours/yr.

b. Only Type O waste(s) shall be incinerated and at a rate not to exceed 40 pounds per hour.

c. The Permittee may incinerate health clinic wastes such as gauzes, bandages, needles and syringes mixed with paper wastes. No more than 10 percent of the waste loaded into the incinerator may be sterilized clinical wastes.

d. The Permittee may not incinerate pathological body parts.

e. The afterburner combustion chamber shall be preheated to the manufacturers recommended temperature but not lower than 1400°F, before any waste is loaded into the incinerator, and this temperature shall be maintained

during incineration.

7.9.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected incinerator is subject to the following:

Pollutant	Emissions (Ton/Yr)
PM	0.44

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1N]

The above limitations were established in Permit 92080040, pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].

7.9.7 Operating Requirements

None

7.9.8 Monitoring Requirements

a. The incinerator shall be equipped with a temperature indicator for afterburner combustion chamber temperature.

7.9.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected incinerator to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

a. The Permittee shall maintain records of the amount of waste charged in the incinerator in ton/mo and ton/yr.

b. The Permittee shall maintain records of the secondary burner temperature.

c. The Permittee shall maintain records of emissions in tons/mo and tons/yr.

7.9.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected incinerator with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

a. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences [Section 39.5(7)(f)(ii) of the Act].

7.9.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.9.12 Compliance Procedures

Emission Calculations for the Incinerator Burner

Emissions (tons) = [(Propane Combusted (gallons)) * (appropriate emission factor (lb/10^3 gallons)]/2000 lb/ton

Appropriate Emission Factors

PM, PM_{10}	0.4 lb/10^3 gallons
SO_2	0.10 * S lb/10^3 gallons (where S is fuel sulfur content)
NO_x	14 lb/10^3 gallons
CO	1.9 lb/10^3 gallons

VOM 0.5 lb/10^3 gallons

Emission Calculations for the Incinerator

Emissions (tons) = [(Waste Charged (ton)) * (appropriate emission factor (lb/ton)]/2000 lb/ton

Appropriate Emission Factors

PM	7 lb/ton
PM_{10}	4.7 lb/ton
SO_2	2.5 lb/ton
NO_x	3 lb/ton
CO	10 lb/ton
VOM	3 lb/ton
Benzene	0.231 lb/ton
Hydrogen Chloride	10 lb/ton

7.10 Unit 10: Investment Casting
Control 10: None

7.10.1 Investment casting is performed in the basement of Building 220. The purpose of this operation is to produce large quantities of precision metal parts. Patterns are first formed with an injection machine that injects wax into metal dies. These patterns are then attached to a wax stem using hot wax from a melting pot and hot plate, dipped in a tank containing the solution Remet Pattern Wash II, rinsed in water, and allowed to dry. Next the patterns are dipped in a fluidized bed and rainfall sand cabinet where they are coated with a stucco material consisting primarily of silica sand that forms a mold when it dries. Once the material is dry, the mold is placed in an oven where the wax patterns melt and are allowed to drip out of the mold. Finally, the mold is cast, knocked out, and finished. Induction furnaces are used to melt down the metals used for casting. Induction furnaces are the only significant emission unit for this process.

7.10.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
10	2 Induction Furnaces and Pouring Hood (220-8)	None

7.10.3 Applicability Provisions and Applicable Regulations

a. The affected investment casting operations for purposes of these unit specific conditions, is the emission unit defined in Condition 7.10.2.

b. The affected investment casting operations are subject to 35 IAC 212.123 which states:

i. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to Section 212.122 of this Subpart.

ii. The emission of smoke or other particulate matter from any such emission unit may have an

opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period, providing that such opaque emission permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1000 ft) radius from the center point of any such emission unit owned or operated by such person and provided further that such opaque emissions permitted from each such fuel combustion emission unit shall be limited to 3 times in any 24 hour period. [35 IAC 212.123)]

c. The affected investment casting operations are subject to 35 IAC 212.321 which states:

i. Except as further provided in this Part, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of this Section.

ii. Interpolated and extrapolated values of the data in subsection (c) of this Section shall be determined by using the equation:

$E = A(P)^B$

Where

P = Process weight rate; and
E = Allowable emission rate; and,

1. Up to process weight rates of 408 MG/hr (450 T/hr):

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	1.214	2.54

B	0.534	0.534

2. For process weight rate greater than or equal to 408 Mg/hr (450 T/hr):

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	11.42	24.8
B	0.16	0.16

[35 IAC 212.321]

7.10.4 Non-Applicability of Regulations of Concern

N/A

7.10.5 Operational and Production Limits And Work Practices

None

7.10.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected investment casting operations is subject to the following:

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.10.7 Operating Requirements

None

7.10.8 Inspection Requirements

None

7.10.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected investment casting operation to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

a. The Permittee shall maintain individual records of the amount of aluminum, bronze, brass, and steel melted in the individual furnaces in ton/mo and ton/yr.

b. The Permittee shall maintain records of monthly and annual emissions in tons/mo and tons/yr.

7.10.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the investment casting operations with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

a. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences [Section 39.5(7)(f)(ii) of the Act].

7.10.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.10.12 Compliance Procedures

Emission Calculations for the Induction Furnaces

Emissions (tons) = [(appropriate metal melted (tons)) * (appropriate emission factor (lb/ton)]/2000 lb/ton

Appropriate Emission Factors for Aluminum

TSP	0.9 lb/ton
PM_{10}	0.9 lb/ton

Appropriate Emission Factors for Bronze

TSP	0.9 lb/ton
PM_{10}	20 lb/ton
Lead	0.1 lb/ton

Appropriate Emission Factors for Brass

TSP	0.9 lb/ton
PM_{10}	20 lb/ton
Lead	0.1 lb/ton

Appropriate Emission Factor for Steel

TSP	0.9 lb/ton
PM_{10}	0.9 lb/ton
Lead	0.1 lb/ton
Manganese Compounds	0.004 lb/ton

Appropriate Emission Factor for Pour and Cool Operations

TSP	4.2 lb/ton
PM_{10}	4.2 lb/ton

7.11 Unit 11: Machining Operations
Control 11: Cyclones, Cartridge Dust Collectors, Scrubber

7.11.1 Machining operations at the Rock Island Arsenal are concentrated in Building 220, although Buildings 212, 222, and 230 also have machining or machining-related operations. Operations in these areas include grinding, plasma arc cutting, electric discharge machining, and thermal deburring. Many of these operations are considered insignificant activities and may be found in section 3 of this permit.

7.11.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
11	2 Chip and Grind Tables (212W-7)	Cyclone (212W-7A)
	4 Grinding Machines (220-6)	Cyclone (220-6A)
	36 Tool Grinding Machine (220-32)	Cartridge (220-32A)
	2 Deburring Benches (220-33)	Cyclone (220-30A)
	2 Grinding Machines (222-5)	Cyclone (222-5A)
	3 Plasma Arc Cutters (230-4)	Scrubber (230-4A)

7.11.3 Applicability Provisions and Applicable Regulations

a. The affected machining operations for purposes of these unit specific conditions, is the emission unit defined in Condition 7.11.2.

b. The affected machining operations are subject to 35 IAC 212.123 which states:

i. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to Section 212.122 of this Subpart.

ii. The emission of smoke or other particulate matter from any such emission unit may have an

opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period, providing that such opaque emission permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1000 ft) radius from the center point of any such emission unit owned or operated by such person and provided further that such opaque emissions permitted from each such fuel combustion emission unit shall be limited to 3 times in any 24 hour period. [35 IAC 212.123)]

c. The affected machining operations are subject to 35 IAC 212.321 which states:

i. Except as further provided in this Part, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of this Section.

ii. Interpolated and extrapolated values of the data in subsection (c) of this Section shall be determined by using the equation:

$E = A(P)^B$

Where:

P = Process weight rate; and
E = Allowable emission rate; and,

1. Up to process weight rates of 408 MG/hr (450 T/hr):

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr

A	1.214	2.54
B	0.534	0.534

2. For process weight rate greater than or equal to 408 Mg/hr (450 T/hr):

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	11.42	24.8
B	0.16	0.16

[35 IAC 212.321]

d. The affected machining operations are subject to 35 IAC 212.301 which states:

No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source. [35 IAC 212.301]

7.11.4 Non-Applicability of Regulations of Concern

N/A

7.11.5 Operational and Production Limits And Work Practices

None

7.11.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected machining operations is subject to the following:

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.11.7 Operating Requirements

None

7.11.8 Inspection Requirements

None

7.11.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected machining operations to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

a. The Permittee shall maintain records of the individual hours of operation for the 2 Chip and Grind Tables (212W-7), 4 Grinding Machines (220-6), 36 Tool Grinding Machine (220-32), 2 Deburring Benches (220-33), 2 Grinding Machines (222-5), and 3 Plasma Arc Cutters (230-4).

b. The Permittee shall maintain records of monthly and annual emissions in tons/mo and tons/yr.

7.11.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected machining operations with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

a. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences [Section 39.5(7)(f)(ii) of the Act].

