DRAFT CAAPP PERMIT
September 6, 2007

217/782-2113

CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT

PERMITTEE:

Olin Corporation
Attn: Michael Redington, Manager, Utilities & Environmental
427 North Shamrock Street
East Alton, Illinois 62024-1197

I.D. No.: 119020AAG
Application No.: 96030015

Date Received: March 4, 1996
Date Issued: To be Determined
Expiration Date[1]: To be Determined

Operation of: Olin Corporation, Manufacture Brass Alloy Strip and Small Arms Ammunition
Source Location: 427 North Shamrock Street, East Alton, Madison County
Responsible Official: J. J. Haferkamp, Vice President, Olin Corporation

This permit is hereby granted to the above-designated Permittee to OPERATE a brass alloy strip and small arms ammunition manufacture plant, 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 Davidson at 217/782-2113.

Edwin C. Bakowski, P.E.
Acting Manager, Permit Section
Division of Air Pollution Control

ECB:MED:psj

cc: Illinois EPA, FOS, Region 3
CES
Lotus Notes

[1] Except as provided in Conditions 1.5 and 8.7 of this permit.

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1.0 INTRODUCTION

1.1 Source Identification

Olin Corporation
427 North Shamrock Street
East Alton, Illinois 62024-1197
618/258-5394

I.D. No.: 119020AAG
County: Madison
Standard Industrial Classification: 3341, Secondary Smelting & Refining Of Nonferrous Metals
3351, Rolling, drawing and extruding of copper based alloys
3482, Small Arms Ammunition

1.2 Owner/Parent Company

Olin Corporation
427 North Shamrock Street
East Alton, Illinois 62024-1197

1.3 Operator

Olin Corporation
427 North Shamrock Street
East Alton, Illinois 62024-1197

Michael Redington, Manager, Utilities & Environmental
618/258-5394

1.4 Source Description

Olin Brass, located at 427 North Shamrock Street, East Alton, in Madison County, produces more than 50 copper-based alloys which are utilized to make specialized sheet and strip products for a diverse array of industries. Worldwide markets for the high-performance copper-based alloy products include automotive, builder's hardware, microelectronics, communications, ammunition, and coinage. Major facilities at East Alton, Illinois include casting and rolling mills.

The process of manufacturing copper-based alloys begins after inspected raw materials are separated by alloy composition, compacted into bales and placed in melting furnaces. Most Olin alloys are cast using a direct-chill technique which produces multiple ingots. Strict quality control procedures are used to verify chemistry of each melt. To form the ingots, molten metal is poured, cooled and solidified under closely controlled conditions.

After casting is complete, the ingots are reduced from seven inches thick to less than one inch by multiple passes on a hot-rolling mill. Through a series of computer-controlled passes, Olin's cold-rolling

tandem mill further reduces the strip thickness to one-tenth of an inch. Other mills are used to reduce the strip thickness even further in order to meet the customer's specifications.

Olin's annealing equipment offers the high degree of versatility needed to meet precise customer metallurgical requirements. Strip thickness, alloy, final product specifications and other factors are considered in determining which of Olin's annealing processes (strip annealing or bell annealing) are used. A computer controlled system closely monitors and controls exact operating parameters throughout the annealing process to ensure that the final anneal achieves the customer's desired mechanical properties and surface finish requirements.

Following final anneal and cleaning, if necessary, a portion of the metal is stamped, slit or drawn into its final shape with equipment at East Alton before it is shipped to the customer. Some of the metal is also sent to the Winchester Division for use in the manufacture of ammunition.

Olin's Winchester division manufactures ammunition components and assembles the components to make small arms ammunition for worldwide markets. Winchester products include: centerfire ammunition (up to 50 caliber); shotshell ammunition and ammunition components (i.e., primers, shellcases, powder, shot, bullets, etc.).

The manufacture of ammunition can be broken down into four common segments; shellcase; source of ignition; propellant; and projectile.

Shellcases for centerfire ammunition, and other associated parts are fabricated from metal strip (brass or steel). Plastic tubes are also used in shotshell assembly.

Primer mix, the source of ignition, is manufactured and added to the shellcase. The primer is used to ignite the propellant. Sealants are used to ensure that the primer is waterproofed.

The propellant is then added to the shellcases in accordance with the ammunition specifications. The propellant is not manufactured at the source. For banks the end of the shellcase is crimped and sealed with a color coded lacquer to identify the charge.

The final step in the manufacture process is the assembly of the projectile into the loaded ammunition. Bullets are inserted into the shellcase, with a waterproofing compound used as a sealant. For shotshells, a wad is used to separate the projectile (shot) from the propellant.

As described in Sections 4 and 7, Olin utilizes a wide variety of particulate matter control devices on various processes; these include cyclones, baghouses, filters, mist eliminators and fume suppressants.

Note: This narrative description is for informational purposes only and is not enforceable.

1.5 Title I Conditions

As generally identified below, this CAAPP permit contains certain conditions for emission units at this source that address the applicability of permitting programs for the construction and modification of sources, which programs were established pursuant to Title I of the Clean Air Act (CAA) and regulations thereunder. These programs include PSD and MSSCAM, and are implemented by the Illinois EPA pursuant to Sections 9, 9.1, 39(a) and 39.5(7)(a) of the Illinois Environmental Protection Act (Act). These conditions continue in effect, notwithstanding the expiration date specified on the first page of this permit, as their authority derives from Titles I and V of the CAA, as well as Titles II and X of the Act. (See also Condition 8.7.)

a. This permit contains "Title I conditions" that reflect Title I requirements established in permits previously issued for this source, which conditions are specifically designated as "T1."

b. This permit contains Title I conditions that revise Title I requirements established in permits previously issued for this source, which conditions are specifically designated as "T1R."

c. This permit contains Title I conditions that are newly established in this CAAPP permit, which conditions are specifically designated as "T1N."

2.0 LIST OF ABBREVIATIONS AND ACRONYMS COMMONLY USED

ACMA	Alternative Compliance Market Account
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
ATU	Allotment Trading Unit
BAT	Best Available Technology
BACT	Best Available Control Technology
CAA	Clean Air Act [42 U.S.C. Section 7401 et seq.]
CAAPP	Clean Air Act Permit Program
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
cfm	Cubic Feet per Minute
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CPDS	Certified Product Data Sheet
ERMS	Emissions Reduction Market System
DC	Direct Chill
°F	Degrees Fahrenheit
Ft^3	Cubic Foot
Gal	Gallon
Gm	Gram
HAP	Hazardous Air Pollutant
HF	Holding Furnace
Hp	horse power
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
°K	Degrees Kelvin
Kg	kilogram
kg/l	kilogram per liter
KW	Kilowatts
lbs	Pound
lb/gal	pound per gallon
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
mmcf	million cubic feet
MF	Melting Furnace
Mgal	One Thousand (1,000) Gallons
MG	Megagram (1,000,000 grams)
M	Meter
mmBtu	million British thermal units
mmBtu/hr	million British thermal units per hour
Mo	Month
MRF	Material Reclamation Facility
MSDS	Material Safety Data Sheets

MSSCAM	Major Stationary Sources Construction and Modification (35 IAC 203, New Source Review for non-attainment areas)
MW	Mega Watts(1,000,000 Watts)
N/A	Not Applicable
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standards
Pb	Lead
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
$PM_{2.5}$	Particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 microns as measured by applicable test or monitoring methods
ppm	parts per million
PSD	Prevention of Significant Deterioration (40 CFR 52.21, New Source Review for attainment areas)
PSD	Prevention of Significant Deterioration
psia	pounds per square inch absolute
Ref.	Reference
RMP	Risk Management Plan
Scf	standard cubic foot
SO_2	Sulfur Dioxide
T	Ton
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
VOC	Volatile Organic Compounds
VOL	Volatile Organic Liquid
VOM	Volatile Organic Material
Wt.	Weight
Yr	Year

3.0 CONDITIONS FOR 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:

Brass Fabricating:	
1	4000# Salem Annealing Furnace (AF-3C)
1	Fabricating Hot Water Heater #1 (HH-1)
1	Fabricating Hot Water Heater #2 (HH-2)

Brass Mill:	
1	#8 Strip Anneal Annealing Furnace (SA-8)
1	Brass Mill Core Cutter (CC-1)
5	#12 Bell Anneal Furnaces (BAF-12)
6	#7 Bell Anneal Furnaces (BAF-7)
4	#13 Bell Anneal Furnaces (BAF-13)

4 Casting Plant: Knife Grinding and Core Drillers (G-1 to G-4)

1 Plant 3: Core Cutter (P3CC-1)

1 Plant 3: #3 Rolling/Cladding Mill - Brushing Unit (B-10)

1 Shot Mfg.: Lead Shot Melting – Dross Cake Melting Pot (DM-1)

1 Zone 4: Westerner Club Gasoline Tank (AST-11)

2 Metallic Manufacturing: Building 7 Tumblers – Tumblers (TM-5 & TM-6)

1 Shot Manufacturing: Lead Shot Melting – Dros Cake Melt Pot Furnace (DMF-1)

1 Zone 4 Operations: Primer Explosives Mix Tank (MT-3)

1 Material Reclaim Facility; Stage 3 Hammermill; Caustic Tank (3CT)

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:

1 #2 Storeroom: Sulfuric Acid Storage Tank (WAST-1)

Brass Fabricating:

2	Hand Dip Tanks (T-1 and T-2)
12	Baird Barrels; Finishing (FBB-1 thru FBB-12)
2	4000# Rockwell Pickling Tanks (AT-1C & AT-2C)
1	Nickel Plating Line (NP-1)
1	4000# Salem Pickler (AT-4)
6	Baird Barrel (Cupping) (BB-1C thru BB-6C)

Brass Mill:

2	#6 Strip Anneal Cleaning Tanks (CT-12 & CT-13)
2	#1 Cleaning Line (CT-1 & CT-2)
2	#6 Cleaning Line (CT-5 & CT-6)
1	#8 Cleaning Line (CT-16)
2	Sulfuric Acid Storage Tanks (BAST-4 & BAST-5)
2	#3 Strip Anneal Cleaning Tanks (CT-8 & CT-9)
1	#9 Strip Anneal Furnace Cleaning (9FC-1)
1	#4 Strip Anneal Cleaning Tanks (CT-10)
1	#5 Strip Anneal Cleaning Tank (CT-11)
2	#7 Strip Anneal Cleaning Tanks (CT-14 & CT-15)

Casting Plant:

2	Coil Drilling Stations (TS-1 & TS-2)
1	Slug Melter (SM-1)
1	#2 Coil Miller System; Decast (DC-1)
1	Hot Mill System; Scrap Dump (SD-1)
1	#2 Coil Miller System; Uncoiler (UC-1)
1	#2 Coil Miller System; Flattener (FL-1)
1	Hot Mill System; Shear (SHR-1)

1	Machine Shop; Chrome Plating Activation Tank (AT-1)

1	Zone 6 Winchester; Waste Water Treatment (WWTF-1)

Metallic Manufacturing:

42	Baird barrel (MBB-1 to MBB-42)
1	#1 Rockwell; Acid Pickling Tank (AT-2)
3	Baird Barrels; Primer (BB-50 to BB-52)
2	#7 & #8 Rockwell; Acid Pickling Tanks (AT-3 & AT-4)
1	#9 & #10 Rockwell; Acid Pickling Tank (AT-5)
1	#2 Rockwell; Acid Pickling Tank (AT-1)

Plant 3

1	BARCO; Acid Cleaning Line (CT-7 & RT-2)
1	Plant 3 Sulfuric Acid Tank (P3AST-1)
1	Brush Degreaser (BD-1)
1	No. 26 Line Welder (WD-26)
1	New BARCO; Degrease Cleaning Line (CT-6 & RT-1)

Primer Manufacturing:

6	Cup Presses (CP-1 thru CP-6)
6	Cup Presses (CP-7 thru CP-12)
1	50 Caliber Primer Sealant Filter System (50F-1 & 50F-2)
3	108 Primer Cup Presses (CP-13 thru CP-15)

3	Wad Tumbling; Wad Hoppers (WH-1 thru WH-3)
3	Wad Tumbling; Wad Gauging (WG-1 thru WG-3)
1	Zone 17 Wastewater Plant; Sulfuric Acid Tank (ST-3)

Zone 4 Operations:

1	T-400 Scrap Handling System 3; Overlay Lines (SHS-3)
3	Resin Handling System; Storage Silos (SS-1 to SS-3)
4	T-400 Straight Line Loaders-Header/Spin Seal (SLLH-1 thru SLLH-4)
1	Primer Explosives: T-242 Sump Kill Operation - Waste Water Storage (SKO-1)
10	T-400 Scrap Handling System 5; Dial Loaders - Skivers (SHS-4)
5	Baird barrels (BB-44 to BB-48)
10	T-400 Dial Loaders; Skivers (DLS-1 thru DLS-10)
1	T-400 Scrap Handling System 4: Punch (SHS-4)
4	T-400 Straight Line Loaders; Skivers (SLLS-1 to SLLS-4)
9	PIAB Powder Transfer Operations (PIAB-1 to PIAB-9)
1	T-400 Scrap Handling System 2; Straight Line Loaders; Header/Skivers (SHS-2)
1	T-400 Scrap Handling System 1; Header, Spin Seal (SHS-1)
2	T-400 Overlay Lines (OL-1 & OL-2)
10	T-400 Dial Loaders – Punch (DLPP-1 to DLPP-10)
1	Canister Powder Line; Powder Handling (CPL-1)
3	T-400 Dial Loaders – Crimp Sealant (CS-1 to CS-3)
1	T-500 Sulfuric Acid Tank (AST-6)
1	Primer Explosives; Sulfonation Tank (T-1) (ST-1)
1	T-500 Pneum-A-Vac; Powder Handling System (PV-1)

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)].

Furnaces used for melting metals, other than beryllium, with a brim full capacity of less than 450 cubic inches by volume [35 IAC 201.210(a)(6)].

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)].

Storage tanks of any size containing virgin or re-refined distillate oil, hydrocarbon condensate from natural gas pipeline or storage systems, lubricating oil, or residual fuel oils [35 IAC 201.210(a)(11)].

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)].

Loading and unloading systems for railcars, tank trucks, or watercraft that handle only the following liquid materials, provided an organic solvent has not been mixed with such materials: soaps, detergents, surfactants, lubricating oils, waxes, glycerin, vegetable oils, greases, animal fats, sweetener, corn syrup, aqueous salt solutions, or aqueous caustic solutions [35 IAC 201.210(a)(18)].

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 (See Condition 5.3.2), the Permittee shall comply with the following requirements, as applicable:

3.2.1 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 (see Attachment 2) and 35 IAC Part 266. 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.

3.2.2 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 219.301, which requires that organic material emissions not exceed 8.0 pounds per hour or, if no odor nuisance exists, do not qualify as photochemically reactive material as defined in 35 IAC 211.4690.

3.2.3 For each open burning activity, the Permittee shall comply with 35 IAC Part 237, including the requirement to obtain a permit for open burning in accordance with 35 IAC 237.201, if necessary.

3.2.4 For each emission unit using sulfuric acid, with the exception of fuel combustion emission units, the Permittee shall comply with the applicable requirements of 35 IAC 214.303. Specifically, 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: 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).

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

3.2.6 For each storage tank that has a storage capacity greater than 946 liters (250 gallons) and, if no odor nuisance exists, that stores an organic material with a vapor pressure exceeding 2.5 psia at 70°F, the Permittee shall comply with the applicable requirements of 35 IAC 219.122, which requires use of a permanent submerged loading pipe, submerged fill, or a vapor recovery system.

3.2.7 For each emission unit required to be included in determining applicability of 35 IAC 219 Subpart TT, total VOM emissions from

insignificant activities (including storage and handling of formulations) in conjunction with the applicable emission units in Section 7.6 of this permit shall not equal or exceed 25 tons/yr.

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

Unit 01 – Casting Operations

Emission Unit	Description	Date Constructed or Modified	Emission Control Equipment
Casting Units	#1 D.C. Casting units (MF-11 to MF-15 & HF-3)	Modification 1998	Cyclone (MC-3), American air filter #2 Baghouse (BH-4)
	#4 D.C. Casting units (MF-17 to MF-21 & HF-5)	Modification 1998	
	#1 Ascast (Ascast furnace) (ASC-1)	Modification 07/2005	
	#2 Ascast (New Ascast furnace) (ASC-2)	Modification 01/2005	
	#2 D.C. Casting units (MF-1 to MF-5 & HF-1)	Modification 1998	Cyclone (MC-1), Wheelabrator #1 Baghouse (BH-1)
	#3 D.C. Casting units (MF-6 to MF-10 & HF-2)	Modification 1998	
	#5 D.C. Casting units ((MF-22 to MF-26 & HF-6)	Modification 1998	Cyclone (MC-2), Lear-Siegler #3 Baghouse (BH-5)
	#1 Horizontal (Technica-Guss) Caster[2] (MF-27 & HF-7)	1982 Modified 2006	Carborundum Baghouse (BH-3)
	#2 Horizontal (Wertli) Casting Unit[2] (MF-16 & HF-8)	1982 Modified 2006	
	Metals Research Laboratory (MRL) Furnace (MF-30)	2004	Spark Arrester, MRL Baghouse (BH-8)
Aerofall Mill & Feed Hopper	Aerofall Mill (AM-1,)	1976	Custom System Baghouse (BH-7)
	Aerofall Mill Feed Bin, Conveyor and Hopper (FSB-1, VF-1, & FH-1)		Pangborn Baghouse (BH-2)
Furnace Building Operations	1F Mix Muller (MM-3)	1983 Modified 2005	Cartridge Filter System (CF-1) Modified 2005
	Low Profile Turbine Mixer (LP-1)		
	Induction Form Stations 1 & 2 (IF-1 & IF-2)	1983 Modified 2005	
Abrasive cleaner	Abrasive cleaner (ABRC-1)	1975	Cyclone (ACCR-1) & Baghouse (ACBH-1)
Charcoal Burners	Charcoal burners (CB-1 thru CB-12), each 1.04 mmBtu/hr Charcoal fired	Modified after 1972	None