7.11.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.11.12 Compliance Procedures

Emission Calculations for the Chip and Grind Tables

PM Emissions (tons) = [(.069 (lb PM/hr)) * (operating hours (hr)]/2000 lb/ton

Emission rate is based off the Rock Island Arsenal 1994 emission inventory

Emission Calculations for the Grinding Machines

PM Emissions (tons) = [(.02 (lb/hr)) * (operating hours (hr))]/2000 lb/ton

PM_{10} Emissions (tons) = [(.008 (lb/hr)) * (operating hours (hr))]/2000 lb/ton

Emission rate is based off the Rock Island Arsenal 1994 emission inventory

Emission Calculations for the Tool Grinding Machines

PM Emissions (tons) = [(.005 (lb/hr)) * (operating hours (hr))]/2000 lb/ton

Emission rate is based off the Rock Island Arsenal 1994 emission inventory

Emission Calculations for the Deburring Benches

PM Emissions (tons) = [(.015 (lb/hr)) * (operating hours (hr))]/2000 lb/ton

PM_{10} Emissions (tons) = [(.015 (lb/hr)) * (operating hours (hr))]/2000 lb/ton

Emission rate is based off the Rock Island Arsenal 1994 emission inventory

Emission Calculations for the Grinding Machines

PM Emissions (tons) = [(.5 (lb/hr)) * (operating hours (hr))]/2000 lb/ton

PM_{10} Emissions (tons) = [(.15 (lb/hr)) * (operating hours (hr))]/2000 lb/ton

Emission rate is based off the Rock Island Arsenal 1994 emission inventory

Emission Calculations for the Plasma Arc Cutters

PM Emissions (tons) = [(.1 (lb/hr)) * (operating hours (hr))]/2000 lb/ton

PM_{10} Emissions (tons) = [(.1 (lb/hr)) * (operating hours (hr))]/2000 lb/ton

Emission rate is based off the Rock Island Arsenal 1994 emission inventory

7.12 Unit 12: Paved and Unpaved Roads
Control 12: None

7.12.1 Rock Island Arsenal has 22 miles of concrete and asphalt paved roads and 2 miles of unpaved roads. About 5000 cars per day travel these roads as employees and contractors travel onto the island and park in parking lots. About 18 trucks travel onto the island each day including 6 coal trucks. No through traffic passes through the Rock Island Arsenal.

7.12.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
12	Paved and Unpaved Roads	None

7.12.3 Applicability Provisions and Applicable Regulations

a. The affected roadways for purposes of these unit specific conditions, is the emission unit defined in Condition 7.12.2.

b. The affected roadways are subject to 35 IAC 212.301 which states:

No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source. [35 IAC 212.301]

7.12.4 Non-Applicability of Regulations of Concern

N/A

7.12.5 Operational and Production Limits And Work Practices

None

7.12.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected roadways are subject to the following:

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.12.7 Operating Requirements

None

7.12.8 Inspection Requirements

None

7.12.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected roadways to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

a. The Permittee shall maintain records of monthly and annual emissions in tons/mo and tons/yr.

7.12.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected roadways with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

a. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences [Section 39.5(7)(f)(ii) of the Act].

7.12.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.12.12 Compliance Procedures

The paved road fugitive emission estimate was based on AP-42, 5th Edition, emission factors and guidance. Dust emissions from paved roads vary with the “silt loading” present on the road surfaces and the average weight of vehicles traveling the roads. The quantity of dust emissions generated from vehicle traffic on a paved road may be estimated using the following empirical expressions provided in AP-42, 5th Edition.

$E = k\ (sL/2)^{0.65}(W/3)^{1.5}$

Where:

E = Particulate emission factor (pounds per vehicle mile traveled (Lb/VMT)
k = Base emission factor for particle size range and unit of interest (AP-42, 5th Edition)
sL = Road surface silt loading (grams per square meter)(g/m^2)
W = Average weight (tons) of the vehicle traveling the road

AP-42, 5th Edition, recommends an sL value of 0.4 g/m2 for high-average daily travel (ADT) roads such as those at the Rock Island Arsenal. This is a conservative value for road usage, assuming that most staff cars travel along the same roads. The average weight of vehicles (W) is assumed to be 1.77 tons (5,000 cars at an average weight of 3,500 pounds per car and 18 trucks at an average weight of 20,000 pounds per truck). The k value used is 0.082 lb/VMT for particulate matter (PM) and 0.016 lb/VMT for PM less than 10 microns in size (PM_{10}).

Using these values,

$E = 0.082$ lb/VMT $(0.4/2)^{0.65}(1.77/3)^{1.5}$ or $E = 0.013$ lb/VMT for PM

E = 0.016 lb/VMT (0.4/2)0.65(1.77/3)1.5 or E = 0.00255 lb/VMT for PM10

There is 22 miles of paved roads at the Rock Island Arsenal and 5,000 cars and 18 trucks per day access the facility. Assuming that each vehicle travels a total of 3 miles on the Rock Island Arsenal, a total of 15,054 VMT/day occur, or 3,763,500 VMT/year assuming 50 weeks per

year and 5 days per week of active travel. If operations increased by 50 percent to a maximum of 7,500 cars and 27 trucks, personnel are assumed to travel 50 percent more miles per year for the maximum scenario.

PM and PM_{10} Emission Calculations for Roadways

PM Emissions (tons) = [(0.013 (lb/VMT)) * (vehicle mile traveled (VMT))]/2000 lb/ton

PM_{10} Emissions (tons) = [(0.016 (lb/VMT)) * (vehicle mile traveled (VMT))]/2000 lb/ton

The unpaved road fugitive emission estimate was based on AP-42, 5th Edition, factors and guidance. Dust emissions from unpaved roads vary with “silt loading” present on the road surfaces and the average weight of vehicles traveling the roads. The quantity of dust emissions generated from vehicle traffic on an unpaved road may be estimated using the following empirical expression:

E = k (5.9)(s/12)(S/30)(W/3)0.7(w/4)[(365-p)/365](lb/VMT)

Where:

E = Particulate emission factor (lb/VMT)
K = Particle size multiplier (dimensionless)
s = silt content of road surface material (percent)
S = Mean vehicle speed (miles per hour)(mph)
W = Mean vehicle weight (tons)
w = Mean number of wheels (dimensionless)
p = Number of days with at least 0.01 inch of precipitation per year (from precipitation distribution map)

The k value is 1.0 for PM emissions and 0.36 for PM_{10} emissions. The s value was determined based on the assumption that Rock Island Arsenal unpaved roads are similar to municipal unpaved roads; therefore, a value of 5.7 percent was used. The mean vehicle speed is assumed to be 25 mph, which is the Rock Island Arsenal speed limit. The mean vehicle weight calculated for paved roads, 1.77 tons, is used. The mean number of wheels is four because the great majority of vehicles using RIA’s unpaved roads are passenger automobiles. The p value for RIA is 110 days per year, based on an annual precipitation distribution map for the United States.

Using these values,

$E = 1.0\ (5.9)\ (5.7/12)\ (25/30)\ (1.77/3)^{0.7}(4/4)^{0.5}[(365-110)/365]$ (lb/VMT) or E = 1.13 lb/VMT for PM

E = 0.36 (5.9) (5.7/12) (25/30) (1.77/3)0.7(4/4)0.5[(365-110)/365](lb/VMT) or E = 0.406 lb/VMT for PM_{10}

There is 2 miles of unpaved roads at RIA, and 5000cars and 18 trucks per day access the facility. Cars and trucks generally travel on RIA's paved roads. It is assumed that 5 percent of the cars and 50 percent of the trucks travel an average of 0.5 mile per week each week on the unpaved roads. Assuming 50 active weeks at the facility per year, cars and trucks travel 129.5 miles on unpaved roads each week, or a total of 6475 VMT occur on unpaved roads each year during a typical year. If operations increased by 50 percent, a total of 19087.5 VMT would occur on unpaved roads each year.

PM and PM_{10} Emission Calculations for Unpaved Roadways

PM Emissions (tons) = [(1.13 (lb/VMT)) * (vehicle mile traveled (VMT))]/2000 lb/ton

PM_{10} Emissions (tons) = [(0.406 (lb/VMT)) * (vehicle mile traveled (VMT))]/2000 lb/ton

7.13 Unit 13: Rubber Mixing
Control 13: None

7.13.1 Rubber mixing operations at the Rock Island Arsenal consists of mixing rubber under a mixing hood and sending it to one of three rubber mills for processing. The rubber is then cured through either injection molding or compression molding. Injection molding consists of feeding extruded rubber into an injection molder. Compression molding is done on one of eight heated presses. Occasionally, the rubber is sent to electric despatch cure ovens for final curing. A curing oven is used to dry rubber beads. Metal and rubber parts are glued under a fume hood.

7.13.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
13	Rubber Mixer (220-18)	None
	3 Rubber Mills (220-18)	None
	Rubber Mixing Hood (220-18)	None

7.13.3 Applicability Provisions and Applicable Regulations

a. The affected rubber mixing operations for purposes of these unit specific conditions, is the emission unit defined in Condition 7.13.2.

b. The affected rubber mixing operations are subject to 35 IAC 215.301 which states:

No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission source, except as provided in Sections 215.302, 215.303, 215.304, and the following exception: If no odor nuisance exists the limitation of this Subpart shall apply only to photochemically reactive material. [35 IAC 215.301]

c. The affected rubber mixing operations are subject to 35 IAC 212.321 which states:

i. Except as further provided in this Part, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of this Section.

ii. Interpolated and extrapolated values of the data in subsection (c) of this Section shall be determined by using the equation:

$E = A(P)^B$

Where

P = Process weight rate; and
E = Allowable emission rate; and,

1. Up to process weight rates of 408 MG/hr (450 T/hr)

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	1.214	2.54
B	0.534	0.534

2. For process weight rate greater than or equal to 408 Mg/hr (450 T/hr)

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	11.42	24.8
B	0.16	0.16

[35 IAC 212.321]

7.13.4 Non-Applicability of Regulations of Concern

N/A

7.13.5 Operational and Production Limits And Work Practices

None

7.13.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected rubber mixing operations are subject to the following:

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.13.7 Operating Requirements

None

7.13.8 Inspection Requirements

None

7.13.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected rubber mixing operations to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

a. The Permittee shall maintain records of monthly and annual emissions in tons/mo and tons/yr.

b. The Permittee shall maintain usage records of Agerite HP-S, Agerite Resin D, and END-75 in lb/mo and lb/yr.

c. The Permittee shall maintain records of the VOM and HAP percentages in the Agerite HP-S, Agerite Resin D, and END-75.

7.13.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected rubber

mixing operations with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

a. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences [Section 39.5(7)(f)(ii) of the Act].

7.13.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.13.12 Compliance Procedures

VOM Emission Calculations from Rubber Mixing Operations

VOM Emissions (tons) = [(Agerite HP-S Usage (lb)) * (percent VOM (%))/100]/2000 lb/ton

VOM Emissions (tons) = [(Agerite Resin D Usage (lb)) * (percent VOM (%))/100]/2000 lb/ton

VOM Emissions (tons) = [(END-75 Usage (lb)) * (percent VOM (%))/100]/2000 lb/ton

HAP Emission Calculations from Rubber Mixing Operations

HAP Emissions (tons) = [(END-75 Usage (lb)) * (percent HAP (%))/100]/2000 lb/ton

7.14 Unit 14: Road Salt Transfers
Control 14: None

7.14.1 Salt is stored in Building 164, a salt shed. The salt is spread on the RIA's roads in the winter to prevent ice formation. The typical usage is 2000 tons per year and its maximum usage is 4500 tons per year. Emissions are calculated for handling of the salt including dropping the salt into building 164, dropping the salt from building 164 into a truck, and dropping the salt from the truck onto the roads.

7.14.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
14	Dropping Onto Salt Pile	None
	Dropping Salt Into Truck	None
	Dropping Salt Onto Streets	None

7.14.3 Applicability Provisions and Applicable Regulations

a. The affected salt pile operations for purposes of these unit specific conditions, is the emission unit defined in Condition 7.14.2.

b. The affected salt pile operations are subject to 35 IAC 212.301 which states:

No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source. [35 IAC 212.301]

c. The affected salt pile operations are subject to 35 IAC 212.315 which states:

No person shall cause or allow the operation of a vehicle of the second division as defined by 625 ILCS 5/1-217, or a semi-trailer as defined by 625 ILCS 5/1-187, without a covering sufficient to prevent the release of particulate matter into the atmosphere,

provided that this rule shall not pertain to automotive exhaust emissions. [35 IAC 212.315]

7.14.4 Non-Applicability of Regulations of Concern

N/A

7.14.5 Operational and Production Limits And Work Practices

None

7.14.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected salt pile operations are subject to the following:

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.14.7 Operating Requirements

None

7.14.8 Inspection Requirements

None

7.14.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected salt pile operations to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

a. The Permittee shall maintain records of monthly and annual emissions in tons/mo and tons/yr.

b. The Permittee shall maintain usage records of salt in ton/mo and ton/yr.

7.14.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected salt pile operations with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

a. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences [Section 39.5(7)(f)(ii) of the Act].

7.14.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.14.12 Compliance Procedures

PM Emission Calculations from Salt Transfer Operations

The equation:

$$E = K(0.0032)\frac{[U/5]^{1.3}}{[M/2]^{1.4}} \text{ (pound [lb]/ton)}$$

Where:

E = Emission Factor
K = Particle size multiplier (dimensionless) (PM= 1; PM_{10} = 0.35)
U = Mean wind speed (7.5 miles per hour from Midwest Climatic center in Moline, Illinois, for 1994)
M = Material moisture content (5% for salt, assumed)

Was obtained from AP-42 and used to calculate PM and PM_{10} emission factors for the following fugitive points.

1. Dropping of salt onto the salt pile.

2. Dropping of salt from the salt pile onto a truck.

3. Dropping of salt from the truck onto the roads.

Uncontrolled annual emissions from each of these fugitive points was calculated as follows:

Uncontrolled annual emissions = E x R x CF

Where:

E = Emission factor (lb/ton)
R = Total amount of salt used by the facility (ton/yr)
(maximum 4500 tons/yr; typical 2000 tons/yr)
CF = Conversion factor (ton/2000 lbs)

7.15 Unit 15: Surface Coating
Control 15: None

7.15.1 Rock Island Arsenal surface coating operations involve coating of heavy, off-highway vehicle products. Coating operations are performed in the following buildings: 139, 159, 208, 212, 219, 247, and 299. RIA coating operations are conducted in paint booths and in unconfined, indoor areas designated for painting. The primary types of coatings used at the RIA include epoxy primers and topcoats and various polyurethanes. Other types include dry film lubricants, epoxy powder coating, plastisol primer, and various aerosol spray can paints.

7.15.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
15	Paint Booth (139-6)	Dry Filter (139-6A)
	Paint Booth (208-4)	Wet Collector (208-4A)
	Paint Booth (208-5)	Wet Collector (208-5A)
	Paint Booth (208-6)	Wet Collector (208-6A)
	Paint Booth (208-7)	Wet Collector (208-7A)
	Paint Booth (208-9)	Wet Collector (208-9A)
	Paint Booth (208-10)	Wet Collector (208-10A)
	Paint Fume Hood (208-11)	None
	Drying Oven (208-12)	None
	Powder Coat Drying Oven (208-50)	None
	Epoxy Powder Coating Booth (208-51)	Dry Filter (208-51B)
	Paint Booth (208-52)	Dry Filter (208-52A)
	Paint Booth (208-53)	Dry Filter (208-53A)
	Paint Booth (208-54)	Dry Filter (208-54A)
	Paint Booth (208-55)	Dry Filter (208-55A)
	Paint Booth Oven (208-56)	Oven Filter (208-56A)
	Paint Booth (212P-8)	Dry Filter (212P-8A)
	Electric Oven (212P-9)	None
	Paint Booth (299-11)	Dry Filter (299-11A)
	Paint Booth (299-12)	Dry Filter (299-12A)
	Paint Booth (299-13)	Dry Filter (299-13A)
	Flash Tunnel (299-14)	None
	Drying Oven (299-15)	None

7.15.3 Applicability Provisions and Applicable Regulations

a. The affected coating operations for purposes of these unit specific conditions, is the emission unit defined in Condition 7.15.2.

b. The affected coating operations are subject to 35 IAC 215.204(k)(2) which states:

No owner or operator of a coating line shall cause or allow the emission of volatile organic material to exceed the following limitations on coating materials, excluding water and any compounds which are specifically exempted from the definition of volatile organic material pursuant to this Part, delivered to the coating applicator: [35 IAC 215.204(k)(2)]

i. Heavy Off-highway Vehicle Products

ii. In the remaining counties

	kg/l	lb/gal
Extreme Performance Coat	0.42	(3.5)
Extreme Performance Top Coat-Air Dried	0.52	(4.3)
Final Repair Coat-Air Dried	0.58	(4.8)

c. The affected coating operations are subject to 35 IAC 212.322 which states:

i. Except as further provided in this Part, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any process emission unit for which construction or modification commenced prior to April 14, 1972, which, either alone or in combination with the emission of particulate matter from all other similar process emission units at a source or premises, exceeds the allowable emission rates specified in subsection (c) of this Section.

ii. Interpolated and extrapolated values of the data in subsection (c) of this Section shall be determined by using the equation:

$E = C + A(P)^B$

Where:

P = Process weight rate; and,

E = Allowable emission rate; and,

1. For process weight rates up to 27.2 Mg/hr (30 T/hr)

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	1.985	4.10
B	0.67	0.67
C	0	0

2. For process weight rates in excess of 27.2 Mg/hr (30 T/hr):

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	25.21	55.0
B	0.11	0.11
C	- 18.4	- 40.0

[35 IAC 212.322]

7.15.4 Non-Applicability of Regulations of Concern

N/A

7.15.5 Operational and Production Limits And Work Practices

None

7.15.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected coating operations are subject to the following:

Emissions from the affected coating operations shall not exceed the following limits:

Equipment	Coating Amount (Gal/yr)	VOM Emissions (ton/yr)
208 Area	8200	14.4
299 Area	14000	23.62

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current

month plus the preceding 11 months (running 12 month total) [T1]

The above limitations were established in Permit 94080094, pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].