Unit 02 – Brass Operations

Description	Emission Control Equipment	Date Constructed/ Last Modified
Slab Heating Furnaces		
#1 Slab Furnace (SF-1)	None	Prior 1972
#2 Slab Furnace (SF-2)	None	1979
#3 Slab Furnace (SF-3)	None	1999
Hot Mill (HM-1)	None	Prior 1972/1998
Surface Milling Operations		
#2 Coil Miller (CM-1)	Skimmer (SK-1) and Collector (GS-4)	1973/2000
#3 Coil Miller (CM-2)	Skimmer (SK-2) and Baffled Settling Chamber (BSC-1)	1977/1998
Polygage Miller (RM-25) And Skive Line	Cyclone (CYC-1); and Drop-out Box (DOB-1); Moisture Separator (MS-1)	1986/1988
#1 Horizontal Caster Inline Miller (SM-2)	Chip Collector (SK-4)	1982
Solution Rolling Mills		
Old Tandem Mill (RM-1)	None	Prior 1972
New Tandem Mill (RM-7)	Mist Eliminator (FE-6)	1978/1999
4-Stand Tandem Mill (Mill 4)	Mist Eliminator (OME-4)	1993
#5 Rolling Mill (RM-2)	Mist Eliminator (FE-1)	Prior 1972/1995
#20 Rolling Mill (RM-6)	Mist Eliminator (FE-5)	1976/1999
Mineral Oil Rolling Mills		
#6 Rolling Mill (RM-9)	Mist Eliminator (FE-8)	1976/1995
#9 Rolling Mill (RM-3)	Mist Eliminator (FE-2)	Prior 1972/1994
#18 Rolling Mill (RM-4)	Mist Eliminator (FE-3)	Prior 1972/1999
#19 Rolling Mill (RM-5)	Mist Eliminator (FE-4)	1974/1999
#23 Rolling Mill (RM-8)	Mist Eliminator (FE-7)	1984/1995
#24 Rolling Mill (Mill-24)	Mist Eliminator (OME-24)	1988/1995
#29 Rolling Mill (Mill-29)	Mist Eliminator (OME-29)	2001
#34 Rolling Mill (Mill-28)	Mist Eliminator (OMC-28)	1988
Bell Anneals		
#7 Bell Anneal (BA-7)	None	Prior 1972/1999
#9 Bell Anneal (BA-9)	None	1984/2003
#12 Bell Anneal (BA-12)	None	1983/2002
#31 Bell Anneal (BA-31)	None	2000/2003
#11 Bell Anneal (BA-11)	None	1984
#13 Bell Anneal (BA-13)	None	1993/1999
Strip Anneals		
#3 Strip Anneal (SA-3)	None	Prior 1972
#4 Strip Anneal (SA-4)	None	Prior 1972/2003
#5 Strip Anneal (SA-5)	None	Prior 1972
#6 Strip Anneal (SA-6)	None	Prior 1972
#7 Strip Anneal (SA-7)	None	1976

Description	Emission Control Equipment	Date Constructed/ Last Modified
Bonding Mills		
#35 Rolling /Clad Bonding Mill (#35 Mill) (RCM-3)	3-Stage Filter System (SFS-3)	1985/1988
Posit Bond Bonding Mill (BM-2)	Filters (F-1 & F-2)	Prior 1972
Brushing Units		
#1 Posit Bond Brush Line (BM-1)	Rotoclone (RC-1)	1981
#2 Posit Bond Brush Line (BM-2)	Drop-out Box (PBDOB-1) & Baghouse (PBBH-1)	2002
Other Brass Mill Operations		
Hot Dip Tin Line (HD-1)	Fume Scrubber (SCRUB-1)	1987
#9 Cleaning Line (CT-17)	Fume Scrubber (FS-2)	1993

Unit 03 - Ammunition Operations

Shot Tower Operations

Description	Emission Control Equipment	Date Constructed
Lead Shot Manufacturing		
Lead Shot Melt Kettles (LK-1 to LK-3)	Baghouse (STBH-1)	Prior 1972
Shot Drying and Polishing	Rotoclone RC-2	1976
Drier (D-1 to D-3)		
Drier Pots (DP-1 to DP-6)		
Polishers (P-1 to P-4)		
Scrap Elevator Pit (SP-1)		
Lower Lead Billet Melt Kettle (LK-4)	None	Prior 1972
Lead Billet Holding Kettle (LK-6)	None	1982
Extrusion Press Tumblers (EPT-1 to EPT-4)	None	Prior 1972
Buckshot Tumbling System (T-1 & T-2)	Baghouse (TBH-2)	1980
Lead Pump Chip-Out (LPC-1)		1991
Central Vacuum System (CVS-1)	Cyclone Separator (CS-1) & Baghouse (BS-1)	1976
Other Ammunition Operations		
50 Caliber Bead Blaster (BB-1)	Cyclone (CYC-1) & Baghouse (BH-1)	July 1995
Wad Tumblers (WTB-1, 2, & 3)	Rotoclones (WR-1, 2 & 3)	Prior 1972
Manurhin Powder Handling System (B-1 thru B-4)	Wet Separator (WS-1) & Bag Separator (BS-2)	1980
Nitration Tank (T-2)	None	Prior 1972
Spent Acid Storage Tank (T-3)	None	1974
Building 7 Cobmeal Collection System (CCS-1)	Filters (CCF-1 & CCF-2)	1999
MRF Rotary Destruct-System Retort (RDR-1)**	Retort Destruct Dust Collector Filter (RDDC-1)	1997
Stage I Hammermill (HM-1)	Hammermill Dust Collector (HMDC-1)	February 2003
Stage II Hammermill (HM-2)		Modified 2006
Stage III Hammermill (HM-3)		
Olin Propellant Treatment Process (OPTP-1)	None	2000
Shotshell Cutoff Firing Machine (SSCOFM-1)	2-Stage Filter	2002

Unit 04 - Subpart F Sources

Description	Emission Control Equipment	Date Constructed
50 Caliber Cappers, capping sealant (50CA-1 to 50CA-3)	None	1983 50CA-3 2006
50 Caliber Cappers, mouth waterproofing (50CA-1 to 50CA-3)	None	1983 50CA-3 2006
50 Caliber Tip I.D. (50TIP-1 & 50TIP-2)	None	1983
50 Caliber Blank Sealant (50BS-1)	None	1983
5.56 Penetrator Line, Tip I.D. (PE-1)	None	1984
Cappers (CA-1 thru CA-49) - capping sealant/mouth waterproofing	None	Prior 1972 CA-42 to CA-45 2006
Proof Load Line, (PL-2)	None	Prior 1972
T-500 Blank Sealant Line (BSL-1)	None	1984
Manurhin Case Mouth Sealant Line (CSML-1)	None	1999
SRTA Coating Operation	None	2005

Unit 5 – Cold Cleaning/Degreasing

Description	Emission Control Equipment	Date Constructed
Posit Bond Brush Cleaner (PBBC-1)	None	May 1996 Modified August 1999

Unit 06 - Other VOM Emission Units

Description	Emission Control Equipment	Date Constructed
108 Primer Sealing Line (PS-8)	None	1985
209 Battery Cup (BC-1)	None	Prior 1972
Centerfire Primer Sealing Line (PS-1 to PS-6)	None	Prior 1972
50 Caliber Primer Sealing Line (PS-7)	None	1983
Ejection Cartridge Sealing Line (EC-1)	None	Prior 1972
Gauge & Weigh Sealing Lines (GW-1 to GW-16)	None	1995 Added GW-14 thru GW-16 2007
Bridgewire Primer Sealing Line (Post)	None	1955
Bridgewire Primer Sealing Line (Foil)	None	1995
Strip Lubrication, Drip-On Oil	None	Prior 1972
Strip Lubrication, Pre-Anneal Lubricant	None	Prior 1972
Strip Lubrication, Anti-Fretting Lubricant	None	1994
Zone 4 Tumblers (TM-1 to TM-3)	None	1995
Fabricating Stamping Operations (SO-1 to SO-12)		
60 Ton Minster Press (SO-1)	None	1981
90 Ton Minster Press (SO-2)	None	1990
100 Ton Minster Press (SO-3)	None	1981
150 Ton Minster Press (SO-4)	None	1979 (est.)
180 Ton Minster Press (SO-5)	None	1999
200 Ton Minster Press (SO-6)	None	1986
300 Ton Minster Press (SO-7)	None	1997
100 Ton Bliss Press (SO-8)	None	1994
200 Ton Bliss Press (1) (SO-9)	None	prior to 1972
200 Ton Bliss Press (2) (SO-10)	None	1989
Model 675 Bliss Press (SO-11)	None	prior to 1972
800 Ton Aida Press (SO-12)	None	1994
Glycol Preheat System (GT-1)	None	prior to 1972
Posit Bond Brushing Machines – Cleaning Tanks (PBCT-1 * PBCT-2)	None	PBCT-1 1972 PBCT-2 1999
Cleaning Solvents	None	--
BTA in Water Operations (BTA-1 to BTA-16)	None	1990 (est.)

Unit 07 - Chrome Plating Line

Description	Emission Control Equipment	Date Constructed
Chrome Plating Tanks (PT-1, PT-2 & PT-3)	None (Chemical Fume Suppressant containing a wetting agent is used to achieve compliance)	Nov. 1982

Unit 08 - Utility Operations

Description	Emission Control Equipment	Date Constructed
Propane plant vaporizer flare (FL-1), 145 mmBtu/hr Propane gas fired	None	1992
2 Limestone silos (S-1,S-2)	Filters (FF-1, FF-2)	Prior 1972
Package Boilers: Cleaver Brooks Boilers (B-1 thru B-6) 32.66 mmBtu/hr each	None	B-1 thru B-5 in 1982 B-6 in 1995

Unit 09 - Gasoline Tanks

Description	Emission Control Equipment	Date Constructed
Zone 17 Gasoline Tank (AST-15); 500 gallons	None	01/1961
Zone 17 Onan Gasoline Tank (AST-16); 525 Gallons	None	01/1995
Zone 2 Gasoline Tank (AST-5); 500 Gallons	None	12/1992
Zone 7 Gasoline Tank (AST-2); 500 Gallons	None	11/1993

Unit 10 - Fugitive emissions

Description	Emission Control Equipment	Date Constructed
Vehicular Mile Traveled (VMT) on Roads	None	
Material Storage Piles	None	
Contact Cooling Towers	None	
Casting Fugitives	None	

5.0 OVERALL SOURCE CONDITIONS

5.1 Applicability of Clean Air Act Permit Program (CAAPP)

This permit is issued based on the source requiring a CAAPP permit as a major source of PM_{10}, $PM_{2.5}$, nitrogen oxides (NO_x), volatile organic material (VOM) and carbon monoxide (CO) emissions.

5.2 Area Designation

This permit is issued based on the source being located in an area that, as of the date of permit issuance, is designated nonattainment for the National Ambient Air Quality Standards for ozone (moderate nonattainment) and/or $PM_{2.5}$ and attainment or unclassifiable for all other criteria pollutants (CO, lead, NO_x, PM_{10}, and SO_2).

5.3 Source-Wide Applicable Provisions and Regulations

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

5.3.2 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.

b. Pursuant to 35 IAC 212.123(a), 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, except as allowed by 35 IAC 212.123(b) and 212.124.

5.3.3 Fugitive Particulate Matter

The permit is issued based upon the source being both an applicable operation (i.e., manufacturing) and being located in an area listed in 35 IAC 212.302(a) (i.e., Madison county – Wood River township). The Permittee shall comply with the applicable fugitive particulate matter requirements of 35 IAC Sections 212.304 through 212.310 and 212.312. These requirements include but are not limited to the following: [35 IAC 212.302(a)]

a. Traffic Areas: All normal traffic pattern roads and parking facilities which are located on mining or manufacturing property shall be paved or treated with water, oils or chemical dust suppressants. All paved areas

shall be cleaned on a regular basis. All areas treated with water, oils or chemical dust suppressants shall have the treatment applied on a regular basis, as needed, in accordance with the operating program required by Conditions 5.3.3(d) through (g) (see also 35 IAC 212.309, 212.310 and 212.312) [35 IAC 212.306].

b. Materials Collected by Pollution Control Equipment: All unloading and transporting operations of materials collected by pollution control equipment shall be enclosed or shall utilize spraying, pelletizing, screw conveying or other equivalent methods [35 IAC 212.307].

c. Spraying or Choke-Feeding Required: 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].

d. Operating Program: The emission units described in Condition 5.3.3 and 35 IAC 212.304 through 212.308 and 212.316 shall be operated under the provisions of an operating program, consistent with the requirements set forth in 35 IAC 212.310 and 212.312, and prepared by the owner or operator and submitted to the IEPA for its review. Such operating program shall be designed to significantly reduce fugitive particulate matter [35 IAC 212.309].

e. Minimum Operating Program: Pursuant to 35 IAC 212.310, at a minimum the operating program shall include the following:

   i. The name and address of the source [35 IAC 212.310(a)];

   ii. The name and address of the owner or operator responsible for execution of the operating program [35 IAC 212.310(b)];

   iii. A map or diagram of the source showing approximate locations of storage piles, conveyor loading operations, normal traffic pattern access areas surrounding storage piles and all normal traffic patterns within the source [35 IAC 212.310(c)];

   iv. Location of unloading and transporting operations with pollution control equipment [35 IAC 212.310(d)];

   v. A detailed description of the best management practices utilized to achieve compliance with this

Subpart, including an engineering specification of particulate collection equipment, application systems for water, oil, chemicals and dust suppressants utilized and equivalent methods utilized [35 IAC 212.310(e)];

vi. Estimated frequency of application of dust suppressants by location of materials [35 IAC 212.310(f)]; and

vii. Such other information as may be necessary to facilitate the Illinois EPA's review of the operating program [35 IAC 212.310(g)].

f. Amendment to Operating Program: The operating program shall be amended from time to time by the owner or operator so that the operating program is current. Such amendments shall be consistent with Condition 2(c)(v) (see also 35 IAC Part 212 Subpart K) and shall be submitted to the Illinois EPA for its review [35 IAC 212.312].

g. Particulate Collection Equipment: If particulate collection equipment is operated pursuant to 35 IAC 212.304 through 212.310 and 212.312, emissions from such equipment shall not exceed 68 mg/dscm (0.03 gr/dscf). [35 IAC 212.213]

Additional requirements have been included in Section 7, pursuant to the above.

5.3.4 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.

5.3.5 Risk Management Plan (RMP)

Should this stationary source, as defined in 40 CFR 68.3, become subject to the federal regulations for Chemical Accident Prevention in 40 CFR Part 68, then the owner or operator shall

submit the items below. This condition is imposed in this permit pursuant to 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 RMP, as part of the annual compliance certification required by Condition 9.8.

5.3.6 Future Emission Standards

a. Should this stationary source become subject to a new or revised regulation under 40 CFR Parts 60, 61, 62, or 63, or 35 IAC Subtitle B 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 Condition 9.8. This permit may also have to be revised or reopened to address such new or revised regulations (see Condition 9.12.2).

b. This permit and the terms and conditions herein do not affect the Permittee’s past and/or continuing obligation with respect to statutory or regulatory requirements governing major source construction or modification under Title I of the CAA

5.3.7 Episode Action Plan

a. Pursuant to 35 IAC 244.141, 244.142, and 244.143, 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 and is incorporated by reference into this permit.

b. The Permittee shall immediately implement the appropriate steps described in this plan should an air pollution alert or emergency be declared by the Director of the Illinois EPA or his or her designated representative.

c. If an operational change occurs at the source which invalidates the plan, a revised plan shall be submitted to the Illinois EPA for review within 30 days of the change, pursuant to 35 IAC 244.143(d). Such plans shall be further revised if disapproved by the Illinois EPA.

5.4 Source-Wide Non-Applicability of Regulations of Concern

5.4.1 This source is not subject to 40 CFR Part 61, Subpart C: National Emission Standard for Beryllium , because the emission units at the source do not meet the applicability criteria in 40 CFR 61.30 (See Condition 5.5.1).

Specifically, the foundry operations at the source (See Section 7 of this permit) do not utilize alloys which contain beryllium at more than 0.1 percent beryllium by weight.

Further, the machining shop operations (See Section 7 of this permit) at the source do not process beryllium, beryllium oxides, or any alloy when such alloy contains more than 5 percent beryllium by weight [40 CFR 61.30(b)].

Foundry means a facility engaged in the melting or casting of beryllium metal or alloy [40 CFR 61.31(f)].

Machine shop means a facility performing cutting, grinding, turning, honing, milling, deburring, lapping, electrochemical machining, etching, or other similar operations [40 CFR 61.31(d)].

Beryllium alloy means any metal to which beryllium has been added in order to increase its beryllium content and which contains more than 0.1 percent beryllium by weight [40 CFR 61.31(j)].

5.4.2 This source is not subject to 40 CFR Part 63, Subpart MMMM, National Emission Standards for Hazardous Air Pollutants: Miscellaneous Metal Parts and Products Surface Coating Operations because the source is not a major source of HAP emissions (See Conditions 5.6.2 and 5.6.3).

5.4.3 This source is not subject to 40 CFR Part 63, Subpart SSSS, National Emission Standards for Hazardous Air Pollutants: Metal Coil Surface Coating Operations because the source is not a major source of HAP emissions (See Conditions 5.6.2 and 5.6.3) and the materials applied in the strip lubrication operation (See Section 7.6) are not considered to be a coating as defined in 40 CFR 63.5110, i.e., “Decorative, protective, or functional materials that consist only of solvents, protective oils, acids, bases, or any combination of these substances are not considered coatings for the purposes of this subpart”.

5.4.4 This source is not subject to 40 CFR Part 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants: Industrial, Commercial, and Institutional Boilers and Process Heaters because the source is not a major source of HAP emissions (See Conditions 5.6.2 and 5.6.3).

5.4.5 This source is not subject to 40 CFR Part 63, Subpart FFFFFF, National Emission Standards for Hazardous Air Pollutants for

Secondary Copper Smelting Area Sources because the source is not a secondary copper smelter as defined in 40 CFR 63.11158.

5.4.6 The storage piles, along with associated conveyor loading operations to the piles and the normal traffic pattern access areas surrounding the piles, are not subject to 35 IAC 212.304 through 212.306 because uncontrolled emissions of fugitive particulate matter from all storage piles at the source are less than 50 tons/year [35 IAC 212.304].

5.4.7 Emissions units at this source are not subject to 35 IAC 212.316 and 212.324 because the source does not meet the applicability criteria in 35 IAC 212.316(a) and 212.324(a), respectively [35 IAC 212.316 and 212.324].

5.4.8 Emissions units at this source are not subject to 35 IAC Part 212 Subpart U because the source does not meet the applicability criteria in 35 IAC 212.700 [35 IAC 212.316].

5.4.9 The source is not subject to control requirements specified in 35 IAC 219 Subpart TT, because emissions of VOM from the affected emission units (as defined by Condition 7.6.3) as a group are limited to less than 100 tons per calendar year in Condition 7.6 [35 IAC 219.980(a)].