7.15.7 Testing Requirements

a. The affected coating operations are subject to 35 IAC 215.208(a) which states:

i. The VOM content of coatings shall be determined by Method 24, 40 CFR Part 60, Appendix A, incorporated by reference in Section 215.105 except for glues and adhesive coatings, two component reactive coatings forming volatile reaction products, coatings requiring energy other than heat to initiate curing, and coatings requiring high temperature catalysis for curing, providing the person proposing testing of the material submits to the Illinois EPA proof that the Method 24 results would not be representative and proof that a proposed alternative test method gives representative, accurate test results. For printing inks, the volatile organic material content shall be determined by Method 24A, 40 CFR Part 60, Appendix A, incorporated by reference in Section 215.105. Any alternate test method must be approved by the Illinois EPA which shall consider data comparing performance of the proposed alternative to the performance of the approved test method(s). If the Illinois EPA determines that such data demonstrates that the proposed alternative will achieve results equivalent to the approved test method(s), the Illinois EPA shall approve the proposed alternative. [35 IAC 215.208(a)]

7.15.8 Inspection Requirements

None

7.15.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected coating operations to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

a. The Permittee shall maintain records of individual coating usage for area 208 and area 299 in gal/mo and gal/yr.

b. The Permittee shall maintain records of individual coatings to include: coating density, weight percent of VOM, weight percent of HAP's, and percent solids in coatings.

c. The Permittee shall maintain records of monthly and annual emissions from area 208 and area 299 in tons/mo and tons/yr.

d. The Permittee shall maintain records of filter replacement for the paint booths.

7.15.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected coating operations with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

a. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences [Section 39.5(7)(f)(ii) of the Act].

7.15.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.15.12 Compliance Procedures

VOM Emission Calculations from Coating Operations

VOM Emissions (tons) = [(individual coating usage (gal)) * (coating density (lb/gal)) * (weight percent VOM (%))/100]/2000 lb/ton

HAP Emission Calculations from Coating Operations

HAP Emissions (tons) = [(individual coating usage (gal)) * (coating density (lb/gal)) * ((weight percent of individual HAP (%))/100)]/2000 lb/ton

Particulate Emission Calculations from Coating Operations

PM Emissions (tons) = [(coating usage (gal)) * (coating density (lb/gal)) * ((percent solids in coating (%))/100) * ((1 – transfer efficiency (%))/100) * ((1 – control efficiency (%))/100)]/2000 lb/ton

7.16 Unit 16: Storage Tanks
Control 16: None

7.16.1 Rock Island Arsenal has 26 aboveground storage tanks and 6 underground storage tanks. 22 of these tanks are considered insignificant activities and 6 are inactive and have no planned future use.

7.16.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
16	Tank 22-West (1000 gal AST) Tank 216-4 (15000 gal UST) Tank 239-East (8000 gal UST) Tank 239-West (20000 gal UST)	None None None None

7.16.3 Applicability Provisions and Applicable Regulations

a. The affected tanks for purposes of these unit specific conditions, is the emission unit defined in Condition 7.16.2.

b. Tanks 22-West and 239-West are subject to 35 IAC 215.585 (a), (b), (d), and (e) which states:

i. No person shall sell, offer for sale, dispense, supply, offer for supply, or transport for use in Illinois gasoline whose Reid vapor pressure exceeds the applicable limitations set forth in subsections (b) and (c) during the regulatory control periods, which shall be June 1 to September 15 for retail outlets, wholesale purchaser-consumer facilities, and all other facilities. [35 IAC 215.585 (a)]

ii. The Reid vapor pressure of gasoline, a measure of its volatility, shall not exceed 9.0 psi (62.1 kPa) during the regulatory control period in 1991 only. [35 IAC 215.585 (b)]

iii. All sampling of gasoline required pursuant to the provisions of this section shall be conducted by one or more of the following approved methods or procedures which are

incorporated by reference in Section 215.105.

1. For manual sampling, ASTM D4057

2. For automatic sampling, ASTM D4177

3. Sampling procedures for Fuel Volatility, 40 CFR 80, Appendix D. [35 IAC 215.585 (d)]

iv. The Reid vapor pressure of gasoline shall be measured in accordance with a modification of ASTM D323 known as the “dry method” as set forth in 40 CFR 80, Appendix E, incorporated by reference in Section 215.105. For purposes of enforcement of the Reid vapor pressure limitation set forth in subsection (b) and (c), no enforcement action shall be initiated unless the Reid vapor pressure measured by the Illinois EPA is more than 0.3 psi (2.1 kPa) greater than the applicable standard. [35 IAC 215.585 (e)]

c. The affected tanks are subject to 35 IAC 215.142 which states:

No person shall cause or allow the discharge of more than 32.8 ml (2 cu in) of volatile organic liquid with vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3 K (70 F) into the atmosphere from any pump or compressor in any 15 minute period at standard conditions. [35 IAC 215.142]

d. The affected tanks are subject to 35 IAC 215.143 which states:

No person shall cause or allow the emission of organic material into the atmosphere from any vapor blowdown system or any safety relief valve, except such safety relief valves not capable of causing an excessive release, unless such emission is controlled:

i. To 10 ppm equivalent methane (molecular weight 16.0) or less; or,

ii. By combustion in a smokeless flare; or,

iii. By other air pollution control equipment approved by the Illinois EPA according to the provisions of 35 Ill. Adm. Code 201. [35 IAC 215.143]

e. The affected tanks are subject to 35 IAC 215.144 which states:

Section 215.143 shall not apply to any set of unregulated safety relief valves capable of causing excessive releases, provided the owner or operator thereof, by October 1, 1972, provides the Illinois EPA with the following:

i. A historical record of each such set (or, if such records are unavailable, or similar sets which, by virtue of operation under similar circumstances, may reasonably be presumed to have the same or greater frequency of excessive releases) for a three year period immediately preceding October 1, 1972, indicating:

1. Dates on which excessive releases occurred from each such set; and,

2. Duration in minutes of each such excessive release; and,

3. Quantities (in pounds) of mercaptans and/or hydrogen sulfide emitted into the atmosphere during each such excessive release.

ii. Proof, using such three year historical records, that no excessive releases is likely to occur from any such set either alone or in combination with such excessive releases from other sets owned or operated by the same person and located within a ten mile radius from the center point of any such set, more frequently than 3 times in any 12 month period; and,

iii. Accurate maintenance records pursuant to the requirements of subsection (a); and,

iv. Proof, at three year intervals, using such three year historical records, that such set conforms to the requirements of subsection (c). [35 IAC 215.144]

7.16.4 Non-Applicability of Regulations of Concern

N/A

7.16.5 Operational and Production Limits And Work Practices

a. The affected tanks are subject to 35 IAC 215.583 (a), (c), (d), and (e) which states:

i. Subject to subsection (b) below, no person shall cause or allow the transfer of gasoline from any delivery vessel into any stationary storage tank at a gasoline dispensing facility unless:

1. The tank is equipped with a submerged loading pipe; and

2. The vapors displaced from the storage tank during filling are processed by a vapor control system that includes one or more of the following:

A. A vapor collection system that meets the requirements of subsection (d)(4) below; or

B. A refrigeration condensation system or any other system approved by the Illinois EPA that recovers at least 90 percent by weight of all vaporized organic material from the equipment being controlled; and,

C. The delivery vessel displays the appropriate sticker pursuant to the requirements of Section 215.584(b) or (d) of this Part.

c. Subject to subsection (b) above, each owner of a gasoline dispensing facility shall:

i. Install all control systems and make all process modifications required by subsection (a) above;

ii. Provide instructions to the operator of the gasoline dispensing facility describing necessary maintenance operations and procedures for prompt notification of the owner in case of any malfunction of a vapor control system; and

iii. Repair, replace, or modify any worn out or malfunctioning component or element of design.

d. Subject to subsection (b) above, each operator of a gasoline dispensing facility shall:

i. Maintain and operate each vapor control system in accordance with the owner's instructions;

ii. Promptly notify the owner of any scheduled maintenance or malfunction requiring replacement or repair of a major component of a vapor control system;

iii. Maintain gauges, meters or other specified testing devices in proper working order;

iv. Operate the vapor collection system and delivery vessel unloading points in a manner that prevents:

A. A reading equal to or greater than 100 percent of the lower explosive limit (LEL measured as propane) when tested in accordance with the procedure described in EPA 450/2-78-051 Appendix B, and

B. Avoidable leaks of liquid during the filling of storage tanks; and

v. Within 15 business days after discovery of the leak by the owner, operator, or the Illinois EPA, repair and retest a vapor collection system which exceeds the limits of subsection (d)(4)(A) above.

e. Gasoline dispensing facilities were required to take certain actions to achieve compliance which are summarized in Appendix C of this Part. [35 IAC

215.583]

7.16.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected tanks are subject to the following:

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.16.7 Testing Requirements

None

7.16.8 Inspection Requirements

None

7.16.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected tanks to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

a. The Permittee shall maintain records of individual tank throughputs in gal/mo and gal/yr.

b. The Permittee shall maintain records of the weight percent of HAP’s for the stored materials.

c. The Permittee shall maintain records of monthly and annual VOM and HAP emissions in tons/mo and tons/yr.

7.16.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected tanks with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

a. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences [Section 39.5(7)(f)(ii) of the Act].

7.16.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.16.12 Compliance Procedures

VOM and HAP Emission Calculations from Tanks

The Permittee may use the most current version of the Tanks program for calculation of VOM and HAP emission working and breathing losses from the storage tanks.

7.17 Unit 17: Test Firing Ranges
Control 17: Baghouses

7.17.1 Rock Island Arsenal has four indoor test firing ranges located in Building 25. The test firing ranges are used for ammunition testing and Army and police training. Two of the ranges are used for helicopter gun simulator testing. All four firing ranges are equipped with baghouse controls with reported efficiencies of 99.9 percent.