5.5 Source-Wide Control Requirements 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:

5.5.1 Avoidance of Applicability of 40 CFR Part 61, Subpart C: National Emission Standard for Beryllium

Pursuant to Condition 5.4.1, the Permittee is prohibited from the following:

a. Melting or casting of beryllium metal or alloy in the foundry operations at the source, as described in Section 7 of this permit and as defined in 40 CFR Part 61, Subpart C: National Emission Standard for Beryllium, which contain beryllium at more than 0.1 percent beryllium by weight.

b. Machining shop operations at the source, as described in Section 7 of this permit and as defined in 40 CFR Part 61, Subpart C: National Emission Standard for Beryllium, shall not process beryllium, beryllium oxides, or any alloy when such alloy contains more than 5 percent beryllium by weight.

5.6 Source-Wide Production and Emission Limitations

5.6.1 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 5.6.1) are set for the purpose of establishing fees and are not federally enforceable (see Section 39.5(18) of the Act).

Permitted Emissions of Regulated Pollutants

Pollutant	Tons/Year
Volatile Organic Material (VOM)	134.51
Sulfur Dioxide (SO_2)	27.77
Particulate Matter (PM)	266.31
Nitrogen Oxides (NO_x)	192.89
HAP, not included in VOM or PM	24.00
Total	645.47

5.6.2 Emissions of Hazardous Air Pollutants

The emissions of HAPs from the source shall be less than 10 tons/year for each individual HAP and 25 tons/year for all HAPs combined. 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). This condition is being imposed so that the source is not a major source of HAP emissions and the requirements of the following do not apply to the source (See Conditions 5.4.1 through 5.4.5, and 5.6.3):

a. 40 CFR 63, Subpart MMMM: National Emission Standards for Hazardous Air Pollutants: Miscellaneous Metal Parts and Products Surface Coating Operations

b. 40 CFR 63, Subpart SSSS: National Emission Standards for Hazardous Air Pollutants: Metal Coil Surface Coating Operations

c. 40 CFR 63, Subpart DDDDD: National Emission Standards for Hazardous Air Pollutants: Industrial/Commercial/ Institutional Boilers and Process Heaters

The Permittee shall fulfill the applicable testing, recordkeeping, and reporting requirements of Conditions 5.7.2, 5.9.2, and 5.10.3.

5.6.3 Other Source-Wide Production and Emission Limitations

The emissions from the source shall not exceed the following limitations:

a. The usage of each individual organic HAP in all coating lines at the source shall not exceed 1.5 tons/month and 9.5 tons/year, total.

b. The total usage of organic HAPs on all coating lines at the source shall not exceed 3.0 tons/month and 24 tons/year.

c. HAP emissions from the source shall not exceed 1.5 ton/month and 9.9 tons/year for any single HAP and 3.5 tons/month and 24 tons/year for all combined HAPs.

d. 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).

The limits on HAP are limitations established in Permit 05030067. These limits ensure that the source is not a major source of HAP emissions (See Conditions 5.4.1 and 5.6.2). It should be noted that the above limits were established prior to the compliance date of the NESHAP standards listed in Condition 5.6.2 [T1].

The above conditions are reiterated in Condition 7.4.6(b).

5.6.4 Source Wide Combustion of Natural Gas Equivalent Propane-Air Mixture

a. The combustion of a natural gas equivalent propane-air mixture is allowed in any emission units permitted to combust natural gas as described in Section 7.

b. Combustion of natural gas equivalent propane-air mixture is subject to the following limitations:

i. Propane Consumption shall not exceed:

Propane Consumption (Mgal/month)	Propane Consumption (Mgal/year)
2,000	5,809

ii. Incremental Emission Limits for Propane-Air Mixture Combustion shall not exceed*

Pollutant	Incremental Emissions (tons/year)
NO_x	27.88
PM	N/A**
VOM	0.24
SO_2	2.74
CO	N/A**

* Note that the flowmeters used to record gas flowrates to each combustion unit record the total gas flow to each unit (i.e., natural gas plus propane-air mixture). Therefore the calculation methods described in Section 7 will account for emissions from combustion of the propane-air mixture as if it were natural gas. Overall total emission rates from combustion units are determined by adding the emissions calculated using the incremental emissions described in this condition to the combustion unit emission rate totals from Section 7.

** PM and CO emissions for combustion of the propane-air mixture are less than the natural gas emissions.

c. Compliance with the source wide fuel combustion emission limits in this section shall be based upon the record-keeping and reporting requirements in Conditions 5.9.3(b) and 5.10.4, respectively, and the fuel-combustion emissions calculation procedures in Condition 5.12.2(b).

d. 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].

e. The above limitations are being established in this permit pursuant to Title I of the CAA, specifically MSSCAM and/or PSD. The source has requested that the Illinois EPA establish emission limitations and other appropriate terms and conditions in this permit that limit the NO_x, VOM, and SO_2 emissions from the affected source below the levels that would trigger the applicability of these rules, consistent with the information provided in the CAAPP application [T1N].

5.7 Source-Wide Testing Requirements

5.7.1 Pursuant to 35 IAC 201.282 and Section 4(b) of the Act, every emission source or air pollution control equipment shall be

subject to the following testing requirements for the purpose of determining the nature and quantities of specified air contaminant emissions and for the purpose of determining ground level and ambient air concentrations of such air contaminants:

a. Testing by Owner or Operator: The Illinois EPA may require the owner or operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests [35 IAC 201.282(a)].

b. Testing by the Illinois EPA: The Illinois EPA shall have the right to conduct such tests at any time at its own expense. Upon request of the Illinois EPA, the owner or operator of the emission source or air pollution control equipment shall provide, without charge to the Illinois EPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary [35 IAC 201.282(b)].

c. Any such tests are also subject to the Testing Procedures of Condition 8.5 set forth in the General Permit Conditions of Section 8.

5.7.2 HAP Testing to Verify Minor Source Status

Pursuant to Condition 5.7.1 and to verify compliance with the requirements of Condition 5.6.2, that is that this source is not a major source of HAPs, the following testing requirements are established:

a. If in the previous calendar year, emissions of HAPs exceeded 80% of major source threshold for individual or total HAPs (greater than 8 tons of a single HAP or greater than 20 tons of total HAPs), then testing for HAPs using USEPA Method 311 or Certified Product Data Sheets (See the definition in 40 CFR 63.801) or recertification of formulation data shall be conducted as follows:

   i. Test or obtain supplier recertification of the top five coatings that make the largest contributions to individual and total HAP emissions. The largest contributions are defined as the product of usage and HAP content. If two coatings differ only in pigment, then both do not have to be tested.

ii. Excluding coatings, test or obtain supplier recertification of those material(s) that contribute to individual and total HAP emissions in excess of 5% of the total of individual and total HAP emissions.

b. If testing is done, it may be conducted by either the supplier of the HAP-containing material or by the Permittee.

c. The calculation as to whether the 80% of major source threshold was exceeded shall be based on records and procedures in Condition 5.9.2 and shall be completed by January 31 for the previous calendar year. If testing is required, this calculation shall be completed by March 15 for the previous calendar year.

d. Any such tests are also subject to the Testing Procedures of Condition 8.5 set forth in the General Permit Conditions of Section 8.

5.8 Source-Wide Monitoring Requirements

Source-wide monitoring requirements are not set for this source. However, there may be provisions for unit specific monitoring set forth in Section 7 of this permit.

5.9 Source-Wide Recordkeeping Requirements

5.9.1 Annual Emission Records

The Permittee shall maintain records of total annual emissions on a calendar year basis for the emission units covered by Section 7 (Unit Specific Conditions for Specific Emission Units) of this permit to demonstrate compliance with Condition 5.6.1, pursuant to Section 39.5(7)(b) of the Act.

5.9.2 Records for HAP Emissions

a. The Permittee shall maintain records of individual and combined HAP emissions on a monthly and annual basis for the emission units covered by Section 7 (Unit Specific Conditions for Specific Emission Units) of this permit to demonstrate compliance with Condition 5.6.2, pursuant to Section 39.5(7)(b) of the Act.

b. If testing is required by Condition 5.7.2, the Permittee shall keep records of the testing, including the test date, conditions, methodologies, calculations, test results, and any discrepancies between the test results and formulation specifications of Condition 5.9.2(c) below.

c. The Permittee shall keep an CPDS or equivalent document showing the formulation of each coating or HAP containing material, including content of all HAPs. These formulation

sheets may be used to make the calculation of HAP emissions required by Condition 5.7.2. If the formulation sheet uses a maximum or range value (e.g., less than 1% or range of 2 – 3%) then the highest value shall be used.

5.9.3 Records for Other Source-Wide Emission Limitations

a. The Permittee shall keep records, including supporting emission calculation, of uncontrolled fugitive particulate emissions of all storage piles at the source, along with associated conveyor loading operations to the piles and the normal traffic pattern access areas surrounding the piles, to show that uncontrolled fugitive particulate emissions are no less than 50 tons/years (See Condition 5.4.6).

b. Pursuant to Condition 5.6.4, the Permittee shall compile and maintain the following:

i. Monthly records of propane usage (gal/month and gal/year).

ii. Monthly records of incremental propane-air mixture combustion emissions (tons/month and tons/year) based upon compliance procedures in Condition 5.12.2.

c. The Permittee shall retain and maintain documentation and records of the plans and monitoring and test results required pursuant to the requirements in Condition 5.3.3.

d. The Permittee shall retain and maintain documentation and records of the beryllium content of the alloys melted, cast, and machined at the source (See Conditions 5.4.1 and 5.5.1). These records may included but are not limited to CPDS, MSDS, laboratory analyses utilizing USEPA methodologies (e.g., USEPA publication SW-846, entitled Test Methods for Evaluating Solid Waste, Physical/Chemical Methods), and/or material balance calculations.

5.9.4 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.

5.10 Source-Wide Reporting Requirements

5.10.1 General Source-Wide Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the source with the permit requirements within 30 days, 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. There are also reporting requirements for unit specific emission units set forth in Section 7 of this permit.

5.10.2 Annual Emissions Report

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

5.10.3 Annual Reporting of HAP Emissions

The Permittee shall submit an annual report, based upon the records and calculations required in Condition 5.6.2, to the Illinois EPA - Bureau of Air - 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).

5.10.4 Source-Wide Reporting Requirements for Combustion of Natural Gas Equivalent Propane-Air Mixture:

a. Reporting of Deviations

i. The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, 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. Deviations can include but are not limited to the following:

A. Source-Wide operation of the affected source's emission units in excess of the limits specified in Conditions 5.6.4 within 30 days of such occurrence.

ii. If there is a deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report within 30 days after the deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the deviation and efforts to reduce emissions and future occurrences.

5.11 Source-Wide Operational Flexibility/Anticipated Operating Scenarios

Source-wide operational flexibility is not set for this source. However, there may be provisions for unit specific operational flexibility set forth in Section 7 of this permit.

5.12 Source-Wide Compliance Procedures

5.12.1 Procedures for Calculating Emissions

Except as provided in Condition 9.1.3, compliance with the source-wide emission limits specified in Condition 5.6 shall be addressed by the recordkeeping and reporting requirements of Conditions 5.9 and 5.10, and compliance procedures in Section 7 (Unit Specific Conditions for Specific Emission Units) of this permit.

5.12.2 Other Source-Wide Compliance Procedures

a. Compliance with the source wide fugitive particulate matter limits in Conditions 5.3.2(a), 5.3.3, and 5.4.6 is based upon the operating program requirements of 5.3.3, the visual observation requirements in Section 7, and records required in Condition 5.9.3.

b. Compliance with the source wide incremental propane fuel combustion emission limits in Condition 5.6.4 is based upon the record-keeping and reporting requirements in Conditions 5.9.3(b) and 5.10.4, respectively.

Incremental Emission Factors for Propane-Air Mixture Combustion

Emissions (tons/month) = Increase in Emissions when Combusting Propane (lb/10^3 gal) x Monthly Propane Usage (10^3 gal/month) x (1 ton / 2000 lb)

Pollutant	Natural Gas Emission Factor** (lbs/mmBtu)	Propane Emission Factor*** (lbs/mmBtu)	Increase in Emissions when Combusting Propane**** (lb/10^3 gal)
NO_x	0.100	0.202	9.6
PM	0.008	0.006	N/A*
VOM	0.006	0.006	0.08
SO_2	0.001	0.011	0.94
CO	0.084	0.034	N/A*

* PM and CO emission factors for combustion of the propane-air mixture are less than the natural gas emission factors.

** Natural Gas Emission Factor (lbs/mmBtu) = Emission Factor (lbs/mmscf) / (1000 Btu/scf)

*** Propane Emission Factor (lbs/mmBtu) = Emission Factor (lbs/1000 gal) / (94 mmBtu / 1000 gal)

**** Increase in Emission when Combusting Propane = [Propane Emission Factor (lbs/mmBtu) – Natural Gas Emission Factor (lbs/mmBtu)] * (94 mmBtu / 1000 gal)

These incremental emission factors are derived from the emission factors for uncontrolled propane-air mixture combustion in boilers (<100 mmBtu/hr), Tables 1.5-1, AP-42, Volume I, Supplement B , October 1996. and the emission factors for uncontrolled natural gas combustion in boilers (<100 mmBtu/hr), Tables 1.4.1 and 1.4.2, AP-42, Volume I, Supplement D, March, 1998.

c. Compliance with the source wide beryllium limits in Conditions 5.4.1 and 5.5.1 is based upon the records required in Condition 5.9.3.

d. Compliance with the source wide HAP emissions limits in Conditions 5.6.2 and 5.6.3 is based upon the testing, recordkeeping, reporting requirements in Conditions 5.7.2, 5.9.2, and 5.10.3, respectively and the emission calculation procedures in Section 7.

6.0 CONDITIONS FOR EMISSIONS CONTROL PROGRAMS

This section is reserved for emissions control programs. As of the date of issuance of this permit, there are no such programs applicable to this source.

7.0 UNIT SPECIFIC CONDITIONS FOR SPECIFIC EMISSION UNITS

7.1 Unit 01 – Casting Operations

7.1.1 Description

Casting Units - (Direct Chill Casting No. 1 D.C. through No. 5, #1 & #2 Ascasts, and #1 & #2 Horizontal Casters)

Containers charged with scrap and virgin materials blended to meet an alloy specification are transported from the Raw Material department to the casting floor and then to the charging hopper that feeds a melting furnace.

Melting is done in low-frequency, channel induction furnaces. Since molten metal loops serve as the transformer's secondary circuit, the solid metal is always charged into a furnace partially full of molten metal.

A layer of carbonaceous or salt material typically covers the molten metal to protect it from oxidation and minimize heat loss. This cover is periodically skimmed off to remove dross and slag, and the melt is re-covered. The skimmings are normally recycled to recover the metal content for melting.

When the melting furnace (MF) is full, it is poured down a transfer trough to a much larger holding furnace that is similar to the melting furnaces in basic design and operation. The melting furnace, partially emptied, can then accept more solid metal and repeat its melting cycle.

When the holding furnace is poured, the molten metal flows down a short distributor and through ceramic tubes into the molds of the casting machine. In the direct chill (DC) Casting Units, up to four ingots can be cast during one pour. For the Ascast Systems, up to two ingots can be cast per pour. The #1 and #2 Horizontal Casters produce long horizontal metal strip that can be immediately upcoiled.

The ingots in the DC and Ascast Units are cast either into slabs, strips, or billets (castings) using a semi-continuous, direct chill method wherein the molten metal solidifies as a shell against a short, water cooled copper mold. The newly formed casting is lowered from the mold as solidification progresses and is passed through a water spray to complete solidification. The completed castings are removed from the casting machine by an overhead crane.

The production cycle continues as the partially emptied holding furnace is then available to accept the next batch of molten metal from the melting furnaces.

Each of the five (5) D.C. Casting Units and the two (2) Ascasts are served by an exhaust system consisting of a cyclone separator, a baghouse and induced draft fans. The Horizontal Casting systems are serviced by an exhaust system that has a baghouse and induced draft fan. The primary purpose of the cyclone separator is to drop out large hot particles to prevent them from entering the baghouse and igniting the bag material. The baghouses are the primary control device for removing particulate matter from the exhaust gases.

Metals Research Laboratory (MRL) Caster:

The MRL Caster is similar to the Ascast Casters in that that the molten metal is poured directly from the melting furnace (MF-30) into the mold of a casting machine. However, because of the smaller capacity of the melt furnace and the absence of a holding furnace, only one bar will be cast per pour. The furnace is designed so that it can operate at either one of two test stations.

The MRL casting unit is served by a spark arrester and baghouse.

Aerofall Mill & Feed Hopper:

The purpose of the Aerofall Mill is to reclaim the metallic portion of the dross and slag that is skimmed off of the melting and holding furnaces in the casting operation.

The furnace skimmings are kept in piles which are segregated by alloy prior to being run through the Aerofall Mill. Material is scooped from the appropriate pile and taken to the mill where it is loaded into the mill either using the large external feed storage bin or by dumping the material directly onto the vibrating feeder conveyor.

The material then travels up the feeder conveyor to the feed hopper. From there it travels through a vibrating feeder and a drier and then enters the mill drum. As the drum rotates, the pieces of reclaim fall against each other which separates the dirt and fine particles from the metallic material being reclaimed.

As the dirt separates from the metal, it is sucked out of the mill drum through ductwork to the vertical classifier where the heavier particles fall to the bottom and are augured away to a container. The smaller and lighter particles continue through the ductwork to the cyclone separator where the heavier of the remaining particles fall out and are containerized. The remaining particles go to the baghouse where they are removed to a container.

The metallic reclaim material exits the mill drum onto a flat belt conveyor which in turn drops the material onto the incline belt conveyor. At the end of the incline belt conveyor, the

material falls onto the vibrating conveyor that takes the material under the magnetic separator where any iron is removed and scrapped. The good reclaim then proceeds to the end of the vibrating table where it falls into a drop bottom container. That container is taken to the raw materials department where the material is used back into good product on a controlled basis.

A second baghouse is used to remove particles from the Aerofall Mill Feed Hopper System.

Furnace Building Operations:

Furnace Building Operations consists two Mix Mullers and an Induction Form Removal Process. The Mix Mullers are designated as 1F Mix Muller (MM-3) and Low Profile Turbine Mixer (LP-1). The Induction Form Process are designated as IF-1 and IF-2.

Each of the Mix Mullers utilizes a batch process to mix refractory for the construction of electric induction furnaces for the casting operations. As shown in 220-CAAPP each Mix Muller has a different batch capacity. Only one of the Mix Mullers is operated at a time.