7.17.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
17	Range 1 (25-6) Range 2 (25-7) Range 3 (25-8,9) Range 4 (25-5)	Baghouse (25-6A) Baghouse (25-7A) Baghouse (25-8A,9A) Baghouse (25-5A)

7.17.3 Applicability Provisions and Applicable Regulations

a. The affected test firing ranges for purposes of these unit specific conditions, is the emission unit defined in Condition 7.17.2.

b. The affected test firing ranges are subject to 35 IAC 212.322 which states:

i. Except as further provided in this Part, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any process emission unit for which construction or modification commenced prior to April 14, 1972, which, either alone or in combination with the emission of particulate matter from all other similar process emission units at a source or premises, exceeds the allowable emission rates specified in subsection (c) of this Section.

ii. Interpolated and extrapolated values of the data in subsection (c) of this Section shall be determined by using the equation:

$$E = C + A(P)^B$$

Where:

P = Process weight rate; and,

E = Allowable emission rate; and,

1. For process weight rates up to 27.2 Mg/hr (30 T/hr)

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	1.985	4.10
B	0.67	0.67
C	0	0

2. For process weight rates in excess of 27.2 Mg/hr (30 T/hr):

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	25.21	55.0
B	0.11	0.11
C	- 18.4	- 40.0

[35 IAC 212.322]

c. The affected test firing ranges are subject to 35 IAC 212.123 which states:

i. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to Section 212.122 of this Subpart.

ii. The emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute

period, providing that such opaque emission permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1,000 ft) radius from the center point of any such emission unit owned or operated by such person and provided further that such opaque emissions permitted from each such fuel combustion emission unit shall be limited to 3 times in any 24 hour period. [35 IAC 212.123]

7.17.4 Non-Applicability of Regulations of Concern

N/A

7.17.5 Operational and Production Limits And Work Practices

None

7.17.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected test firing ranges are subject to the following:

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.17.7 Testing Requirements

None

7.17.8 Inspection Requirements

None

7.17.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected test firing ranges to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

a. The Permittee shall maintain records of the number of

rounds fired in the individual ranges.

b. The Permittee shall maintain records of the weight per round in grams.

c. The Permittee shall maintain records of the amount of propellant per round in grams/round.

d. The Permittee shall maintain records of monthly and annual VOM and HAP emissions in tons/mo and tons/yr.

7.17.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected test firing ranges with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

a. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences [Section 39.5(7)(f)(ii) of the Act].

7.17.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.17.12 Compliance Procedures

PM Emission Calculations from the Test Firing Ranges

PM Emissions (tons) = [(Weight per round (grams)) * (Number of rounds fired) * (Amount of Propellant (grams/round)) * (0.844 grams/gram propellant) * (1 – control efficiency (%))]/454 gram/lb * 2000 lb/ton

Lead Emission Calculations from the Test Firing Range

Lead Emissions (tons) = (PM Emissions (tons)) * (.000005)

7.18 Unit 18: Welding
Control 18: Cartridge Filters, Dust Collectors

7.18.1 Most welding at the Rock Island Arsenal takes place in Building 212W. Welding also occurs in other buildings including buildings 106, 108, 208, 211, 212F, 220, 230, and 351. Various types of welding processes are used at the RIA. Electric arc welding is the most commonly used, it is also the process that has the greatest potential for emissions. The following four types of electric arc welding are used at RIA: Shielded metal arc, gas metal arc, flux cored arc, and submerged arc.

7.18.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
18	4 Welders (106-51)	Portable Filter Unit
	2 Welders (108-1)	None
	2 Welding Robots (208-71)	Cartridge (208-71A)
	Repair Welding Station (208-72)	Cartridge (208-72A)
	Welders (211-1)	Portable Filter Unit
	Weld Stations (212F-20.1)	Cartridge (212F-20A)
	Overlay Welding (212W-1)	Cartridge (212W-1A)
	Welders (212W-2,3,4)	Filter Unit (212W-2A, 3A, & 4A)
	2 Welders (212W-10)	Portable Filter Unit
	4 Welders (220-1)	Portable Filter Unit
	Welding Station (220-43)	Portable Filter Unit
	3 Weld Overlay Lathes (220-46)	Dust Collector (220-46A)
	14 Welders (230-39)	Portable Filter Unit
	Welders (351-1)	None

7.18.3 Applicability Provisions and Applicable Regulations

a. The affected welding units for purposes of these unit specific conditions, is the emission unit defined in Condition 7.18.2.

b. The affected welding units are subject to 35 IAC 212.123 which states:

i. No person shall cause or allow the emission of smoke or other particulate matter, with an

opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to Section 212.122 of this Subpart.

ii. The emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period, providing that such opaque emission permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1000 ft) radius from the center point of any such emission unit owned or operated by such person and provided further that such opaque emissions permitted from each such fuel combustion emission unit shall be limited to 3 times in any 24 hour period. [35 IAC 212.123]

c. The affected welding units are subject to 35 IAC 212.321 which states:

i. Except as further provided in this Part, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of this Section.

ii. Interpolated and extrapolated values of the data in subsection (c) of this Section shall be determined by using the equation:

$$E = A(P)^B$$

Where:

P = Process weight rate; and
E = Allowable emission rate; and,

1. Up to process weight rates of 408 MG/hr (450 T/hr)

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	1.214	2.54
B	0.534	0.534

2. For process weight rate greater than or equal to 408 Mg/hr (450 T/hr)

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	11.42	24.8
B	0.16	0.16

[35 IAC 212.321]

7.18.4 Non-Applicability of Regulations of Concern

N/A

7.18.5 Operational and Production Limits And Work Practices

None

7.18.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected welding units are subject to the following:

Emissions from the affected weld overlay lathes (220-46) shall not exceed the following limits:

Equipment	Emission Rate (Lb/hr)	PM Emissions (tons/yr)
Weld Overlay Lathes (220-46)	.55	1.1

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1]

7.18.7 Testing Requirements

None

7.18.8 Inspection Requirements

None

7.18.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected welding units to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

a. The Permittee shall maintain records of the individual electrode usage for the welding units in lb/mo and lb/yr.

b. The Permittee shall maintain records of monthly and annual emissions in tons/mo and tons/yr.

7.18.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected welding units with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

a. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA’s Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce

emissions and future occurrences [Section 39.5(7)(f)(ii) of the Act].

7.18.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.18.12 Compliance Procedures

Emission Calculations from the Welding Units

PM and HAP Emissions (tons) = [(Electrode consumed (lb)) * (appropriate emission factor[1] (lb/1000 lb consumed)) * (1 – control efficiency (%)/100)]/2000 lb/ton

1. The Permittee shall utilize emission factors from Tables 12.19-1 and 12.19-2 from AP-42, 5th Edition for calculation of PM and HAP emissions.

7.19 Unit 19: Woodworking Units
Control 19: Baghouse and Cyclones

7.19.1 Woodworking at the Rock Island Arsenal is conducted in building 299 and in Building 212F of the foundry. Building 212F houses 11 woodworking machines (212F-22), which are controlled by a baghouse. Building 299 houses a total of 25 woodworking machines. This shop is equipped with three dust cyclone collectors. The shop is configured in such a way that the matcher planer (299-23) has a dedicated cyclone. Fourteen woodworking machines designated as Emission Unit 299-24, are ducted to one cyclone (299-24A); ten other woodworking machines, designated as Emission Unit 299-25, have a separate cyclone (299-25A) for an air pollution control device.

7.19.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
19	2 Planers, 4 Disc Sanders, Tablesaw, 2 Bandsaws, Jointer, Spindle Sander (212F-22)	Baghouse (212F-22A)
	Wood Matcher Planer (299-23)	Cyclone (299-23A)
	Planer/Joiner, Dowel Turning Machine, Shaper, Molder Shaper, 3 Radial Arm Saws, Routing Machine, 3 Band Saws, Router, Planer, Auto Cut-off Saw (299-24)	Cyclone (299-24A)
	Sander, Bandsaw, 2 Auto Cut-off Saw, Rip Saw, 2 Table Saw, 2 Planer/Joiner, Band Saw (299-25)	Cyclone (299-25A)
	Fugitive Processes	None

7.19.3 Applicability Provisions and Applicable Regulations

a. The affected woodworking units for purposes of these unit specific conditions, is the emission unit defined in Condition 7.19.2.

b. The affected woodworking units are subject to 35 IAC 212.123 which states:

   i. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to Section 212.122 of this Subpart.

   ii. The emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period, providing that such opaque emission permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1000 ft) radius from the center point of any such emission unit owned or operated by such person and provided further that such opaque emissions permitted from each such fuel combustion emission unit shall be limited to 3 times in any 24 hour period. [35 IAC 212.123]

c. The affected fugitive processes are subject to 35 IAC 212.301 which states:

   No person shall cause the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source. [35 IAC 212.301]

d. Sections 212.321 and 212.322 of this Part shall not apply to the following industries, which shall be subject to Subpart K of this Part:

   i. Grinding;

   ii. Woodworking; and

   iii. Sandblasting or shotblasting.

7.19.4 Non-Applicability of Regulations of Concern

N/A

7.19.5 Operational and Production Limits And Work Practices

None

7.19.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected woodworking units are subject to the following:

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.19.7 Testing Requirements

None

7.19.8 Inspection Requirements

None

7.19.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected woodworking units to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

a. The Permittee shall maintain records of the woodwaste in ton/mo and ton/yr.

b. The Permittee shall maintain records of monthly and annual emissions in tons/mo and tons/yr.