The Induction Form Removal Process consists of two stations. In the construction of the electric induction furnace, refractory mix is poured around a form in the shape of slots for metal to flow through the furnace and around the induction coils. These forms are either made of polystyrene or wood, depending on the structural stability needed when pouring the refractory. The forms must be removed in order to open a slot for the metal to flow. Removal is accomplished by applying a current to metal strips that have been manufactured into the form. As this metal strip heats up, it initiates the combustion of the form. Once the combustion starts, it takes approximately 5 – 45 minutes before the slot is fully open. The whole induction form process cycle takes approximately 3 hours.

Abrasive Cleaner:

The abrasive cleaning equipment is used to clean used mold liners prior to being rebuilt. The mold liners range in weight between 200 and 280 pounds each. It is estimated that it takes 20 minutes to clean each mold liner. Approximately 2 lbs. of scale and other built up material are removed from each used mold liner.

During the cleaning operation, the nozzle rate of the aluminum oxide abrasive material is approximately 672 pounds per hour in a 113 CFM air stream.

The emissions are exhausted to a cyclone reclaimer followed by a baghouse.

Charcoal Burners (CB-1 thru CB-12):

In order to control the metallurgical properties of the molten metal in holding furnaces in the casting operation, various types of furnace melt cover materials are spread over the top of the molten metal. The melt cover materials include various salts and carbonaceous materials. The melt cover material used varies from alloy to alloy and is dependent on the metallurgical characteristics of alloy being cast. One of the carbonaceous materials used as a furnace melt cover is charcoal made from hard woods. It is used on approximately 14% of the total pounds cast in the operations.

The charcoal material has to be ignited prior to being fed into the holding furnace as a melt cover. A device called a charcoal burner is used for this purpose. Charcoal is manually fed into the charcoal burner where it is ignited by the burning charcoal in the unit and then it is manually fed as required into the holding furnace.

The furnace melt cover material is a raw material which is part of the process weight rate for the casting process. Therefore, the emissions from the charcoal material are considered to be part of the allowable emissions from the casting process when it is used.

Note: This narrative description is for informational purposes only and is not enforceable.

7.1.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Date Constructed or Modified	Emission Control Equipment
Casting Units	#1 D.C. Casting units (MF-11 to MF-15 and HF-3) *	Modification 1998[1]	Cyclone (MC-3), American Air Filter #2 Baghouse (BH-4)
	#4 D.C. Casting units (MF-17 to MF-21 and HF-5) *	Modification 1998[1]	
	#1 Ascast (Ascast furnace) (ASC-1) *	Modification 07/2005[1]	
	#2 Ascast (New Ascast furnace) (ASC-2) *	Modification 01/2006	
	#2 D.C. Casting units (MF-1 to MF-5 and HF-1) *	Modification 1998[1]	Cyclone (MC-1), Wheelabrator #1 Baghouse (BH-1)
	#3 D.C. Casting units (MF-6 to MF-10 and HF-2) *	Modification 1998[1]	

Emission Unit	Description	Date Constructed or Modified	Emission Control Equipment
Casting Units (Continued)	#5 D.C. Casting units ((MF-22 to MF-26 & HF-6) *	Modification 1998[1]	Cyclone (MC-2), Lear-Siegler #3 Baghouse (BH-5)
	#1 Horizontal (Technica-Guss) Caster[2] (MF-27 & HF-7) *	1982 Modified 2006	Carborundum Baghouse (BH-3)
	#2 Horizontal (Wertli) Casting Unit[2] (MF-16 & HF-8) *	1982 Modified 2006	
	Metals Research Laboratory (MRL)[3] Furnace (MF-30)	2004	Spark Arrester, MRL Baghouse (BH-8)
Aerofall Mill & Feed Hopper	Aerofall Mill(AM-1,)	1976	Custom System Baghouse (BH-7)
	Aerofall Mill Feed Bin, Conveyor and Hopper (FSB-1, VF-1, & FH-1)		Pangborn Baghouse (BH-2)
Furnace Building Operations	1F Mix Muller (MM-3)	1983 Modified 2005[4]	Cartridge Filter System (CF-1) Modified 2005[4]
	Low profile turbine mixer (LP-1)		
	Induction Form Stations 1 & 2 (IF-1 & IF-2)	1983 Modified 2005[4]	
Abrasive cleaner	Abrasive cleaner (ABRC-1)	1975	Cyclone (ACCR-1) & Baghouse (ACBH-1)
Charcoal Burners	Charcoal burners (CB-1 thru CB-12), each 1.04 mmBtu/hr Charcoal fired	Modified after 1972	None

* Low frequency channel induction furnaces.

1 See Construction Permit 03060079

2 See Construction Permit 04020062

3 See Construction Permit 04010031

4 See Construction Permit 04090009

7.1.3 Applicable Provisions and Regulations

a. An “affected process emission unit” for the purpose of these unit-specific conditions are the emission units described in conditions 7.1.1 and 7.1.2.

b. The affected process emission units (as defined by Condition 7.1.3(a)) constructed or modified on or after April 14, 1972 (i.e., all emission sources listed in condition 7.1.2), are subject to 35 IAC 212.321(a), which provides that:

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, 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 35 IAC 212.321(c) (See Attachment 2 - Emissions of Particulate Matter from Process Emission Units) [35 IAC 212.321(a)].

c. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from an affected process emission unit, except as provided in Sections 219.302, 219.303, 219.304 of this Part and the following exception: If no odor nuisance exists the limitation of this Subpart shall apply only to photochemically reactive material [35 IAC 219.301].

d. No person shall cause or allow the emission of sulfur dioxide (SO_2) into the atmosphere from any affected process emission unit to exceed 2000 ppm [35 IAC 214.301].

e. The “affected furnaces” (#1 thru #5 D.C. Casting Units, #1 and #2 Ascast Casting Units, #1 and #2 Horizontal Casting Units, and MRL Casting Unit) are subject to the NSPS for Secondary Brass and Bronze Production Plants, 40 CFR 60 Subparts A and M, because the plant commenced construction or modification after June 11, 1973. The Illinois EPA administers the NSPS for subject sources in Illinois pursuant to a delegation agreement with the USEPA. Pursuant to the NSPS:

At all times the Permittee shall also, to the extent practicable, maintain and operate these sources, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.

On and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, no owner or operator subject to the provisions of this subpart

shall discharge or cause the discharge into the atmosphere from any blast (cupola) or electric furnace any gases which exhibit 10 percent opacity or greater [40 CFR 60.132(b)].

f. As applicable, associated air pollution control equipment for the affected process emission units (as defined by Condition 7.1.3(a)) shall be included in the operating program required in Condition 5.3.3 and, as per Condition 5.3.3, they shall comply with the following:

i. Materials Collected by Pollution Control Equipment: All unloading and transporting operations of materials collected by pollution control equipment shall be enclosed or shall utilize spraying, pelletizing, screw conveying or other equivalent methods [35 IAC 212.307].

ii. Particulate Collection Equipment: If particulate collection equipment is operated pursuant to 35 IAC 212.304 through 212.310 and 212.312, emissions from such equipment shall not exceed 68 mg/dscm (0.03 gr/dscf) [35 IAC 212.213].

7.1.4 Non-Applicability of Regulations of Concern

a. The charcoal burners are not subject to 35 IAC 217.121 for emissions of nitrogen oxides from new fuel combustion emission units, because the actual heat input of each unit is less than 73.2 MW (250 mmBtu/hr) and the charcoal burner is not by definition a fuel combustion emission unit (See 35 IAC 211.2470)

b. The charcoal burners are not subject to 35 IAC 216.121, emissions of carbon monoxide from fuel combustion emission units, because a charcoal burner is not by definition a fuel combustion emission unit.

7.1.5 Control Requirements and Work Practices

The Permittee shall operate and maintain, as applicable, all air pollution control equipment in a manner that assures compliance with Conditions 5.3.2, 5.3.3, 7.1.3(e) and (f) and 7.1.6.

7.1.6 Production and Emission Limitations

a. Emissions and operation of the Ascasts 1 and 2 and DC Casting Unit Numbers 1 through 5 and their associated air pollution control equipment shall not exceed the following limits:

i. The combined process rate of the affected Ascast furnaces 1 and 2 shall not exceed 24,000 lbs/hr and 70,000 tons/year [T1].

ii. The combined process rate of all affected units (Ascasts 1 and 2 and DC Casting Unit Numbers 1 through 5) shall not exceed 244,000 lbs/hr and 447,000 tons/year [T1].

iii. Emissions from the affected Ascast furnaces 1 and 2 shall not exceed the following limits:

Pollutant	Emission Factor	Tons/Month	Tons/Year
PM/PM_{10}	0.28 Lb/Ton	1.0	9.8

These limits are based on the production limits in Condition 7.1.6(a)(i), information supplied in the permit application and the emission calculation procedures in Condition 7.1.12 [T1].

iv. Emissions from the Ascast furnaces 1 and 2, melt furnaces on DC Casting Unit Numbers 1 through 5 and their associated air pollution control equipment combined shall not exceed the following limits:

Pollutant	Tons/Month	Tons/Year
PM/PM_{10}	5.5	51.4

This limit replaces the emission limits in Operating Permit Application No. 73032221 and 98090026 as those limits applied to the affected emission units listed in Condition 7.1.6(a).

These limits are based on the production limits in Condition 7.1.6(a)(ii), information supplied in the permit application and the emission calculation procedures in Condition 7.1.12 [T1].

v. This permit is issued based on negligible emissions of SO_2 and VOM from the affected units. For this purpose, emissions shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year for each regulated air pollutant from each affected emission unit [T1].

vi. This permit is issued based on negligible emissions of lead from the affected units. For this purpose, emissions shall not exceed nominal emission rates of 0.005 lb/hour and 0.025 tons/year [T1].

vii. 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].

viii. The above limitations were established in Permit 03060079, pursuant to 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 PSD [T1].

b. Emissions and operation of the #1 and #2 Horizontal Casting Units with their associated Baghouse (BH-3) shall not exceed the following limits:

i. The production capacity of each horizontal caster, determined as the output capacity of the molding unit, shall not exceed 3,500 lbs/hour.

ii. The process rate of the #1 and #2 Horizontal Casting Units shall not exceed 19,920 tons/year, total.

iii. Emissions from the #1 and #2 Horizontal Casting Units shall not exceed the following limits:

Pollutant	Casting (Stack and Fugitive) (Lbs/Ton)
PM/PM_{10}	0.375

These limits are based on the production limits in Condition 7.1.6(b)(i & ii), information supplied in the permit application and the emission calculation procedures in Condition 7.1.12 [T1].

iv. This permit is issued based on minimal emissions of SO_2, NO_x, and VOM for the affected units.

v. 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]

vi. The above limitations were established in Permit 04020062, pursuant to 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 PSD [T1].

c. Emissions and operation of the Metals Research Laboratory (MRL) Furnace (MF-30) with the associated spark arrester and MRL Baghouse (BH-8) shall not exceed the following limits:

i. At all times, the Permittee shall maintain and operate the MRL caster, including associated control system, in a manner consistent with good air pollution control practice for minimizing emissions.

ii. This permit is issued based on negligible emissions of PM_{10} from the MRL caster. For this purpose, emissions shall not exceed nominal emission rates of 0.2 lb/hour and 0.5 ton/year.

iii. This permit is issued based on the MRL caster only being used for research and development purposes and not for any production purposes.

iv. 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].

v. The above limitations were established in Permit 04010031, pursuant to 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 PSD [T1].

d. Emissions and operation of the 1F mix muller, low profile turbine mixer and induction form operations with the associated furnace building cartridge filter system (CF-1) shall not exceed the following limits:

i. Operational Limits:

Emission Unit	Process Rate
1F Mix Muller	4 batches/hour*
Low Profile Turbine Mixer	5.2 batches/hour*
Induction Form Operations	0.33 cycles/hour

* Only one mixer can operate at a time [T1].

ii. Emissions from the 1F mix muller, low profile turbine mixer, and induction form operations shall not exceed the following limits:

Pollutant	Lbs/Hour	Tons/Year
PM/PM_{10}	0.314	1.38
CO	2.00	8.80
VOM	1.82	7.97

These limits are based on the production limits in Condition 7.1.6(d)(i), information supplied in the permit application and the emission calculation procedures in Condition 7.1.12 [T1].

iii. This permit is issued based on negligible emissions of SO_x and NO_x from the 1F mix muller, low profile turbine mixer, and induction form operations. For

this purpose, emissions shall not exceed nominal emission rates of 0.1 lb/hr and 0.44 tpy [T1].

iv. 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].

v. The above limitations were established in Permit 04090009, pursuant to 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 PSD [T1].

7.1.7 Testing Requirements

Testing requirements are not set for the affected emission units. However, there are source-wide testing requirements in Condition 5.7 and general testing requirements in Condition 8.5.

7.1.8 Monitoring Requirements

The Permittee shall document the following as part of the recordkeeping and compliance procedures requirements in Conditions 7.1.9 and 7.1.12 and, as applicable, the sources standard operating procedures:

a. Differential Pressure Monitoring: The Permittee shall monitor the differential pressure across each baghouse controlling an affected process emission unit (i.e., Casting Units, Aerofall Mill and Feed Hopper, and Abrasive Cleaner) according to the schedule shown in Attachment 5 (Pressure Drop Monitoring Schedule and Visible Emission Compliance Demonstration).

b. Monthly Operational Inspections: The Permittee shall perform monthly operational inspections of the equipment that is important to the performance of the capture system for each affected process emission unit (as defined by Condition 7.1.3(a)) (e.g., pressure sensors, dampers, and damper switches, scrubber pumps, as applicable). This inspection shall include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). Any deficiencies shall be noted and proper maintenance performed.

Not withstanding the above if an affected process emission unit (as defined by Condition 7.1.3(a)) is not operated during a month, the above inspections need not be performed provided however that such an inspection shall be conducted

as part of the resumption of operation of the affected process emission units.

c. Visible Emission Observations

The Permittee shall comply with the visible emission monitoring requirements for each affected process emission unit (as defined by Condition 7.1.3(a)) according to the procedures shown in Attachment 5 (Pressure Drop Monitoring Schedule and Visible Emission Compliance Demonstration).

For each process emission unit requiring visible emission observations as noted in Attachment 5, the Permittee shall comply with the following visible emission observation requirements:

i. The Permittee shall conduct a qualitative visible emissions observation once each day during normal daylight operations when the process emission units and associated air pollution control equipment are in operation in order to observe for the presence of abnormal visible emissions. These observations shall be made and recorded by a trained employee. If such observations during operation do not detect observable emissions for a period of two weeks, the frequency of observations shall be reduced to once per week when operating. If the weekly observations do not detect observable emissions for a period of two months, the frequency of observations shall be reduced to once per month when operating. If abnormal visible emissions are detected the frequency of observations shall be increased to once a day. Observations thereafter may be reduced again if visible emissions are not detected for the period outlined above.

If abnormal visible emissions are observed, the Permittee shall initiate corrective actions to eliminate the abnormal visible emissions. If the Permittee cannot eliminate the abnormal visible emissions within 24 hours, the Permittee shall conduct opacity testing pursuant to the methods and procedures in Method 9 (40 CFR Part 60, Appendix A) within three days after the qualitative observation showing abnormal emissions.

ii. For processes operated continuously, “normal” means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

iii. In the case of batch or discontinuous operations, readings shall be taken during that part of the

operation that would normally be expected to cause the greatest emissions.

iv. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

v. The Permittee shall follow the sources standard operating procedures and manufactures specifications, as applicable, in order to correct periods of excess emissions. The program and/or the procedures for a specific emission units and associated air pollution control equipment shall contain troubleshooting contingency and response steps for when an abnormal emission are observed.

d. Broken Bag Observations

In the event of a bag failure that causes the Permittee to operate outside the parameters in the permit for pressure drop or to emit visible emissions, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the sources standard operating procedures and manufactures operating specifications shall be initiated, as applicable. For any failure with corresponding response steps and timetable not described in the program or procedures indicated above, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion.

It should be noted that the Permittee has been granted additional operating flexibility pursuant to the limitations in Condition 7.1.11.

7.1.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall document, maintain and retain records of the following items for the affected process emission unit (as defined by Condition 7.1.3(a)) to demonstrate compliance with Conditions 5.6.1, 7.1.6 and 7.1.8, pursuant to Section 39.5(7)(b) of the Act:

a. Casting plant operation:

i. D.C. and Ascast Casting Units

A. % Zinc of Alloy for each alloy at the casting units (% Zinc).

B. Tons of each material at each casting unit (tons/day).

C. Material throughput (tons/month and tons/year).

D. Hours of operation of each casting unit (hours/day).

E. Tons of each alloy cast at the casting operations (tons/month).

F. PM, PM_{10}, VOM, SO_2, NO_x, CO, lead and HAP emissions for each casting unit (lbs/hour and tons/month) as calculated in Condition 7.1.12.

G. PM, PM_{10}, VOM, SO_2, NO_x, CO, lead and HAP emissions for the casting operations (tons/year) as calculated by summing the monthly emissions from each casting unit for each month and the preceding 11 months (running total).

ii. Horizontal Caster Units

A. Material throughput (tons/month and tons/year).

B. Hours of operation of each casting unit (hours/day).

C. PM, PM_{10} and HAP emissions for each casting unit (lbs/hour and tons/month) as calculated in Condition 7.1.12.

D. PM, PM_{10} and HAP emissions for emissions for the casting operations (tons/year) as calculated by summing the monthly emissions from each casting unit for each month and the preceding 11 months (running total).

E. Capacity of the molding unit lbs/hour, with supporting documentation.

iii. MRL Caster

A. PM, PM_{10} and HAP emissions for each casting unit (lbs/hour and tons/month) as calculated in Condition 7.1.12.

B. PM, PM_{10} and HAP emissions for emissions for the casting operations (tons/year) as calculated by summing the monthly emissions from each casting unit for each month and the preceding 11 months (running total).

C. The Permittee shall keep an operating log for each “pilot plant” scale furnace and casting unit for the Metals Research Laboratory (MRL) which includes date and time of each startup and shutdown.

iv. Charcoal Burners

A. Tons of Charcoal used each month (tons/month); and

B. PM, PM_{10}, VOM, SO_2, NO_x, CO, and HAP emissions tons/month) as calculated in Condition 7.1.12.

b. Air Pollution Control Equipment:

The Permittee shall document, maintain and retain records of the following:

i. Baghouse pressure monitoring, visible emission observations, and operational inspections required in Condition 7.1.8 and a log of all repairs and corrective actions implemented as a result of the above.

ii. Baseline measurements used to determine malfunction (i.e., baseline baghouse pressure drop).

iii. The date and reason any required inspection was not performed.

c. 40 CFR 60 Subpart M - Standards of Performance for Secondary Brass and Bronze Production Plants:

i. The Permittee shall document, maintain and retain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative [40 CFR 60.7(b)].

ii. The Permittee shall document, maintain and retain records of all tests performed pursuant to 40 CFR 60.18 and 40 CFR 60 Subpart M.

7.1.10 Reporting Requirements

a. Reporting of Deviations

The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the affected process emission unit (as defined by Condition 7.1.3(a)) 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:

i. Emissions of PM, PM_{10}, VOM, SO_2, NO_x, CO, lead and HAP and visible emissions from the affected process emission unit (as defined by Condition 7.1.3(a)) in excess of the limits specified in Conditions 7.1.3 and 7.1.6 within 30 days of such occurrence.

ii. Operation of the affected process emission unit (as defined by Condition 7.1.3(a)) in excess of the limits specified in Conditions 7.1.3, 7.1.5, 7.1.6 and 7.1.11 within 30 days of such occurrence.

If there is a deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report within 30 days after the deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the deviation and efforts to reduce emissions and future occurrences.

7.1.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to the affected process emission unit (as defined by Condition 7.1.3(a)) without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

a. For the baghouses listed below, individual compartments may be isolated for off-line cleaning, maintenance, or repairs without removing the emission units that are controlled by these baghouses from service. The minimum number of baghouse compartments that must remain in service when the #1 to #5 D.C. Casting units and #1 and #2 Ascast units are in operation is stated below:

Baghouse Number	Minimum Number of Compartments in Operation
No. 1 Baghouse (BH-1)	4
No. 2 Baghouse (BH-4)	4
No. 3 Baghouse (BH-5)	2

7.1.12 Compliance Procedures

a. Compliance with the fugitive particulate matter and visible emissions limits in Conditions 5.3.2(a), 5.3.3 and 7.1.3(f)

and the opacity limitations of Conditions 5.3.2(b) and 7.1.3(e) is based upon the operating program requirements of 5.3.3 and the air pollution control equipment and visible emissions monitoring required in Condition 7.1.8.

b. Compliance with the PM emissions limits in Conditions 7.1.3(b), (e) and (f) is assured and achieved by the proper operation and maintenance of the air pollution control equipment as required in Condition 7.1.5, the operational limitations in Conditions 7.1.6 and 7.1.11 and visible emissions and air pollution control equipment monitoring required in Condition 7.1.8 and the work-practices inherent in operation of the affected process emission units (as defined by Condition 7.1.3(a)).

c. Compliance with the sulfur dioxide (SO_2) limit in Condition 7.1.3(d) is assured based upon the limitations on fuel usage in Condition 7.1.6.

d. Compliance with the emission limits in Conditions 5.6.1, 7.1.3(b), and 7.1.6 from the casting emission units shall be calculated based on the following emission factors and formulas, or other calculation methods as approved by the IEPA, and the recordkeeping requirements in Condition 7.1.9.

i. Casting units and furnaces:

#1 D.C. Casting units (MF-11 to MF-15 & HF-3)
#4 D.C. Casting units (MF-17 to MF-21 & HF-5)
#1 Ascast furnace (ASC-1)
#2 Ascast furnace (ASC-2)
#2 D.C. Casting units (MF-1 to MF-5 & HF-1)
#3 D.C. Casting units (MF-6 to MF-10 & HF-2)
#5 D.C. Casting units (MF-22 to MF-26 & HF-6)

Particulate Matter (lb/month) = (0.18 lb PM/ton + ([Sum of (% Zinc in each Alloy Cast x Tons of each Alloy Cast for the month)]/(% Zinc in Alloy 260 x Tons Cast for the month)) x 0.10 lb PM/ton) x (Tons Cast for the month)

Fugitive PM = 0.155 lb/ton
Fugitive PM_{10} = 0.095 lb/ton

HAP Emissions (lb HAP/month) = 0.004 (lb HAP/lb PM) x Particulate Matter Emissions (lb PM/month)

The above formulas were developed from stack test data dated July 20, 1993 and October 26, 1993:

ii. #1 & #2 Horizontal Casting Units and MRL Caster

Particulate Matter = 0.28 lb/ton

Fugitive PM = 0.155 lb/ton
Fugitive PM_{10} = 0.095 lb/ton

The above formulas were developed from stack test data dated July 20, 1993 and October 26, 1993.

iii. Other Equipment

Description	Emission Control Equipment	Emission Factor**
Aerofall Mill(AM-1,)	Custom System Baghouse (BH-7)	PM = 1.0 lbs/hr[1]
Aerofall Mill Feed Bin, Conveyor and Hopper (FSB-1, VF-1, & FH-1)	Pangborn Baghouse (BH-2)	
1F Mix Muller (MM-3)	Cartridge Filter System (CF-1)	PM = 0.038 lb/cycle[2] or 0.15 lb PM/hr @ 4 batches per hour
Low profile turbine mixer (LP-1)		PM = 0.055 lb/cycle[3] or 0.29 lb PM/hr @ 5.2 batches per hour
Induction Form Operations (IF-1 and IF-2)		PM_{10} = 0.083 lb/cycle[4] CO = 6.06 lb/cycle SO_2 = 0.01 lb/cycle NO_x = 0.062 lb/cycle VOM = 5.50 lb/cycle HAP = 0.0004 lb/cycle
Abrasive Cleaner (ABRC-1)	Zero Baghouse (ACBH-1)	PM = 0.024 lbs/hr[5]

Emissions (tons/month) = Emission Rates (lbs/hour) x Hours of Operation (hours/month)/(2,000 lbs/ton).

1 Aerofall Mill (AM-1,) and Aerofall Mill Feed Bin, Conveyor and Hopper (FSB-1, VF-1, & FH-1) emission factor is based upon total emissions from both the Custom System Baghouse (BH-7) and Pangborn Baghouse (BH-2).

The Custom System Baghouse (BH-7) emissions were estimated using the maximum dust collection rate (140.0 lb/hr) and the maximum collection efficiency (99.9%) which equaled a PM emission rate of 0.14 lb/hr.

Pangborn Baghouse (BH-2) emissions were estimated using a maximum grain loading of 2 grains/ft^3, maximum volumetric flow (5000 ft^3/min), (60 min/hr) and the maximum control efficiency (99%) which equals a PM emission rate of 0.86 lb/hr.

2 1F Mix Muller (MM-3) with Cartridge Filter System (CF-1) emissions were estimated using a maximum grain loading of 4 grains/ft^3, maximum volumetric flow (1,200 ft^3/min), maximum batch mixing (5.5 min/batch) and the maximum Cartridge Filter System (CF-1) control efficiency (99%).

3 Low profile turbine mixer (LP-1) with Cartridge Filter System (CF-1) emissions were estimated using a maximum grain loading of 4 grains/ft^3, maximum volumetric flow (1,200 ft^3/min), maximum batch mixing (8 min/batch) and the maximum Cartridge Filter System (CF-1) control efficiency (99%).

4 Induction Form Operations (IF-1 and IF-2) emissions were estimated using Tables 1.9-1 for uncontrolled wood combustion, AP-42, Volume I, Supplement B, October 1996; a process rate of 48 lbs of wood per cycle; and a cycle rate 1 cycle per 3 hours and the maximum Cartridge Filter System (CF-1) control efficiency (PM_{10} = 99%).

5 Abrasive cleaner (ABRC-1) with Zero Baghouse (ACBH-1) emissions were estimated using a calculated maximum cyclone emission rate of 7.92 lbs/hour and the maximum baghouse control efficiency of 99.7%.

iv. Charcoal Burning Processes

	Emission Factor	
Pollutant	lbs/mmBtu[1]	lbs/ton[2]
Particulate Matter	0.40	2.7[3]
Carbon Monoxide	0.60	15.6
Nitrogen Oxide	0.49	12.7
Sulfur Dioxide	0.025	0.65
Organic Material	0.17	0.44

1 USEPA AP 42 emission factors for dry wood combustion 4th Edition, September 1985, Table 1.6-1, 1.6-2, and 1.6-3.

2 The lbs/ton emission factors are based on emission factors for dry wood combustion taken from USEPA AP-42 and the heat content for charcoal (13,000 Btu/lb) obtained from Perry's Chemical Engineering Handbook, 7th Edition.

3 The PM emission factor assumes that twenty-five percent (25%) of the total emissions are from the Charcoal Burners with the balance of the emissions coming from the holding furnaces which are controlled by baghouses BH-1, BH-4 and BH-5. Particulate emissions from the holding furnaces shall be included with the particulate emissions reported for baghouses BH-1, BH-4 and BH-5.

v. For Emission Factors based on Material Throughput:

Emissions (ton/month) = Emission Factor (lb/ton) x Material Throughput (ton/month)/(2,000 lb/ton).

vi. Annual Emissions

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 (i.e., a running 12 month total of emissions).

7.2 Unit 02 – Brass Operations

7.2.1 Description

Slab Heating Furnaces (SF-1, SF-2, & SF-3):

The slab heating furnaces are used to heat cast bars of copper alloy metal to the proper hot working temperature for the hot rolling process. The slab heating furnaces are normally natural gas fired but may also be fired with a propane-air mixture.

Hot Mill (HM-1):

The hot mill rolling process consists of passing metal maintained above its recrystallization temperature between two work rolls revolving in opposite directions and spaced such that the distance between the rolls is somewhat less than the incoming material's thickness, thereby applying force and reducing the metal's thickness. Because the material is worked above its recrystallization temperature, strain hardening does not occur and large overall reductions in thickness are possible. This particular hot mill is a reversing mill, and approximately a dozen passes are used to reduce the ingot thickness from approximately 6 inches to about 1/2 inch. After being rolled to final thickness, the hot metal strip is quenched by water sprays and coiled in an upcoiler.

During the hot rolling process, the work rolls are flooded with water to prevent heat build-up in the rolls. This water then flows by gravity back to a recirculating cooling water system.

A small percentage of the metal processed on the Hot Mill is a beryllium copper alloy. Olin has installed additional emission controls which are placed in service only while processing the beryllium copper alloy. These additional emission controls are not required to meet any applicable rules but the equipment is maintained in order protect workers from exposure beryllium dust.

No. 2 and No. 3 Coil Millers (CM-1 & CM-2):

The Coil Milling operation uses miller knives to mechanically remove oxides formed on the metal strip's surface during Slab Reheating and Hot Rolling. Rotating arbors carrying milling knife inserts mechanically scalp the top and bottom strip surfaces clean, and edge millers are sometimes used to remove the oxide from the strip edges. Additional milling passes may be made in order to remove any residual superficial surface defects. The metal chips removed during milling are collected and recycled. The miller knives are cooled and lubricated by a recirculating emulsified oil solution.

The metal chips and soluble oil solution removed during milling are pneumatically conveyed thru duct work to various control

equipment. Air flow from the No. 2 Coil Miller is ducted to AAF Skimmer (SK-1), a low-pressure-drop centrifugal precipitator, then to collector/filter (GS-4) and then out to a stack. Air flow from the No. 3 Coil Miller is ducted to Torin Skimmer (SK-2), a low-pressure-drop centrifugal precipitator, then to baffled settling chamber (BSC-1) and then out to a stack.

#1 Horizontal Caster Inline Miller Skimmer (SM-2):

The #1 Horizontal Caster produces long horizontal metal strips that can be immediately upcoiled (See the description in Section 7.1.1). The horizontal casting is transferred from their respective holding furnaces and then through the associated inline miller skimmer (SM-2) which is used to remove metal oxides from the casting. Emissions from the millers are controlled with the Chip Collector (SK-4).

Polygage Miller (RM-25) And Skive Line:

Olin Polygage products are made on this machine. A Polygage product is coiled strip having two or more thicknesses across the width, rather than a rectangular cross-sectional area. The profiling is done by means of milling and/or skiving. In either case, metal is removed continuously as the strip is passed under shaped tooling. Both types of metal removal require cooling which is done by flooding the tools and the strip with a water soluble lubricant. The milled chips and lubricant are removed from the milling process thru an exhaust and chip collection system (i.e., Cyclone (CYC-1), Drop box (DOB-1) , Moisture separator (MS-1)).

Soluble Oil Rolling Mills:

Rolling mills are used to reduce the thickness of varying gauge copper alloys by using a cold rolling process. This is done by passing the strip through two work rolls which are supported by larger back up rolls. A cooling solution of soluble oil is applied to the rolls and the strip for cooling and to reduce friction. The solution is filtered to remove tramp oil and recirculated. Mist eliminators are used to reduce particulate matter emissions from some of the process emission units.

- Old Tandem Mill (RM-1): No Control
- New Tandem Mill (RM-7): A mist eliminator (FE-6) is used to reduce particulate matter emissions from the process emission unit.
- 4-Stand Tandem Mill (Mill 4): The mill is capable of processing strip with a width up to 32″. This is a one way mill meaning that metal cannot go in a reverse direction through the mill. A mist eliminator (OME-4) is used to reduce particulate matter emissions from the process emission unit.
- #5 Rolling Mill (RM-2): The mill is capable of processing strip with a width up to 5″ to 32″. This is a one way mill

meaning metal can not go in the reverse direction through the mill. A mist eliminator (FE-1) is used to reduce particulate matter emissions from the process emission unit.

- #20 Rolling Mill (RM-6): The mills are capable of processing strip with a width up to 5″ to 32″. This mill is capable of rolling strip in either direction. A mist eliminator (FE-5) is used to reduce particulate matter emissions from the process emission unit.

Mineral Oil Rolling Mills:

Rolling mills are used to reduce the thickness of varying gauge copper alloys by using a cold rolling process. This is done by passing the strip through two work rolls which are supported by larger back up rolls. A cooling solution of soluble oil is applied to the rolls are cooled with mineral oil. The solution is filtered and recirculated. All of the mineral oil mills are reversible and are controlled by mist eliminators.

- #6 Rolling Mill (RM-9): Mist Eliminator (FE-8)
- #9 Rolling Mill (RM-3): Mist Eliminator (FE-2)
- #18 Rolling Mill (RM-4): Mist Eliminator (FE-3)
- #19 Rolling Mill (RM-5): Mist Eliminator (FE-4)
- #23 Rolling Mill (RM-8): Mist Eliminator (FE-7)
- #24 Rolling Mill (Mill-24): Mist Eliminator (OME-24)
- #29 Rolling Mill (Mill-29): Mist Eliminator (OME-29)
- #34 Rolling Mill (RM-28): Mist Eliminator (OMC-28)

Bell Anneals:

Bell Anneals are batch-type furnaces used for annealing metal in coil form. The metal is stacked on a base and covered by a retort or “bell” to seal it from the atmosphere. A natural gas fired furnaces is then placed over the retort and the batch is heated to the proper temperature and held for a given period of time. After the annealing cycle has been completed, water can be used to cool the retort at a desired rate. The bell anneal is purged with a non-oxidizing atmosphere (nitrogen or hydrogen) during the annealing and cooling cycle to minimize oxidation of the metal.

- #7 Bell Anneal (BA-7): 13 bases & 6 furnaces
- #9 Bell Anneal (BA-9): 12 bases & 6 furnaces
- #11 Bell Anneal (BA-11): 9 bases & 4 furnaces
- #12 Bell Anneal (BA-12): 10 bases & 5 furnaces
- #13 Bell Anneal (BA-13): 8 bases & 4 furnaces
- #31 Bell Anneal (BA-31): 2 bases & 1 furnaces

The furnaces are normally natural gas fired, but may also be fired with a propane-air mixture.

Strip Anneals:

The purpose of the strip anneals is to anneal a bar of copper alloy which is heated in a controlled atmosphere to relieve stress in the strip induced by cold working. This is a continuous machine in which the coil is unwound and fed at a specified speed through a furnace at a given temperature. After annealing, the metal receives an acid clean and rinse. Looping towers are at the entry and exit ends to allow for continuous movement of material through the furnace.

- #3 Strip Anneal (SA-3)
- #4 Strip Anneal (SA-4)
- #5 Strip Anneal (SA-5)
- #6 Strip Anneal (SA-6)
- #7 Strip Anneal (SA-7)

No. 35 Rolling/Bonding Mill:

This machine performs two functions: cold rolling and bonding. In the cold rolling mode, copper alloy strip is reduced in thickness by means of two opposed parallel steel rollers which rotate and apply force to each surface of the strip. A lubricant is applied to the rolls and the strip for cooling and to reduce friction. The lubricant is continuously recirculated and filtered. Multiple passes on a given coil are possible by reversing the direction of the strip travel until the desired strip hardness or thickness are obtained.

In the bonding mode, two or more strips are threaded into the rolls. A heavy reduction in thickness is provided by the rolls, under high pressure. The combination of pressure and the increase in length of the strip (as a result of thickness reduction) caused the materials to adhere at the interface. A small amount of lubricant is applied to the rolls to prevent the brass alloys from sticking to the roll surface.

Particulate matter emissions are controlled with a #3 Stage filter (SFS-3).

Posit Bond Mill:

The purpose of this rolling mill is to produce a clad material from three strips of metal. Three strips are simultaneously fed into the roll bite of the mill. A reduction in thickness is provided by the rolls, under high pressure. The reduction causes the materials to adhere at the interface. Soluble oil in water is used to cool and lubricate the rolls and an oil is dripped onto the bonded coil as it is wound to prevent sticking. The lubricating oil is collected and recirculated. A mist eliminator (Filters (F-1 & F-2)) is used to reduce particulate matter emissions from the process emission unit.

Posit Bond Brushing Machines:

The purpose of the posit bond brushing machines is to clean the surface of copper and cupro-nickel strips and prepare the surface for bonding. The strips are individually fed through the machine where it is brushed in a detergent tank and rinsed. The detergent tank is continually overflowed to float out contaminates and filtered and recirculated. The strip passes through a drier oven and then through a series of wire brushed that "scratch" the surface to allow the strips to adhere better when bonded. For the #1 Posit Bond Brush Line (BM-1) a rotoclone (RC-1) collects copper dust and detached brush wires from surface "scratching" operation. For the #2 Posit Bond Brush Line (BM-2), a Drop-out Box (PBDOB-1) & Baghouse (PBBH-1) collects copper dust and detached brush wires

Hot Dip Tin Line:

The Hot Dip Tin Line consists of a flux tank (FT-1) followed by a hot dip tin tank (HD-1) and an air cooler. The hot dip tin tank is interchanged with a solder tank (ST-1) that is used for different applications of copper based alloy strip. Fumes from the flux tank and the hot dip tin tank (or the solder tank) are controlled by passing them through a venturi fume scrubber (SCRUB-1).

Cleaning Lines:

Cleaning Lines are used to clean any oxidation or discoloration from the surface of the copper alloy strip or to remove oil from a coil. A coil is unwound and fed through sulfuric acid tanks, brushed with an aggressive nylon brush, then rinsed and dried before recoiling.