7.19.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected woodworking units with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports

shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

a. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences [Section 39.5(7)(f)(ii) of the Act].

7.19.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.19.12 Compliance Procedures

Emission Calculations from the Woodworking Units

PM and PM_{10} Emissions (tons) = [(Wood waste generated (ton)) * (appropriate emission factor (lb PM/ton of woodwaste)) * (1 – control efficiency (%)/100)]/2000 lb/ton

Emission Unit	Emission Factor (lb PM/ton Woodwaste)	Emission Factor (lb PM/ton Woodwaste)	Emission Factor (lb PM_{10}/ton Woodwaste)	Emission Factor (lb PM_{10}/ton Woodwaste)
	Storage Bin Vent	Storage Bin Loadout	Storage Bin Vent	Storage Bin Loadout
212F-22	1	2	0.58	1.2
299-23	1	2	0.58	1.2
299-24	1	2	0.58	1.2
299-25	1	2	0.58	1.2

8.0 GENERAL PERMIT CONDITIONS

8.1 Permit Shield

Pursuant to Section 39.5(7)(j) of the Act, the Permittee has requested and has been granted a permit shield. This permit shield provides that compliance with the conditions of this permit shall be deemed compliance with applicable requirements which were applicable as of the date the proposed permit for this source was issued, provided that either the applicable requirements are specifically identified within this permit, or the Illinois EPA, in acting on this permit application, has determined that other requirements specifically identified are not applicable to this source and this determination (or a concise summary thereof) is included in this permit.

This permit shield does not extend to applicable requirements which are promulgated after _____**{insert public notice start date}** (the date of issuance of the draft permit) unless this permit has been modified to reflect such new requirements.

8.2 Applicability of Title IV Requirements (Acid Deposition Control)

This source is not an affected source under Title IV of the CAA and is not subject to requirements pursuant to Title IV of the CAA.

8.3 Emissions Trading Programs

No permit revision shall be required for increases in emissions allowed under any USEPA approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for elsewhere in this permit and that are authorized by the applicable requirement [Section 39.5(7)(o)(vii) of the Act].

As of the date of issuance of this permit, there are no such economic incentive, marketable permit or emission trading programs that have been approved by USEPA.

8.4 Operational Flexibility/Anticipated Operating Scenarios

8.4.1 Changes Specifically Addressed by Permit

Physical or operational changes specifically addressed by the Conditions of this permit that have been identified as

not requiring Illinois EPA notification may be implemented without prior notice to the Illinois EPA.

8.4.2 Changes Requiring Prior Notification

The Permittee is authorized to make physical or operational changes that contravene express permit terms without applying for or obtaining an amendment to this permit, provided that [Section 39.5(12)(a)(i) of the Act]:

a. The changes do not violate applicable requirements;

b. The changes do not contravene federally enforceable permit terms or conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements;

c. The changes do not constitute a modification under Title I of the CAA;

d. Emissions will not exceed the emissions allowed under this permit following implementation of the physical or operational change; and

e. The Permittee provides written notice to the Illinois EPA, Division of Air Pollution Control, Permit Section, at least 7 days before commencement of the change. This notice shall:

i. Describe the physical or operational change;

ii. Identify the schedule for implementing the physical or operational change;

iii. Provide a statement of whether or not any New Source Performance Standard (NSPS) is applicable to the physical or operational change and the reason why the NSPS does or does not apply;

iv. Provide emission calculations which demonstrate that the physical or operational change will not result in a modification; and

v. Provide a certification that the physical or operational change will not result in

emissions greater than authorized under the Conditions of this permit.

8.5 Testing Procedures

Tests conducted to measure composition of materials, efficiency of pollution control devices, emissions from process or control equipment, or other parameters shall be conducted using standard test methods. Documentation of the test date, conditions, methodologies, calculations, and test results shall be retained pursuant to the recordkeeping procedures of this permit. Reports of any tests conducted as required by this permit or as the result of a request by the Illinois EPA shall be submitted as specified in Condition 8.6.

8.6 Reporting Requirements

8.6.1 Monitoring Reports

If monitoring is required by any applicable requirements or conditions of this permit, a report summarizing the required monitoring results, as specified in the conditions of this permit, shall be submitted to the Air Compliance Section of the Illinois EPA every six months as follows [Section 39.5(7)(f) of the Act]:

Monitoring Period	Report Due Date
January - June	September 1
July - December	March 1

All instances of deviations from permit requirements must be clearly identified in such reports. All such reports shall be certified in accordance with Condition 9.9.

8.6.2 Test Notifications

Unless otherwise specified elsewhere in this permit, a written test plan for any test required by this permit shall be submitted to the Illinois EPA for review at least 60 days prior to the testing pursuant to Section 39.5(7)(a) of the Act. The notification shall include at a minimum:

a. The name and identification of the affected unit(s);

b. The person(s) who will be performing sampling and analysis and their experience with similar tests;

c. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating parameters for the source and any control equipment will be determined;

d. The specific determination of emissions and operation which are intended to be made, including sampling and monitoring locations;

e. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods;

f. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification; and

g. Any proposed use of an alternative test method, with detailed justification.

8.6.3 Test Reports

Unless otherwise specified elsewhere in this permit, the results of any test required by this permit shall be submitted to the Illinois EPA within 60 days of completion of the testing. The test report shall include at a minimum [Section 39.5(7)(e)(i) of the Act]:

a. The name and identification of the affected unit(s);

b. The date and time of the sampling or measurements;

c. The date any analyses were performed;

d. The name of the company that performed the tests and/or analyses;

e. The test and analytical methodologies used;

f. The results of the tests including raw data, and/or analyses including sample calculations;

g. The operating conditions at the time of the sampling or measurements; and

h. The name of any relevant observers present including the testing company's representatives, any Illinois EPA or USEPA representatives, and the representatives of the source.

8.6.4 Reporting Addresses

a. The following addresses should be utilized for the submittal of reports, notifications, and renewals:

i. Illinois EPA - Air Compliance Section

Illinois Environmental Protection Agency
Bureau of Air
Compliance Section (MC 40)
P.O. Box 19276
Springfield, Illinois 62794-9276

ii. Illinois EPA - Air Regional Field Office

Illinois Environmental Protection Agency
Division of Air Pollution Control
5415 North University
Peoria, Illinois 61614

iii. Illinois EPA - Air Permit Section

Illinois Environmental Protection Agency
Division of Air Pollution Control
Permit Section (MC 11)
P.O. Box 19506
Springfield, Illinois 62794-9506

iv. USEPA Region 5 - Air Branch

USEPA (AE - 17J)
Air & Radiation Division
77 West Jackson Boulevard
Chicago, Illinois 60604

b. Unless otherwise specified in the particular provision of this permit, reports shall be sent to the Illinois

EPA - Air Compliance Section with a copy sent to the Illinois EPA - Air Regional Field Office.

8.7 Obligation to Comply with Title I Requirements

Any term, condition, or requirement identified in this permit by T1, T1R, or T1N is established or revised pursuant to 35 IAC Part 203 or 40 CFR 52.21 (“Title I provisions”) and incorporated into this permit pursuant to both Section 39.5 and Title I provisions. Notwithstanding the expiration date on the first page of this permit, the Title I conditions remain in effect pursuant to Title I provisions until the Illinois EPA deletes or revises them in accordance with Title I procedures.

9.0 STANDARD PERMIT CONDITIONS

9.1 Effect of Permit

9.1.1 The issuance of this permit does not release the Permittee from compliance with State and Federal regulations which are part of the Illinois State Implementation Plan, as well as with other applicable statutes and regulations of the United States or the State of Illinois or applicable ordinances, except as specifically stated in this permit and as allowed by law and rule [Section 39.5(7)(j)(iv) of the Act].

9.1.2 In particular, this permit does not alter or affect the following:

a. The provisions of Section 303 (emergency powers) of the CAA, including USEPA's authority under that Section;

b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

c. The applicable requirements of the acid rain program consistent with Section 408(a) of the CAA; and

d. The ability of USEPA to obtain information from a source pursuant to Section 114 (inspections, monitoring, and entry) of the CAA.

9.1.3 Notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

9.2 General Obligations of Permittee

9.2.1 Duty to Comply

The Permittee must comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the CAA and the Act, and is grounds for any or all of the following: enforcement action, permit termination, revocation and reissuance, modification, or

denial of a permit renewal application [Section 39.5(7)(o)(i) of the Act].

The Permittee shall meet applicable requirements that become effective during the permit term in a timely manner unless an alternate schedule for compliance with the applicable requirement is established.

9.2.2 Duty to Maintain Equipment

The Permittee shall maintain all equipment covered under this permit in such a manner that the performance or operation of such equipment shall not cause a violation of applicable requirements.

9.2.3 Duty to Cease Operation

No person shall cause, threaten or allow the continued operation of any emission unit during malfunction or breakdown of the emission unit or related air pollution control equipment if such operation would cause a violation of an applicable emission standard, regulatory requirement, ambient air quality standard or permit limitation unless such malfunction or breakdown is allowed by a permit condition [Section 39.5(6)(c) of the Act].

9.2.4 Disposal Operations

The source shall be operated in such a manner that the disposal of air contaminants collected by the equipment operations, or activities shall not cause a violation of the Act or regulations promulgated thereunder.

9.2.5 Duty to Pay Fees

The Permittee must pay fees to the Illinois EPA consistent with the fee schedule approved pursuant to Section 39.5(18) of the Act, and submit any information relevant thereto [Section 39.5(7)(o)(vi) of the Act]. The check should be payable to "Treasurer, State of Illinois" and sent to: Fiscal Services Section, Illinois Environmental Protection Agency, P.O. Box 19276, Springfield, Illinois, 62794-9276.

9.3 Obligation to Allow Illinois EPA Surveillance

Upon presentation of proper credentials and other documents, the Permittee shall allow the Illinois EPA, or an authorized representative to perform the following [Section 39.5(7)(a) and (p)(ii) of the Act and 415 ILCS 5/4]:

a. Enter upon the Permittee's premises where an actual or potential emission unit is located; where any regulated equipment, operation, or activity is located or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect during hours of operation any sources, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

d. Sample or monitor any substances or parameters at any location:

   i. At reasonable times, for the purposes of assuring permit compliance; or

   ii. As otherwise authorized by the CAA, or the Act.

e. Obtain and remove samples of any discharge or emission of pollutants authorized by this permit; and

f. Enter and utilize any photographic, recording, testing, monitoring, or other equipment for the purposes of preserving, testing, monitoring, or recording any activity, discharge or emission at the source authorized by this permit.

9.4 Obligation to Comply with Other Requirements

The issuance of this permit does not release the Permittee from applicable State and Federal laws and regulations, and applicable local ordinances addressing subjects other than air pollution control.

9.5 Liability

9.5.1 Title

This permit shall not be considered as in any manner affecting the title of the premises upon which the permitted source is located.

9.5.2 Liability of Permittee

This permit does not release the Permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the sources.

9.5.3 Structural Stability

This permit does not take into consideration or attest to the structural stability of any unit or part of the source.

9.5.4 Illinois EPA Liability

This permit in no manner implies or suggests that the Illinois EPA (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the source.

9.5.5 Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege [Section 39.5(7)(o)(iv) of the Act].

9.6 Recordkeeping

9.6.1 Control Equipment Maintenance Records

A maintenance record shall be kept on the premises for each item of air pollution control equipment. As a minimum, this record shall show the dates of performance and nature of preventative maintenance activities.

9.6.2 Records of Changes in Operation

A record shall be kept describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under this permit, and the emissions resulting from those changes [Section 39.5(12)(b)(iv) of the Act].

9.6.3 Retention of Records

a. Records of all monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit [Section 39.5(7)(e)(ii) of the Act].

b. Other records required by this permit shall be retained for a period of at least 5 years from the date of entry unless a longer period is specified by a

particular permit provision.

9.7 Annual Emissions Report

The Permittee shall submit an annual emissions report to the Illinois EPA, Compliance Section no later than May 1 of the following year, as required by 35 IAC Part 254.

9.8 Requirements for Compliance Certification

Pursuant to Section 39.5(7)(p)(v) of the Act, the Permittee shall submit annual compliance certifications. The compliance certifications shall be submitted no later than May 1 or more frequently as specified in the applicable requirements or by permit condition. The compliance certifications shall be submitted to the Air Compliance Section, Air Regional Field Office, and USEPA Region 5 – Air Branch. The addresses for the submittal of the compliance certifications are provided in Condition 8.6.4 of this permit.

a. The certification shall include the identification of each term or condition of this permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, both currently and over the reporting period consistent with the conditions of this permit.

b. All compliance certifications shall be submitted to USEPA Region 5 in Chicago as well as to the Illinois EPA.

c. All compliance reports required to be submitted shall include a certification in accordance with Condition 9.9.

9.9 Certification

Any document (including reports) required to be submitted by this permit shall contain a certification by a responsible official of the Permittee that meets the requirements of Section 39.5(5) of the Act [Section 39.5(7)(p)(i) of the Act]. An example Certification by a Responsible Official is included as an attachment to this permit.

9.10 Defense to Enforcement Actions

9.10.1 Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit [Section 39.5(7)(o)(ii) of the Act].

9.10.2 Emergency Provision

a. An emergency shall be an affirmative defense to an action brought for noncompliance with the technology-based emission limitations under this permit if the following conditions are met through properly signed, contemporaneous operating logs, or other relevant evidence:

i. An emergency occurred as provided in Section 39.5(7)(k) of the Act and the Permittee can identify the cause(s) of the emergency. Normally, an act of God such as lightning or flood is considered an emergency;

ii. The permitted source was at the time being properly operated;

iii. The Permittee submitted notice of the emergency to the Illinois EPA within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken; and

iv. During the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission limitations, standards, or regulations in this permit.

b. This provision is in addition to any emergency or upset provision contained in any applicable requirement. This provision does not relieve a Permittee of any reporting obligations under existing federal or state laws or regulations.

9.11 Permanent Shutdown

This permit only covers emission units and control equipment while physically present at the indicated source location(s). Unless this permit specifically provides for equipment relocation, this permit is void for the operation or activity of any item of equipment on the date it is removed from the permitted location(s) or permanently shut down. This permit expires if all equipment is removed from the permitted location(s), notwithstanding the expiration date specified on this permit.

9.12 Reopening and Reissuing Permit for Cause

9.12.1 Permit Actions

This permit may be modified, reopened, and reissued, for cause pursuant to Section 39.5(15) of the Act. The filing of a request by the Permittee for a permit modification, revocation, and reissuance, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition [Section 39.5(7)(o)(iii) of the Act].

9.12.2 Reopening and Revision

This permit must be reopened and revised if any of the following occur [Section 39.5(15)(a) of the Act]:

a. Additional requirements become applicable to the equipment covered by this permit and three or more years remain before expiration of this permit;

b. Additional requirements become applicable to an affected source for acid deposition under the acid rain program;

c. The Illinois EPA or USEPA determines that this permit contains a material mistake or inaccurate statement when establishing the emission standards or limitations, or other terms or conditions of this permit; and

d. The Illinois EPA or USEPA determines that this permit must be revised to ensure compliance with the applicable requirements of the Act.

9.12.3 Inaccurate Application

The Illinois EPA has issued this permit based upon the information submitted by the Permittee in the permit application. Any misinformation, false statement or misrepresentation in the application shall be grounds for revocation under Section 39.5(15)(b) of the Act.

9.12.4 Duty to Provide Information

The Permittee shall furnish to the Illinois EPA, within a reasonable time specified by the Illinois EPA any information that the Illinois EPA may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to the Illinois EPA copies of records required to be kept by this permit, or for information claimed to be confidential, the Permittee may furnish such records directly to USEPA along with a claim of confidentiality [Section 39.5(7)(o)(v) of the Act].

9.13 Severability Clause

The provisions of this permit are severable, and should any one or more be determined to be illegal or unenforceable, the validity of the other provisions shall not be affected. The rights and obligations of the Permittee shall be construed and enforced as if this permit did not contain the particular provisions held to be invalid and the applicable requirements underlying these provisions shall remain in force [Section 39.5(7)(i) of the Act].

9.14 Permit Expiration and Renewal

The right to operate terminates on the expiration date unless the Permittee has submitted a timely and complete renewal application. For a renewal to be timely it must be submitted no later than 9 and no sooner than 12 months prior to expiration. The equipment may continue to operate during the renewal period until final action is taken by the Illinois EPA, in accordance with the original permit conditions [Section 39.5(5)(l), (n), and (o) of the Act].

10.1 Attachment 1 - Example Certification by a Responsible Official

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____

Name: _____

Official Title: _____

Telephone No.: _____

Date Signed: _____

10.2 Attachment 2 - Guidance on Revising This Permit

The Permittee must submit an application to the Illinois EPA using the appropriate revision classification in accordance with Sections 39.5(13) and (14) of the Act and 35 IAC 270.302. Specifically, there are currently three classifications for revisions to a CAAPP permit. These are:

1. Administrative Permit Amendment;

2. Minor Permit Modification; and

3. Significant Permit Modification.

The Permittee must determine, request, and submit the necessary information to allow the Illinois EPA to use the appropriate procedure to revise the CAAPP permit. A brief explanation of each of these classifications follows.

1. Administrative Permit Amendment

- Corrects typographical errors;

- Identifies a change in the name, address, or phone number of any person identified in the permit, or provides a similar minor administrative change at the source;

- Requires more frequent monitoring or reporting by the Permittee;

- Allows for a change in ownership or operational control of the source where no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new Permittees has been submitted to the Illinois EPA. This shall be handled by completing form 272-CAAPP, REQUEST FOR OWNERSHIP CHANGE FOR CAAPP PERMIT; or

- Incorporates into the CAAPP permit a construction permit, provided the conditions of the construction permit meet the requirements for the issuance of CAAPP permits.

2. Minor Permit Modification

- Do not violate any applicable requirement;
- Do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit;
- Do not require a case-by-case determination of an emission limitation or other standard, or a source-specific determination of ambient impacts, or a visibility or increment analysis;
- Do not seek to establish or change a permit term or condition for which there is no corresponding underlying requirement and which avoids an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
    - A federally enforceable emissions cap assumed to avoid classification as a modification under any provision of Title I of the CAA; and
    - An alternative emissions limit approved pursuant to regulations promulgated under Section 112(i)(5) of the CAA.
- Are not modifications under any provision of Title I of the CAA;
- Are not required to be processed as a significant permit modification; and
- Modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches.