Emissions from the process are collected by exhaust hoods which are vented to a fume scrubber.

Note: This narrative description is for informational purposes only and is not enforceable.

7.2.2 List of Emission Units and Air Pollution Control Equipment

Description	Emission Control Equipment	Date Constructed/ Last Modified
Slab Heating Furnaces		
#1 Slab Furnace (SF-1)**	None	Prior 1972
#2 Slab Furnace (SF-2)**	None	1979
#3 Slab Furnace (SF-3)**	None	1999
Hot Mill (HM-1)	None	Prior 1972/1998

Description	Emission Control Equipment	Date Constructed/ Last Modified
Surface Milling Operations		
#2 Coil Miller (CM-1)	Skimmer (SK-1) and Collector (GS-4)	1973/2000
#3 Coil Miller (CM-2)	Skimmer (SK-2) and Baffled Settling Chamber (BSC-1)	1977/1998
Polygage Miller (RM-25) And Skive Line	Cyclone (CYC-1); and Drop-out Box (DOB-1); Moisture Separator (MS-1)	1986/1988
#1 Horizontal Caster Inline Miller (SM-2)	Chip Collector (SK-4)	1982
Solution Rolling Mills		
Old Tandem Mill (RM-1)	None	Prior 1972
New Tandem Mill (RM-7)	Mist Eliminator (FE-6)	1978/1999
4-Stand Tandem Mill (Mill 4)	Mist Eliminator (OME-4)	1993
#5 Rolling Mill (RM-2)	Mist Eliminator (FE-1)	Prior 1972/1995
#20 Rolling Mill (RM-6)	Mist Eliminator (FE-5)	1976/1999
Mineral Oil Rolling Mills		
#6 Rolling Mill (RM-9)	Mist Eliminator (FE-8)	1976/1995
#9 Rolling Mill (RM-3)	Mist Eliminator (FE-2)	Prior 1972/1994
#18 Rolling Mill (RM-4)	Mist Eliminator (FE-3)	Prior 1972/1999
#19 Rolling Mill (RM-5)	Mist Eliminator (FE-4)	1974/1999
#23 Rolling Mill (RM-8)	Mist Eliminator (FE-7)	1984/1995
#24 Rolling Mill (Mill-24)	Mist Eliminator (OME-24)	1988/1995
#29 Rolling Mill (Mill-29)	Mist Eliminator (OME-29)	2001
#34 Rolling Mill (Mill-28)	Mist Eliminator (OMC-28)	1988
Bell Anneals		
#7 Bell Anneal (BA-7)**	None	Prior 1972/1999
#9 Bell Anneal (BA-9)**	None	1984/2003
#12 Bell Anneal (BA-12)**	None	1983/2002
#31 Bell Anneal (BA-31)**	None	2000/2003
#11 Bell Anneal (BA-11)**	None	1984
#13 Bell Anneal (BA-13)**	None	1993/1999

Description	Emission Control Equipment	Date Constructed/ Last Modified
Strip Anneals		
#3 Strip Anneal (SA-3)**	None	Prior 1972
#4 Strip Anneal (SA-4)**	None	Prior 1972/2003
#5 Strip Anneal (SA-5)**	None	Prior 1972
#6 Strip Anneal (SA-6)**	None	Prior 1972
#7 Strip Anneal (SA-7)**	None	1976
Bonding Mills		
#35 Rolling /Clad Bonding Mill (#35 Mill) (RCM-3)	3-Stage Filter System (SFS-3)	1985/1988
Posit Bond Bonding Mill (BM-2)	Filters (F-1 & F-2)	Prior 1972
Brushing Units		
#1 Posit Bond Brush Line (BM-1)	Rotoclone (RC-1)	1981
#2 Posit Bond Brush Line (BM-2)	Drop-out Box (PBDOB-1) & Baghouse (PBBH-1)	2002
Other Brass Mill Operations		
Hot Dip Tin Line (HD-1)	Fume Scrubber (SCRUB-1)	1987
#9 Cleaning Line (CT-17)	Fume Scrubber (FS-2)	1993

** Normally Natural gas firing, but may be fired with a natural gas equivalent propane-air mixture.

7.2.3 Applicable Provisions and Regulations

a. An “affected process emission units” for the purpose of the unit-specific conditions in Section 7.2 is an emission unit described in conditions 7.2.1 and 7.2.2.

b. The affected process emission units constructed or modified on or after April 14, 1972 (i.e., all emission units listed in condition 7.2.2, except for the Old Tandem Mill; #3, #5, and #6 Strip Anneals; and Posit Bond Bonding Mill) are subject to 35 IAC 212.321(a), which provides that:

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, 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 35 IAC 212.321(c) (See Attachment 2 - Emissions of Particulate Matter from Process Emission Units) [35 IAC 212.321(a)].

Note that the #1, #2, and #3 Slab Furnaces are fuel combustion emission units, and are exempt from this requirement.

c. The affected process emission units constructed or modified prior to April 14, 1972 (i.e., Tandem Mill; #3, #5, and #6 Strip Anneals; and Posit Bond Bonding Mill) are subject to 35 IAC 212.322(a), which provides that:

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 35 IAC 212.322(c) (See Attachment 2 - Emissions of Particulate Matter from Existing Process Emission Units) [35 IAC 212.322(a)].

Note that the #1, #2, and #3 Slab Furnaces are fuel combustion emission units, and are exempt from this requirement.

d. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from an affected process emission unit (as defined by Condition 7.2.3(a)), except as provided in 35 IAC 219.302, 219.303, 219.304 and the following exception: If no odor nuisance exists the limitation of this Subpart shall apply only to photochemically reactive material [35 IAC 219.301].

e. No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission unit to exceed 2000 ppm [35 IAC 214.301].

f. For each emission unit using sulfuric acid (i.e., #9 Cleaning Line (CT-17)), with the exception of fuel combustion emission units, the Permittee shall comply with the applicable requirements of 35 IAC 214.303. Specifically, 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: 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) [35 IAC 214.303].

g. As applicable, associated air pollution control equipment for the emission units shall be included in the operating program required in Condition 5.3.3 and, as per Condition 5.3.3, they shall comply with the following:

i. Materials Collected by Pollution Control Equipment: All unloading and transporting operations of materials collected by pollution control equipment shall be enclosed or shall utilize spraying, pelletizing, screw conveying or other equivalent methods [35 IAC 212.307].

ii. Particulate Collection Equipment: If particulate collection equipment is operated pursuant to 35 IAC 212.304 through 212.310 and 212.312, emissions from such equipment shall not exceed 68 mg/dscm (0.03 gr/dscf) [35 IAC 212.213].

7.2.4 Non-Applicability of Regulations of Concern

a. The #1 to #3 Slab Furnaces; Hot Mill; and #7, #9, #11 to #13, and #31 Bell Anneals are not subject to 35 IAC 217.121 for emissions of nitrogen oxides from new fuel combustion emission sources, because the actual heat input of each unit is less than 73.2 MW (250 mmBtu/hr) and the aforementioned process emission units are not by definition fuel combustion emission units as per 35 IAC 211.2470.

b. The #1 to #3 Slab Furnaces; Hot Mill; and #7, #9, #11 to #13, and #31 Bell Anneals are not subject to 35 IAC 216.121, emissions of Carbon Monoxide from fuel combustion emission units, because the aforementioned process emission units are not by definition fuel combustion emission units as per 35 IAC 211.2470.

c. The affected process emission units (as defined by Condition 7.2.3(a)) are not subject to the NSPS for Standards of Performance for Secondary Brass and Bronze Production Plants, 40 CFR 60 Subparts A and M, because, the aforementioned emission units do not meet the applicability criteria for the NSPS, i.e., 40 CFR 60.130.

7.2.5 Control Requirements and Work Practices

The Permittee shall operate and maintain, as applicable, all air pollution control equipment in a manner that assures compliance with Conditions 5.3.3, 7.2.3(f) and 7.2.6.

7.2.6 Production and Emission Limitations

In addition to the source-wide emission limitations in Condition 5.6, the affected process emission units (as defined by Condition 7.2.3(a)) are subject to the following:

a. i. Emissions and operation of the Slab Furnace Operations (SF-1, SF-2, & SF-3) (See Permit # 98090026) shall not exceed the following limits:

Natural Gas Usage** ($mmft^3$/month)	($mmft^3$/Year)
65.52	655.2

Emissions	(Tons/Month)	(Tons/Year)
NO_x	3.28	32.8
PM	0.25	2.5
VOM	0.18	1.8
SO_2	0.02	0.2
CO	2.75	27.5

These limits are based on the maximum natural gas limit provided in the permit application and the emission calculation procedures in Condition 7.2.12 [T1R].

** Normally Natural gas firing, but may be fired with a natural gas equivalent propane-air mixture.

ii. 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) [T1R].

iii. The above limitations contain revisions to previously issued Permit 98090026. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically MSSCAM and/or PSD. These limits continue to ensure that the construction and/or modification addressed in this permit does not constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. Specifically, the above limits reduce the previously allowed emission limit based upon the revised emission factors shown in Tables 1.4.1 and 1.4.2, AP-42, Volume I, Supplement D, March, 1998 (See Condition 7.2.12) [T1R].

b. i. Emissions and operation of the Hot Mill (See Permit #98040084) and their associated air pollution control equipment shall not exceed the following limits:

Throughput (Lbs/Hour)	Particulate Matter Emissions (Lbs/Hour)	(Tons/Year)
210,000	4.08	8.18

These limits are based on the information provided in the permit application and the emissions calculation procedures in Condition 7.2.12 [T1R].

ii. 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) [T1R].

iii. The above limitations were established in Permits 98040084, pursuant to PSD. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically MSSCAM and/or PSD. These limits continue to ensure that the construction and/or modification addressed in this permit does not constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. Specifically, the above limits reduce the previously allowed emission limit based upon the reduction in surface area per ton of metal processed [T1R].

c. Emissions and operation of the #2 and #3 Coil Millers (See Permit #00080019) and their associated air pollution control equipment shall not exceed the following limits:

i Operational and Production Limits and Work Practices

Maximum hourly throughput for the #2 and #3 Coil Millers shall not exceed the following limits:

Coil Miller #2: 250,000 pounds/hour.

Coil Miller #3: 262,000 pounds/hour.

ii. The PM emissions from the #2 and #3 Coil millers (combined) shall not exceed the following limits:

PM Emissions (Tons/Month)	PM Emissions (Tons/Year)
2.5	20.1

These limits are based on the maximum throughput, emission factors and the compliance procedures specified in Condition 7.2.12 [T1].

iii. 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].

iv. The above limitations were established in Permit 00080019, pursuant to 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 PSD [T1].

d. Emissions and operation of the 4-Stand Tandem Mill (See Permit #93010016) and their associated air pollution control equipment shall not exceed the following limits:

i. This permit is issued based on negligible emissions of particulate matter from 4-stand tandem mill. For this purpose, emissions shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/year [T1].

iii. 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].

iv. The above limitations were established in Permit 93010016, pursuant to 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 PSD [T1].

e. Emissions and operation of the #29 Rolling Mill With Mist Eliminator (See Permit # 01010072) and their associated air pollution control equipment shall not exceed the following limits:

i. Annual throughput of metal rolled on #29 rolling mill shall not exceed 132,720 tons/year [T1].

ii. Particulate matter emissions of #29 rolling mill shall not exceed 0.51 lb/hour and 2.14 tons/year. These limits are based on uncontrolled emission factor from similar unit at the source (3.22 lb/ton metal rolled) and control efficiency of mist

eliminator (99%) as provided in the application [T1].

iii. At all times the Permittee shall, to the extent practicable, maintain, and operate the mist eliminator, in a manner consistent with good air pollution control practice for minimizing emissions.

iv. This permit is issued based on negligible emissions of volatile organic material from #29 rolling mill. For this purpose, emissions shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/year [T1].

v. 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].

vi. The above limitations were established in Permits 01010072, pursuant to 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 PSD [T1].

f. Emissions and operation of the Bell Anneal process emission units (See Permit #07010037) shall not exceed the following limits:

i. Natural gas or a propane/air equivalent mix shall be the only fuels used by the affected bell anneal processes.

ii. The maximum firing rates for each bell anneal furnace shall not exceed 9.9 million Btu/hour.

iii. The total annual bell annealing throughput for the affected bell anneal processes shall not exceed 310,000 tons.

iv. Particulate matter, PM, emissions from the affected bell anneal processes shall not exceed the following limits:

Process	Lbs/Hr	Tons/Mo	Tons/Yr
Total From All Bell Annealing Processes	---	1.5	14.55

These limits are based on the usage limits in Condition 7.2.6(f)(iii), and the emission factors and

compliance procedures specified in Condition 7.2.12 [T1].

v. 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].

vi. The above limitations were established in Permits 07010037, pursuant to 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 PSD [T1].

g. Emissions and operation of the #4 Strip Anneal (See Permit #03030083) shall not exceed the following limits:

i. Natural gas or a propane-air equivalent mix shall be the only fuels used by the #4 Strip Anneal.

ii. Annual natural gas usage for the #4 Strip Anneal shall not exceed 45.26 million SCF.

iii. Emissions from the #4 Strip Anneal shall not exceed the following limits:

Pollutant	Lbs/Hour	Tons/Month	Tons/Year
PM	8.69	0.21	2.09
CO	----	40.70	407.30
NO_x	----	1.50	14.77
VOM	----	0.02	0.22
SO_2	----	0.01	0.10

These limits are based on the usage limits above, and information supplied in the permit application.

iv. 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].

v. The above limitations were established in Permits 03030083, pursuant to 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 PSD [T1].

h. Emissions and operation of the #1 Posit Bond Brushing Machine (BM-1) (See Permit #98120051) and associated air

pollution control equipment shall not exceed the following limits:

i. Emission of particulate matter from the #1 Posit Bond Brushing Machine shall not exceed 0.44 lb/hr and 1.85 tons/year. These limits are based on maximum material throughput (18,750 lb/hr and 78,750 tons/year), operating hours(8,400 hours/year), and overall reduction efficiency (93.0%).

Compliance with the particulate matter limitations in this section is assured and achieved by the proper operation and maintenance of the Rotoclone as required by this permit and the work practices inherent in operation of the #1 Posit Bond Brushing Machine.

ii. 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].

iii. The above limitations were established in Permits 98120051, pursuant to 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 PSD [T1].

i. Emissions and operation of the #2 Posit Bond Brushing Machine (BM-2) (See Permit #99070007) and associated air pollution control equipment shall not exceed the following limits:

i. This permit is issued based on negligible emissions of particulate matter from the #2 Posit Bond Brushing Machine with drop out box and baghouse. For this purpose, emissions shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/year.

ii. 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].

iii. The above limitations were established in Permits 99070007, pursuant to 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 PSD [T1].

j. Emissions and operation of the Hot Dip Tin Line (HD-1) (See Permit #04120083) and associated air pollution control equipment shall not exceed the following limits:

i. This permit is issued based on negligible emissions of particulate matter (PM) from the hot dip tin line. For this purpose, PM emissions shall not exceed 0.1 lbs/hour and 0.44 tons/year.

ii. Emissions of hydrogen chloride (HCl) from the hot dip tin line shall not exceed 0.024 lbs/hour and 0.1 tons/year.

v. 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].

vi. The above limitations were established in Permits 04120083, pursuant to 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 PSD [T1].

k. Emissions and operation of the #9 Cleaning Line (See Permit #93080004) and associated air pollution control equipment shall not exceed the following limits:

i. Emissions of sulfuric acid and/or sulfuric acid trioxide (H_2SO_4) from the #9 Cleaning Line acid cleaning tank (CT-17) with fume scrubber (FS-2) shall not exceed the following limits:

Operating Hours (Hours/Year)	H_2SO_4 Emissions (Lbs/Hour)	(Tons/Year)
8,400	0.1	0.42

ii. This permit is issued based upon negligible emissions of NO_x and CO from the No. 9 Cleaning Line gas fired dryer (D-7). For this purpose emissions of each pollutant shall not exceed 0.1 lbs/hour and 0.44 tons/year.

iii. 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].

iv. The above limitations were established in Permits 93080004, pursuant to 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 PSD [T1].

l. Emissions and operation of the #1 Horizontal Caster Inline Miller (SM-2) with their associated Chip Collector (SK-4) shall not exceed the following limits:

i. Emissions

PM/PM_{10} Emissions		
(Lbs/Hour)	(Tons/Month)	(Tons/Year)
0.51	0.29	2.90

These limits are based on the production limits for the Horizontal Casters in 7.1.6(b) and the emission calculation procedures in Condition 7.2.12 [T1R].

ii. Emissions of carbon monoxide (CO) from the strip annealing process (the key downstream unit) shall not exceed 18,000 lb per million scf of natural gas used [T1].

iii. 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) [T1R].

iv. The above limitations were established in Permit 04020062, pursuant to PSD. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically MSSCAM and/or PSD. These limits continue to ensure that the construction and/or modification addressed in this permit does not constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. Specifically, the emission limits were revised using the production limits for the Horizontal Casters (See Condition 7.1.6(b)) and the previously permitted #1 Horizontal Caster Inline Miller (SM-2) emission rates (0.2921 lbs PM/ton) in Permit 04020062 and the emission calculation procedures in Condition 7.2.12 [T1R].

7.2.7 Testing Requirements

Testing requirements are not set for the affected process emission units (as defined by Condition 7.2.3(a)). However, there are source-wide testing requirements in Condition 5.7 and general testing requirements in Condition 8.5.

7.2.8 Monitoring Requirements

The Permittee shall document the following as part of the recordkeeping and compliance procedures requirements in Conditions 7.2.9 and 7.2.12 and, as applicable, the sources standard operating procedures:

a. Differential Pressure Monitoring: The Permittee shall monitor the differential pressure across each baghouse controlling an affected process emission unit (as defined by Condition 7.2.3(a)) according to the schedule shown in Attachment 5 (Pressure Drop Monitoring Schedule and Visible Emission Compliance Demonstration).

b. Monthly Operational Inspections: The Permittee shall perform monthly operational inspections of the equipment that is important to the performance of the capture system for each affected process emission unit (as defined by Condition 7.2.3(a)) (e.g., pressure sensors, dampers, and damper switches, scrubber pumps, as applicable). This inspection shall include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). Any deficiencies shall be noted and proper maintenance performed.

   Not withstanding the above if an affected process emission unit (as defined by Condition 7.2.3(a))is not operated during a month, the above inspections need not be performed provided however that such an inspection shall be conducted as part of the resumption of operation of the aforementioned affected process emission unit.

c. Visible Emission Observations

   The Permittee shall comply with the visible emission monitoring requirements for each affected process emission unit (as defined by Condition 7.2.3(a)) according to the procedures shown in Attachment 5 (Pressure Drop Monitoring Schedule and Visible Emission Compliance Demonstration).

   For each emission source requiring visible emission observations as noted in Attachment 5, the Permittee shall comply with the following visible emission observation requirements:

i. The Permittee shall conduct a qualitative visible emissions observation once each day during normal daylight operations when the process emission units and associated air pollution control equipment are in operation in order to observe for the presence of abnormal visible emissions. These observations shall be made and recorded by a trained employee. If such observations during operation do not detect observable emissions for a period of two weeks, the frequency of observations shall be reduced to once per week when operating. If the weekly observations do not detect observable emissions for a period of two months, the frequency of observations shall be reduced to once per month when operating. If abnormal visible emissions are detected the frequency of observations shall be increased to once a day. Observations thereafter may be reduced again if visible emissions are not detected for the period outlined above.

   If abnormal visible emissions are observed, the Permittee shall initiate corrective actions to eliminate the abnormal visible emissions. If the Permittee cannot eliminate the abnormal visible emissions within 24 hours, the Permittee shall conduct opacity testing pursuant to the methods and procedures in Method 9 (40 CFR Part 60, Appendix A) within three days after the qualitative observation showing abnormal emissions.

ii. For processes operated continuously, “normal” means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

iii. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

iv. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

v. The Permittee shall follow the sources standard operating procedures and manufactures specifications, as applicable, in order to correct periods of excess emissions. The program and/or the procedures for a specific emission units and associated air pollution control equipment shall contain troubleshooting contingency and response steps for when an abnormal emission are observed.

d. Broken Bag Observations

In the event of a bag failure that causes the Permittee to operate outside the parameters in the permit for pressure drop or to emit visible emissions, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the sources standard operating procedures and manufactures operating specifications shall be initiated, as applicable. For any failure with corresponding response steps and timetable not described in the program or procedures indicated above, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion.

7.2.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall document, maintain and retain records of the following items for the affected process emission units (as defined by Condition 7.2.3(a)) to demonstrate compliance with Conditions 5.6.1, 7.2.6 and 7.2.8, pursuant to Section 39.5(7)(b) of the Act:

a. Hot Mill Operations:

i. Tons of material hot milled at the hot milling unit (tons/day).

ii. Hours of operation of the hot milling unit (hours/day).

iii. PM emissions for hot milling unit (lbs/hour and tons/month) based on the emission calculation procedures in Condition 7.2.12, with supporting calculations.

iv. PM emissions for the hot rolling operations (tons/year) as calculated by summing the monthly emissions from the hot milling unit for each month and the preceding 11 months (running total).

b. Coil Miller #2 and #3:

i. Throughput for each Coil Miller (pounds/day and tons/month);

ii. Hours of operation of each coil miller (hours/day);

iii. PM emissions for #2 and #3 Coil Millers, combined (pounds/hour, tons/month and tons/year) based on the

emission calculation procedures in Condition 7.2.12, with supporting calculations.

c. Bell Anneal Operations:

i. A file that identifies the maximum process weight rate of each affected bell anneal processes and associated maximum hourly particulate matter emission, with supporting documentation and calculations. This file shall be updated whenever there is a change in a process that could significantly alter particulate matter emissions, e.g.; change in usage rate or retention of oil.

ii. Operating logs for the affected bell anneal processes.

iii. Records of the following items for the affected bell anneal processes:

A. Material annealed (tons/month and tons/year).

B. Emissions of PM (tons/month and tons/year).

d. Posit Bond Brushing Machines (BM-1 & BM-2):

i. Records for periodic inspection of the Rotoclone and drop out box and baghouse, as applicable, with date, individual performing the inspection, and nature of inspection; and

ii. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.

iii. The aggregate monthly and annual PM emissions from the Posit Bond brushing machines based on the emission calculation procedures in Condition 7.2.12, with supporting calculations.

e. #29 rolling mill with mist eliminator:

i. Tons of metal rolled on #29 rolling mill (tons/month and tons/year); and

ii. The aggregate monthly and annual PM emissions based on the emission calculation procedures in Condition 7.2.12, with supporting calculations.

iii. A maintenance log for the mist eliminator detailing all routine and non-routine maintenance performed including dates and duration of any outages.

f. Fuel Combustion Records:

i. Natural Gas usage (ft^3/month and ft^3/year);

ii. Capacity or Rating for each fuel burner (e.g., BTU/hour); and

iii. Emission Calculations (ton/month and ton/year) based on the emission calculation procedures in Condition 7.2.12, with supporting calculations.

g. Hot Dip Tin Line:

i. A file containing the following:

A. The amount of HCl in the flux.

B. The maximum uncontrolled HCl emissions.

C. The scrubber efficiency.

ii. Records of flux usage (lbs/hour and tons/year).

iii. Logs of inspection, maintenance, and repairs for the Hot Dip Tin Line.

iv. Records for upsets or deviations in operation of the Hot Dip Tin Line that would increase emissions, with estimate of the excess emissions and supporting calculations.

h. Air Pollution Control Equipment:

The Permittee shall document, maintain and retain records of the following:

i. Baghouse pressure monitoring, visible emission observations, and operational inspections required in Condition 7.2.8 and a log of all repairs and corrective actions implemented as a result of the above.

ii. Baseline measurements used to determine malfunctions (i.e., baseline baghouse pressure drop).

iii. The date and reason any required inspection was not performed.

i. All Other Equipment:

i. Production and Material throughput records;

iii. Emission Calculations (tons/month and tons/year) for each emission unit or each emission unit grouping, as

applicable, based on the emission calculation procedures in Condition 7.2.12, with supporting calculations.

7.2.10 Reporting Requirements

a. Reporting of Deviations

i. The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the affected process emission units (as defined by Condition 7.2.3(a))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. Deviations can include but are not limited to the following:

A. Emissions of PM, PM_{10}, VOM, SO_2, NO_x, CO and visible emissions from the affected process emission units (as defined by Condition 7.2.3(a)) in excess of the limits specified in Conditions 7.2.3 and 7.2.6 within 30 days of such occurrence.

B. Operation of the affected process emission units (as defined by Condition 7.2.3(a)) in excess of the limits specified in Conditions 7.2.3, 7.2.5, and 7.2.6 within 30 days of such occurrence.

ii. If there is a deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report within 30 days after the deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the deviation and efforts to reduce emissions and future occurrences.

7.2.11 Operational Flexibility/Anticipated Operating Scenarios

Operational flexibility is not set for the affected process emission units (as defined by Condition 7.2.3(a)). However, there may be provisions for source-wide operational flexibility set forth in Condition 5.11 of this permit.

7.2.12 Compliance Procedures

a. Compliance with the fugitive particulate matter and visible emissions limits in Conditions 5.3.2(a), 5.3.3 and 7.2.3(g) and the opacity limitations of Conditions 5.3.2(b) is based upon the operating program requirements of 5.3.3 and the

air pollution control equipment and visible emissions monitoring required in Condition 7.2.8.

b. Compliance with the PM emissions limits in Conditions 7.2.3(b), (c), and (f) is assured and achieved by the proper operation and maintenance of the air pollution control equipment as required in Condition 7.2.5, the operational limitations in Conditions 7.2.6 and visible emissions and air pollution control equipment monitoring required in Condition 7.2.8 and the work-practices inherent in operation of the affected process emission units (as defined by Condition 7.2.3(a)).

c. i. Compliance with the sulfur dioxide (SO_2) limit in Condition 7.2.3(e) is assured based upon the limitations on fuel usage in Condition 7.2.6.

ii. Compliance with the sulfuric acid and/or sulfur trioxide limit for the #9 Cleaning Line (CT-17) in Condition 7.2.3(f) and 7.2.6(k) is assured based upon the use of the control equipment listed in Condition 7.2.1 and 7.2.2 (i.e., Fume Scrubber (FS-2)). (See Condition 7.2.12(h) below).

d. To determine compliance with Conditions 5.6.1 and 7.2.6, emissions from the fuel burning emission units (i.e., Slab Heating Furnaces), shall be calculated based on the following emission factors and formulas or the current version of AP-42, or other calculation methods as approved by the IEPA:

i. Natural Gas

Pollutant	Emission Factor ($lb/10^6$ ft^3)
NO_x	100.0
PM	7.6
VOM	5.5
SO_2	0.6
CO	84.0

These are the emission factors for uncontrolled natural gas combustion in boilers (<100 mmBtu/hr), Tables 1.4.1 and 1.4.2, AP-42, Volume I, Supplement D, March, 1998.

Natural Gas Combustion Emissions (lb) = (Natural Gas Consumed, ft^3) x (The Appropriate Emission Factor)

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 (i.e., a running 12 month total of emissions).

e. To determine compliance with Conditions 5.6.1, 7.2.6(b)(i), particulate matter emissions from the hot mill shall be calculated based on the following or other calculation methods as approved by the IEPA:

PM Hot Mill (lb/hr) = 0.0389 x (Throughput rate/2000)

PM Hot Mill (lb/month) = 0.0389 x (Tons of Material Hot Milled for the month)

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 (i.e., a running 12 month total of emissions).

The Hot Mill emission factor is based upon a March 27, 1991 stack test where average PM emissions = 0.433 lb/bar of metal processed and the average bar weight equaled 7.5 tons. Note that this emission factor has been adjusted to account for the change in surface area per ton of metal processed that has occurred since the stack test was completed.

f. To determine compliance with Conditions 5.6.1 and 7.2.6(c), particulate matter emissions from the coil milling operation shall be calculated based on the following emission factors, or other calculation methods as approved by the IEPA:

PM #2 Coil Miller (lb/hr) = 0.040 x (Throughput rate/2000)

PM #3 Coil Miller (lb/hr) = 0.073 x (Throughput rate/2000)

PM #2 Coil Miller (lb/month) = 0.040 x (Tons of Material Coil Milled for the month)

PM #3 Coil Miller (lb/month) = 0.073 x (Tons of Material Coil Milled for the month)

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 (i.e., a running 12 month total of emissions)

The No. 2 Coil Miller emissions factor is based upon the August 18, 2004 stack test for the No. 2 Coil Miller (0.040 lb PM/ton).

The No. 3 Coil Miller emission factor is based upon the August 17, 2004 stack test for the No. 3 Coil Miller (0.073 lb PM/ton).

g. To determine compliance with Conditions 5.6.1 and 7.2.6(f), PM emissions from the Bell Anneal Operations shall be calculated based on the following emission factors and formulas or other calculation methods as approved by the IEPA:

i. Bell Anneal BA-7, BA-9, BA-12, and BA-31B = 0.099 lb/ton

ii. Bell Anneal BA-11 = 0.028 lb/ton

iii. Bell Anneal BA-13 = 0.020 lb/ton

Emissions (ton/month) = Emission Factor (lb/ton) x Material Throughput (ton/month)/(2,000 lb/ton).

Where Material Throughput (tons/month) equals the amount of stripped annealed in each unit.

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 (i.e., a running 12 month total of emissions).

Note these factors are developed based on the surface area per ton of strip multiplied by the rate of oil used per square feet.

h. To determine compliance with Conditions 5.6.1 and 7.2.6, emissions from the affected process emission units (as defined by Condition 7.2.3(a)) shall be calculated based on the following emission factors for each type of process emission unit, or other calculation methods as approved by the IEPA:

Description	Emission Control Equipment	Emission Factor
Surface Milling Operations		
#1 Horizontal Caster Inline Miller (SM-2)	Chip Collector (SK-4)	lbs PM/ton = 0.292[1]
Polygage Miller (RM-25) and Skive Line	Cyclone (CYC-1); and Drop-out Box (DOB-1); Moisture Separator (MS-1)	lbs PM/hr = 0.025
Solution Rolling Mills		
Old Tandem Mill (RM-1)	None	0.01 lbs PM/tons rolled[3]

Description	Emission Control Equipment	Emission Factor
New Tandem Mill (RM-7)	Mist Eliminator (FE-6)	0.00005 lbs PM/tons rolled[4]
4-Stand Tandem Mill (Mill 4)	Mist Eliminator (OME-4)	
#5 Rolling Mill (RM-5)	Mist Eliminator (FE-1)	
#20 Rolling Mill (RM-6)	Mist Eliminator (FE-5)	
Mineral Oil Rolling Mills		
#6 Rolling Mill (RM-9)	Mist Eliminator (FE-8)	0.0322 lbs PM/tons rolled[5]
#9 Rolling Mill (RM-3)	Mist Eliminator (FE-2)	
#18 Rolling Mill (RM-4)	Mist Eliminator (FE-3)	
#19 Rolling Mill (RM-5)	Mist Eliminator (FE-4)	
#23 Rolling Mill (RM-8)	Mist Eliminator (FE-7)	
#24 Rolling Mill (Mill-24)	Mist Eliminator (OME-24)	
#29 Rolling Mill (Mill-29)	Mist Eliminator (OME-29)	
#34Rolling Mill (Mill-28)	Mist Eliminator (OMC-28)	
Bell Anneals		
#7 Bell Anneal (BA-7)	None	lbs PM/ton = 0.099[6]
#9 Bell Anneal (BA-9)	None	
#12 Bell Anneal (BA-12)	None	
#31 Bell Anneal (BA-31)	None	
#11 Bell Anneal (BA-11)	None	lbs PM/ton = 0.028[7]
#13 Bell Anneal (BA-13)	None	lbs PM/ton = 0.020[8]

Description	Emission Control Equipment	Emission Factor
Strip Anneals		
#3 Strip Anneal (SA-3) #4 Strip Anneal (SA-4) #5 Strip Anneal (SA-5) #6 Strip Anneal (SA-6) #7 Strip Anneal (SA-7)	None	PM = 52.2 lb/mmcf[9] NO_x = 368.7 lb/mmcf[9] SO_2 = 2.5 lb/mmcf[9] CO = 18,000 lb/mmcf[9] VOM = 5.5 lb/mmcf[9]
Bonding Mills		
#35 Rolling /Clad Bonding Mill (#35 Mill) (RCM-3)	3-Stage Filter System (SFS-3)	Mode 1 - Rolling: PM = 0.46 lb/hr[10] Mode 2 - Bonding: PM = 0.043 lb/hr[11]
Posit Bond Bonding Mill (BM-2)	Filters (F-1 & F-2)	PM = 0.039 lb/hr[12]
Brushing Units		
#1 Posit Bond Brushing Machine (BM-1)	Rotoclone (RC-1)	PM = 0.44 lb/hr[13]
#2 Posit Bond Brushing Machine (BM-2)	Drop-out Box (PBDOB-1) & Baghouse (PBBH-1)	PM = 0.0021 lb/hr[14]
Hot Dip Tin Line (HD-1)	Fume Scrubber (SCRUB-1)	HCl = 0.013 lb HCl/hr[15] PM = 0.031 lb/hr[15]
#9 Cleaning Line (CT-17)	Fume Scrubber (FS-2)	PM = 0.021 lb/hr[16]

i. For Emission Factors based on hourly emission rate:

Emissions (ton/month) = Emission Rates (lbs/hr) x Hours of Operation (hrs/month)/(2,000 lb/ton).

ii. For Emission Factors based on Material Throughput:

Emissions (ton/month) = Emission Factor (lb/ton) x Material Throughput (ton/month)/(2,000 lb/ton).

iii. Annual Emissions

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 (i.e., a running 12 month total of emissions).

A. The #1 Horizontal Caster Inline Miller emission factor is based upon engineering estimate (See Permit 04020062).

B. The Polygage Miller (RM-25) and Skive Line emission factor is based upon engineering estimate, using the maximum oil solution pumping rate (2 gal/min), 5% oil solution density (8.3 lb/gal) and the maximum overall control efficiency of the Cyclone (CYC-1) – 90%; and Drop-out Box (DOB-1) – 50%; Moisture Separator (MS-1) – 99% or 99.95%.

C. The Old Tandem Mill (RM-1) factor is based upon engineering estimate using historical records of the amount of soluble oil added to the Old Tandem Mill (Old TM) per ton of strip processed (0.1 lb/ton) and an estimated oil loss rate of 10%.

D. Solution Rolling Mills factor is based upon engineering estimate using historical records of the amount of soluble oil added to the Old Tandem Mill (Old TM) per ton of strip processed (0.1 lb/ton), an estimated oil loss rate of 10% and an estimated mist eliminator control efficiency of 99.5%.

E. The Mineral Oil Rolling Mills is based upon engineering estimate using historical records of the amount of soluble oil returned from the mist eliminators (5 gal/hr) while the mills were processing 22,900 lbs/hr of metal strip, an estimated mist eliminator control efficiency of 99%, and an mineral oil density of 7.3 lb/gal.

F. The PM emission factor for the #7, #9, #12 & #31 Bell Anneals (BA-7, BA-9, BA-12, & BA-31) is based upon engineering estimate using a maximum residual oil deposit rate 0.02 grams/ft^2, a calculated average metal strip surface area per ton strip of 4509 ft^2/ton and estimated stack oil vapor condensation rate of 50%.

G. The PM emission factor for the #11 Bell Anneal (BA-11) is based upon engineering estimate using a maximum residual oil deposit rate 0.02 grams/ft^2, a calculated average metal strip surface area per ton strip of 1288 ft^2/ton and estimated stack oil vapor condensation rate of 50%.

H. The PM emission factor for the #13 Bell Anneal (BA-13) is based upon engineering estimate using a maximum residual oil deposit rate 0.02 grams/ft^2, a calculated average metal strip surface area per ton strip of 902 ft^2/ton and estimated stack oil vapor condensation rate of 50%.

I. The Strip anneal fuel combustion factors are based upon the results of PM, NO_x, and SO_2 stack tests for the #6 strip anneal (PM = 0.350 lb/hr, NO_x = 2.470 lb/hr and SO_2 =0.017 lb/hr) and an estimated fuel use rate of 6,700 scf per hour; CO emissions factor is based upon a mass balance calculation and the VOM emission factor is the VOM emission factor found in AP-42 for the uncontrolled natural gas combustion in boilers (<100 mmBtu/hr), Tables 1.4.1 and 1.4.2, AP-42, Volume I, Supplement D, March, 1998.

J. The #35 Rolling /Clad Bonding Mill (#35 Mill) (RCM-3) – Mode 1 emissions are based upon engineering estimate using historical records of the amount of soluble oil returned from the mist eliminators (5 gal/hr) while the mills were processing 22,900 lbs/hr of metal strip, a mineral oil density of 7.3 lb/gal and an estimated mist eliminator collection and control efficiency of 98.7%.