An application for a minor permit modification shall include the following:

- A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;
- The source’s suggested draft permit/conditions;

- Certification by a responsible official that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used; and

- Information as contained on form 271-CAAPP, MINOR PERMIT MODIFICATION FOR CAAPP PERMIT for the Illinois EPA to use to notify USEPA and affected States.

3. Significant Permit Modification

- Applications that do not qualify as either minor permit modifications or as administrative permit amendments;

- Applications requesting a significant change in existing monitoring permit terms or conditions;

- Applications requesting a relaxation of reporting or recordkeeping requirements; and

- Cases in which, in the judgment of the Illinois EPA, action on an application for modification would require decisions to be made on technically complex issues.

An application for a significant permit modification shall include the following:

- A detailed description of the proposed change(s), including all physical changes to equipment, changes in the method of operation, changes in emissions of each pollutant, and any new applicable requirements which will apply as a result of the proposed change. Note that the Permittee need only submit revised forms for equipment and operations that will be modified.

The Illinois EPA requires the information on the following appropriate forms to be submitted in accordance with the proper classification:

- Form 273-CAAPP, REQUEST FOR ADMINISTRATIVE PERMIT AMENDMENT FOR CAAPP PERMIT; or

- Form 271-CAAPP, MINOR PERMIT MODIFICATION FOR CAAPP PERMIT; or

- Form 200-CAAPP, APPLICATION FOR CAAPP PERMIT (for significant modification).

Application forms can be obtained from the Illinois EPA website at http://www.epa.state.il.us/air/forms.

Note that the request to revise the permit must be certified for truth, accuracy, and completeness by a responsible official.

Note that failure to submit the required information may require the Illinois EPA to deny the application. The Illinois EPA reserves the right to require that additional information be submitted as needed to evaluate or take final action on applications pursuant to Section 39.5(5)(g) of the Act and 35 IAC 270.305.

Illinois Environmental Protection Agency
Division Of Air Pollution Control -- Permit Section
P.O. Box 19506
Springfield, Illinois 62794-9506

Application For Construction Permit (For CAAPP Sources Only)	For Illinois EPA use only
	I.D. number:
	Permit number:
	Date received:

This form is to be used by CAAPP sources to supply information necessary to obtain a construction permit. Please attach other necessary information and completed CAAPP forms regarding this construction/modification project.

Source Information

1. Source name:		
2. Source street address:		
3. City:		4. Zip code:
5. Is the source located within city limits?		☐ Yes ☐ No
6. Township name:	7. County:	8. I.D. number:

Owner Information

9. Name:		
10. Address:		
11. City:	12. State:	13. Zip code:

Operator Information (if different from owner)

14. Name		
15. Address:		
16. City:	17. State:	18. Zip code:

Applicant Information

19. Who is the applicant? ☐ Owner ☐ Operator	20. All correspondence to: (check one) ☐ Owner ☐ Operator ☐ Source
21. Attention name and/or title for written correspondence:	
22. Technical contact person for application:	23. Contact person's telephone number:

This Agency is authorized to require and you must disclose this information under 415 ILCS 5/39. Failure to do so could result in the application being denied and penalties under 415 ILCS 5 et seq. It is not necessary to use this form in providing this information. This form has been approved by the forms management center.

Illinois Environmental Protection Agency
Division Of Air Pollution Control -- Permit Section
P.O. Box 19506
Springfield, Illinois 62794-9506

This Agency is authorized to require and you must disclose this information under 415 ILCS 5/39. Failure to do so could result in the application being denied and penalties under 415 ILCS 5 et seq. It is not necessary to use this form in providing this information. This form has been approved by the forms management center.

Summary Of Application Contents

24.	Does the application address whether the proposed project would constitute a new major source or major modification under each of the following programs: a) Non-attainment New Source Review – 35 IAC Part 203; b) Prevention of Significant Deterioration (PSD) – 40 CFR 52.21; c) Hazardous Air Pollutants: Regulations Governing Constructed or Reconstructed Major Sources – 40 CFR Part 63?	☐ Yes ☐ No
25.	Does the application identify and address all applicable emissions standards, including those found in the following: a) Board Emission Standards – 35 IAC Chapter I, Subtitle B; b) Federal New Source Performance Standards – 40 CFR Part 60; c) Federal Standards for Hazardous Air Pollutants – 40 CFR Parts 61 and 63?	☐ Yes ☐ No
26.	Does the application include a process flow diagram(s) showing all emission units and control equipment, and their relationship, for which a permit is being sought?	☐ Yes ☐ No
27.	Does the application include a complete process description for the emission units and control equipment for which a permit is being sought?	☐ Yes ☐ No
28.	Does the application include the information as contained in completed CAAPP forms for all appropriate emission units and air pollution control equipment, listing all applicable requirements and proposed exemptions from otherwise applicable requirements, and identifying and describing any outstanding legal actions by either the USEPA or the Illinois EPA? Note: The use of "APC" application forms is not appropriate for applications for CAAPP sources. CAAPP forms should be used to supply information.	☐ Yes ☐ No
29.	If the application contains TRADE SECRET information, has such information been properly marked and claimed, and have two separate copies of the application suitable for public inspection and notice been submitted, in accordance with applicable rules and regulations?	☐ Yes ☐ No ☐ Not Applicable, No TRADE SECRET information in this application

Note 1: Answering "No" to any of the above may result in the application being deemed incomplete.

Signature Block

This certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete.

30. I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in this application are true, accurate and complete. Authorized Signature:

BY:

_____	_____
AUTHORIZED SIGNATURE	TITLE OF SIGNATORY
_____	_____ / _____ / _____
TYPED OR PRINTED NAME OF SIGNATORY	DATE

Note 2: An operating permit for the construction/modification permitted in a construction permit must be obtained by applying for the appropriate revision to the source's CAAPP permit, if necessary.

10.4 Attachment 4 - Guidance on Renewing This Permit

Timeliness - Pursuant to Section 39.5(5)(n) of the Act and 35 IAC 270.301(d), a source must submit to the Illinois EPA a complete CAAPP application for the renewal of a CAAPP permit not later than 9 months before the date of permit expiration of the existing CAAPP permit in order for the submittal to be deemed timely. Note that the Illinois EPA typically sends out renewal notices approximately 18 months prior to the expiration of the CAAPP permit.

The CAAPP application must provide all of the following information in order for the renewal CAAPP application to be deemed complete by the Illinois EPA:

1. A completed renewal application form 200-CAAPP, APPLICATION FOR CAAPP PERMIT.

2. A completed compliance plan form 293-CAAPP, COMPLIANCE PLAN/SCHEDULE OF COMPLIANCE FOR CAAPP PERMIT.

3. A completed compliance certification form 296-CAAPP, COMPLIANCE CERTIFICATION, signed by the responsible official.

4. Any applicable requirements that became effective during the term of the permit and that were not included in the permit as a reopening or permit revision.

5. If this is the first time this permit is being renewed and this source has not yet addressed CAM, the application should contain the information on form 464-CAAPP, COMPLIANCE ASSURANCE MONITORING (CAM) PLAN.

6. Information addressing any outstanding transfer agreement pursuant to the ERMS.

7. a. If operations of an emission unit or group of emission units remain unchanged and are accurately depicted in previous submittals, the application may contain a letter signed by a responsible official that requests incorporation by reference of existing information previously submitted and on file with the Illinois EPA. This letter must also include a statement that information incorporated by reference is also being certified for truth and accuracy by the responsible

official's signing of the form 200-CAAPP, APPLICATION FOR CAAPP PERMIT and the form 296-CAAPP, COMPLIANCE CERTIFICATION. The boxes should be marked yes on form 200-CAAPP, APPLICATION FOR CAAPP PERMIT, as existing information is being incorporated by reference.

b. If portions of current operations are not as described in previous submittals, then in addition to the information above for operations that remain unchanged, the application must contain the necessary information on all changes, e.g., discussion of changes, new or revised CAAPP forms, and a revised fee form 292-CAAPP, FEE DETERMINATION FOR CAAPP PERMIT, if necessary.

8. Information about all off-permit changes that were not prohibited or addressed by the permit to occur without a permit revision and the information must be sufficient to identify all applicable requirements, including monitoring, recordkeeping, and reporting requirements, for such changes.

9. Information about all changes made under 40 CFR 70.4(b)(12)(i) and (ii) that require a 7-day notification prior to the change without requiring a permit revision.

The Illinois EPA will review all applications for completeness and timeliness. If the renewal application is deemed both timely and complete, the source shall continue to operate in accordance with the terms and conditions of its CAAPP permit until final action is taken on the renewal application.

Notwithstanding the completeness determination, the Illinois EPA may request additional information necessary to evaluate or take final action on the CAAPP renewal application. If such additional information affects your allowable emission limits, a revised form 292-CAAPP, FEE DETERMINATION FOR CAAPP PERMIT must be submitted with the requested information. The failure to submit to the Illinois EPA the requested information within the time frame specified by the Illinois EPA, may force the Illinois EPA to deny your CAAPP renewal application pursuant to Section 39.5 of the Act.

Application forms may be obtained from the Illinois EPA website at http://www.epa.state.il.us/air/forms.html.

If you have any questions regarding this matter, please contact a permit analyst at 217/782-2113.

Mail renewal applications to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Permit Section (MC 11)
P.O. Box 19506
Springfield, Illinois 62794-9506