K. The #35 Rolling /Clad Bonding Mill (#35 Mill) (RCM-3) – Mode 2 emissions are based upon engineering estimate of maximum polyethylene glycol lubricant application rate of 6.66 lb/hr, a 50% evaporation rate and an estimated mist eliminator collection and control efficiency of 98.7%.

L. The Posit Bond Bonding Mill (BM-2) emissions are based upon engineering estimate using maximum oil usage rate 2,237 gal/yr), 8760 hr/yr of operation, an oil density of 7.54 lb/gal, a soluble oil loss rate of 10% and an estimated filter collection and control efficiency of 98%.

M. The #1 Posit Bond Brushing Machine(BM-1) emissions are based upon engineering estimate using maximum dust and debris collection rate of 5.83 lb/hr, and an estimated collection and control efficiency of 93%. Maximum uncontrolled emissions are estimated at 6.27 lb/hr.

N. The #2 Posit Bond Brushing Machine (BM-2) emissions are based upon engineering estimate using maximum dust and debris collection rate of 3.85 lb/hr, and an estimated Drop-out Box (PBDOB-1) & Baghouse (PBBH-1) collection and control efficiency of 99.95%.

O. The Hot Dip Tin Line (HD-1) HCl emissions are based upon engineering estimate using maximum flux usage rate of 15 lb/hr, flux HCl content of 17%, an un-reacted HCl release rate of 25%, and an estimated Fume Scrubber (SCRUB-1) collection and control efficiency of 98%. PM emissions are based metal oxide emission factor of 0.0065 pound per pound of tin used, a tin usage rate of 240 lb tin/hr, and an estimated Fume Scrubber (SCRUB-1) collection and control efficiency of 98%.

P. The #9 Cleaning Line (CT-17) emissions are based upon engineering estimate using maximum H_2SO_4 concentration of 15%, actual H_2SO_4 usage rates for #1, #6, and # 8 cleaning lines (53 lb/hr) and the emission factors from Modern Pollution Control Technology, Volume 1, pg. 7-11 and 7-23 (2% loss of makeup H_2SO_4) and an estimated Fume Scrubber (FS-2) collection and control efficiency of 98%.

7.3 Unit 03: Ammunition Operations

7.3.1 Description

Shot Tower Operations

Lead Shot Manufacturing:

Shot manufacturing is a process whereby pig lead is melted in three lead melt kettles (LK-1 to LK-3) on the seventh floor of the Shot Tower. Melted lead from the kettles is poured through a shot pan with holes drilled in the bottom. After the molten lead passes through the holes, it falls approximately 190 feet into a well containing about 10 feet of water. The shot is then taken from the well by a well chain and dumped into a water box on the second floor. The water box drains the water from the shot and adds graphite to it. The shot is then processed through three driers (D-1 to D-3) on the first floor. The shot is then transferred to the fourth floor where a shot distributor sends the shot to the glass top tables on the third floor where the unacceptable shot is separated from the acceptable shot. The acceptable shot goes through the shot polishers (P-1 to P-4) on the first floor and then into three of the six drier pots (DP-1 to DP-3) on the first floor. The acceptable shot is collected in containers and transferred to other production areas for further processing. The unacceptable shot goes directly to the other three drier pots (DP-4 to DP-6) on the first floor and then recycled back to the seventh floor for re-melting using the scrap elevator pit (SP-1).

Propane - The furnaces are normally natural gas fired, but may also be fired with a propane-air mixture.

Emissions from the melt kettles are controlled by a baghouse (STBH-1). Emissions from the Shot dryer (D-1 to D-3), Drier pots (DP-1 to DP-6), polisher (P-1 to P-4, & scrap elevator pit (SP-1) are controlled with a Rotoclone (RC-2).

Billet Melt Kettles:

Lead is melted in the Lower Billet Melt Kettle (LK-4). After the lead has been melted it is transferred to the Upper Billet Holding Kettle (LK-6) where it remains in its molten stage. The molten lead is then transferred to the Billet Molding Station where lead billets are formed. The Lower Billet Melt Kettle (LK-4) has been divided into two modes of operation depending on the type of material being melted. Mode 1 represents melting of refined pigs or scrap lead generated on-site. Mode 2 represents melting of scrap lead from off-site sources which potentially generate higher emissions.

The billet casting furnaces are normally natural gas fired but may also be fired with a propane-air mixture.

Extrusion Press Tumblers(EPT-1 to EPT-4):

Lead billets are extruded into lead slugs. The lead slugs are tumbled against each other to remove sharp edges. Sharp edges typically complicate the final processing of the lead slugs.

Buckshot Tumbling System (T-1 & T-2):

The Buckshot tumblers (T-1 & T-2) process is currently operated in an enclosed room. Due to OSHA operator exposure limits for lead, this operation is exhausted to the atmosphere.

The exhaust system consists of hooded enclosures over each tumbler and a Baghouse (TBH-2) to control emissions prior to discharge in the atmosphere.

Lead Pump Chip-Out (LPC-1):

The Lead pump chip-out (LPC-1) Exhaust System is an existing piece of equipment that was installed in October 1991. The Lead Pump Chip-Out Exhaust System is used to control emissions when routine maintenance is performed on lead pumps. The routine maintenance involves chipping off lead dross build-up from the lead pumps. An 8 inch diameter flexible hose is placed next to the pumps when the chipping process begins. As lead dross dust is created, the exhaust system pulls in the lead dross particulate and exhausts it to an existing Baghouse (TBH-2). This is the same baghouse used in the Buckshot Tumbling System.

Central Vacuum System (CVS-1):

The Central Vacuum System (CVS-1) is used for maintenance related clean-up work at the Shot Manufacturing Facility. There are a total of 46 available vacuum pick-up points; however, 3 to 5 points are the most in use at any one time.

The vacuum system is used to “clean” work table surfaces and floor areas under the tables at the end of each shift.

Other Ammunition Operations

50 Caliber Bead Blaster:

The 50 caliber bead blaster (BB-1) consists of a bead blast cabinet for stress-relief of the mouth area of shellcases. Nine blasting guns discharge glass beads in the cabinet directed at the mouth area of the shell cases. After firing, the glass beads and glass dust are picked up in a closed ventilation system that passes through a cyclone separator. The separator recycles the glass bead back to the cabinet and discharges the glass bead dust into a baghouse which is located outside of the processing building. The baghouse efficiency is 99.97%.

Wad Tumbling:

A wad is a paper cylinder that is the diameter of a shotgun shell and approximately 3/8″ thick. It is ultimately used as a component of a shotgun shell. After manufacture from a paper slurry, a wad is fed into a loading hopper which discharges into a wad tumbling bin (WTB-1, 2, & 3). The bin operates very similar to a domestic clothes dryer with a perforated rotating barrel. The wads enter the bin with rounded edges and a paper particle fuzz on their surface. The wads leave the bin with sharp edges and with the fuzz polished off by the tumbling action. From the bin the wads are packaged. A byproduct of the polishing is the paper particles removed from the wad. These particles are exhausted to a rotoclone (WR-1, 2, 3) prior to being released to the atmosphere inside the building. The wad tumbling operation consists of 3 identical hopper/bin/rotoclone arrangements.

Manurhin Powder Handling System:

Olin's Manurhin Powder Handling System consists of a pneumatic distribution system that transfers propellant powder from a powder distribution building to cyclone separator bins (CSB-1 to CSB-4) located at each of the loading machines. The system can transfer powder to only one loading machine at a time. Emissions from the cyclone separator bins are controlled by a single wet separator (WS-1) and Bag separator (BS-1).

Nitration Tank (T-2):

Resorcinol is converted to trinitroresorcinol (styphnic acid) by a two-stage reaction. In the first stage, resorcinol is converted to sulfonic acid by means of a reaction with sulfuric acid. In the second stage, the sulfonic acid is converted to trinitroresorcinol in the nitration tank by means of a reaction with nitric acid. NO_x is released from the nitration tank during this reaction. The trinitroresorcinol is subsequently used in the preparation of lead styphnate compounds. Less than 100 tons of nitric acid (100% basis) is used in this process annually.

Spent Acid Storage Tank (T-3):

The Spent Acid Storage Tank is used to collect the highly concentrated waste acid from the trinitroresorcinol manufacturing process. This waste acid is periodically removed for off-site treatment/disposal. During storage of the waste acid, some of the nitric acid will break down and nitrogen dioxide will be released from solution.

Building 7 Cobmeal Collection System:

Olin's Building 7 Tumbler system consists of two cobmeal tumblers (TM-5 and TM-6) and one cobmeal collection system

(CCS-1). The purpose of the Tumbler System is to clean bullets prior to assembly and move the spent cobmeal to a collection point. The tumblers were installed and operated prior to April 1972. The tumblers are insignificant emission sources. The cobmeal collection system was installed in 1999.

MRF Rotary Destruct System:

The MRF Rotary Destruct System (RDR-1) is used to insure that all primer mix has been detonated before scrap brass, steel, and aluminum leave the Material Reclamation Facility. A furnace supplies indirect heat to the retort containing the scrap metal being processed. The heat causes detonation of the primer mix in the retort in order to insure that the scrap metal is safe to recycle.

The furnace and retort have separate emission points. The furnace is rated at 1 million BTU per hour and applies heat to the outside of the retort. Emissions from the retort are collected from the feed and discharge end of the retort and are ducted to a dust collection system (RDRF-1). Makeup air is drawn into to the duct system in order to protect the cartridge air filters from excessive heat.

Stage 1, 2, And 3 Hammermills:

Stage 1 Hammermill (HM-1): Empty primed shot shells or guillotined shotshells, loaded centerfire & rimfire rounds, empty primed centerfire shells, or scrap lead bullet ends are fed into a Hammer Mill which distorts or “chops” the material to separate it into its component parts. During the process, it is assumed that 10 percent of the powder in loaded rounds and 90 percent of the primer mix is ignited. A water spray is introduced continuously into the process to reduce the reactivity of powder and priming mix and to keep the material cool while in process. From the Hammer Mill the powder is screened from the scrap metal or plastic.

Stage 2 Hammermill (HM-2): Empty primed shot shells or guillotined shotshells, loaded centerfire & rimfire rounds, empty primed centerfire shells, or scrap lead bullet ends which chops or distorts the material in the hammer Mill to separate it into its component parts. It is assumed that 90 percent of the primer mix is ignited in the mill. A water spray is introduced continuously into the process to reduce the reactivity of powder and priming mix and to keep the material cool while in process. Following the Hammer Mill, the smokeless powder and shot, if any, is separated from the paper, plastic and metals in a screen separator. Then the paper and plastic is separated from the metals in a gravity separator as indicated on the flow diagram.

Stage 3 Hammermill (HM-3): Empty primed rimfire shells, scrap shot shell and centerfire primers are fed into a Hammer Mill. The rimfire shells contain only primer mix. A caustic alkaline

solution is continuously sprayed on the process to chemically kill the primer mix. This material arrives at the mill having been soaked in a caustic/water solution therefore ignition of the primers during milling rarely occurs. In the event ignition occurs, the operation is halted and that material is allowed to soak until the next time the hammermill is operated. It is assumed from the above reasoning that a maximum of 3% of the priming mix ignites.

Particulate matter is collected through the Hammermill dust collector (HMDC-1).

Olin Propellant Treatment Process (OPTP):

Scrap propellant will be treated using the OPTP. The propellant scrap is added to the OPTP reactor vessel where it is chemically treated in 800-gallon batches by hydrolysis. Chemicals used in the OPTP include caustic and sulfuric acid (for pH adjustment).

Shotshell Cut-off Firing Machines:

The shotshell cut-off firing machine is a process that involves cutting off the projectile of a shotgun shell and then firing the primer of the shell in order to capture the shells powder. A 2-stage filter controls particulate matter and lead emissions. This process leaves an empty un-primed shotshell.

Note: This narrative description is for informational purposes only and is not enforceable.

7.3.2 List of Emission Units and Air Pollution Control Equipment

Shot Tower Operations

Description	Emission Control Equipment	Date Constructed
Lead Shot Manufacturing		
Lead Shot Melt Kettles (LK-1 to LK-3)**	Baghouse (STBH-1)	Prior 1972
Shot Drying and Polishing	Rotoclone RC-2	1976
Drier (D-1 to D-3)		
Drier Pots (DP-1 to DP-6)		
Polishers (P-1 to P-4)		
Scrap Elevator Pit (SP-1)		
Lower Lead Billet Melt Kettle (LK-4)**	None	Prior 1972
Lead Billet Holding Kettle (LK-6)**	None	1982
Extrusion Press Tumblers (EPT-1 to EPT-4)	None	Prior 1972
Buckshot Tumbling System (T-1 & T-2)	Baghouse (TBH-2)	1980
Lead Pump Chip-Out (LPC-1)		1991

Description	Emission Control Equipment	Date Constructed
Central Vacuum System (CVS-1)	Cyclone Separator (CS-1) & Baghouse (BS-1)	1976
Other Ammunition Operations		
50 Caliber Bead Blaster (BB-1)	Cyclone (CYC-1) & Baghouse (BH-1)	July 1995
Wad Tumblers (WTB-1, 2, & 3)	Rotoclones (WR-1, 2 & 3)	Prior 1972
Manurhin Powder Handling System (B-1 thru B-4)	Wet Separator (WS-1) & Bag Separator (BS-2)	1980
Nitration Tank (T-2)	None	Prior 1972
Spent Acid Storage Tank (T-3)	None	1974
Building 7 Cobmeal Collection System (CCS-1)	Filters (CCF-1 & CCF-2)	1999
MRF Rotary Destruct System Retort (RDR-1)**	Retort Destruct Dust Collector Filter (RDDC-1)	1997
Stage I Hammermill (HM-1)	Hammermill Dust Collector (HMDC-1)	Modified 2006
Stage II Hammermill (HM-2)		
Stage III Hammermill (HM-3)		
Olin Propellant Treatment Process (OPTP-1)	None	2000
Shotshell Cutoff Firing Machine (SSCOFM-1)	2-Stage Filter	2002

** Normally Natural gas firing, but may be fired with a natural gas equivalent propane-air mixture.

7.3.3 Applicable Provisions and Regulations

a. An “affected process emission unit” for the purpose of the unit-specific conditions in Section 7.3 is an emission unit described in conditions 7.3.1 and 7.3.2.

b. The process emission unit listed in condition 7.3.2, i.e., Lead Shot Melt Kettles (LK-1 to LK-3); Lower Lead Billet Melt Kettle (LK-4); Extrusion Press Tumblers (EPT-1 to EPT-4); Wad Tumblers (WTB-1, 2, & 3); and Nitration Tank (T-2) are subject to 35 IAC 212.321(a), which provides that:

   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, 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 35 IAC 212.321 (See

Attachment 1 Emissions of Particulate Matter from New Process Emission Units) [35 IAC 212.321(a)].

For the nitration tank (T-2), compliance with this limit is assured based upon the inherent nature of the nitration tank.

c. All process emission unit listed in condition 7.3.2, except for the Lead Shot Melt Kettles (LK-1 to LK-3); Lower Lead Billet Melt Kettle (LK-4); Extrusion Press Tumblers (EPT-1 to EPT-4); Wad Tumblers (WTB-1, 2, & 3); and Nitration Tank (T-2) are subject to 35 IAC 212.322(a), which provides that:

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 35 IAC 212.322 (See Attachment 2 Emissions of Particulate Matter from Existing Process Emission Units) [35 IAC 212.322(a)].

For the spent acid storage tank (T-3), compliance with this limit is assured based upon the inherent nature of the spent acid storage tank.

d. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from an affected process emission unit (as defined by Condition 7.3.3(a)), except as provided in Sections 219.302, 219.303, 219.304 of this Part and the following exception: If no odor nuisance exists the limitation of this Subpart shall apply only to photochemically reactive material [35 IAC 219.301].

e. No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission unit to exceed 2000 ppm [35 IAC 214.301].

f. For each emission unit using sulfuric acid (i.e., Olin Propellant Treatment Process (OPTP-1)), with the exception of fuel combustion emission units, the Permittee shall comply with the applicable requirements of 35 IAC 214.303. Specifically, 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: 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).

g. Existing Industrial Processes. No person shall cause or allow the emission of nitrogen oxides into the atmosphere from any existing process producing products of organic nitration and/or oxidation using nitric acid to exceed 5.0 kg of nitrogen oxides (expressed as nitrogen dioxide) per metric tonne of nitric acid (100 percent acid basis) used in such process (10.0 lbs/T) [35 IAC 217.301(b)].

Exemption. 35 IAC 217.301(b) shall not apply to any industrial process using less than 90.7 metric tonnes (100 tons) of nitric acid (100 percent acid basis) annually or which produces less than 907 kg (1 ton) of nitrogen oxides (expressed as nitrogen dioxide) per year [35 IAC 217.301(c)].

The Permittee has provided justification that the nitration tank (NT-2) and spent acid storage tank (T-3) are exempt from the requirements of 35 IAC 217.301(a) and (b) (See Condition 7.3.5).

h. As applicable, associated air pollution control equipment for the emission units shall be included in the operating program required in Condition 5.3.3 and, as per Condition 5.3.3, they shall comply with the following:

i. Materials Collected by Pollution Control Equipment: All unloading and transporting operations of materials collected by pollution control equipment shall be enclosed or shall utilize spraying, pelletizing, screw conveying or other equivalent methods [35 IAC 212.307].

ii. Particulate Collection Equipment: If particulate collection equipment is operated pursuant to 35 IAC 212.304 through 212.310 and 212.312, emissions from such equipment shall not exceed 68 mg/dscm (0.03 gr/dscf) [35 IAC 212.313].

7.3.4 Non-Applicability of Regulations of Concern

a. The Lead Shot Melt Kettles, Lower Lead Billet Melt, and Lead Billet Holding units are not subject to 40 CFR 60 Subpart R - Standards of Performance for Primary Lead Smelters; 40 CFR 60 Subpart L – Standards of Performance for Secondary Lead Smelters; 40 CFR 63 Subpart X - National Emission Standards For Hazardous Air Pollutants From Secondary Lead Smelting; and 40 CFR 63 Subpart TTT - National Emission Standards for Hazardous Air Pollutants for Primary Lead Smelting, because the lead melting emission units do not meet the applicability criteria for these regulations.

Specifically, these emission units are operated as remelters, in that the emission units are not physically

set up for smelting operations and only remelt lead and lead alloy pigs and scrap (See Condition 7.3.5(a)).

b. The nitration tank (T-2) and spent acid storage tank (T-3) are not subject to any of the requirements of 35 IAC 219, because organic materials are neither stored or processed in the tanks.

7.3.5 Control Requirements and Work Practices

a. The Lead Shot Melt Kettles, Lower Lead Billet Melt, and Lead Billet Holding units are limited to the "remelting" of lead pigs, off-specification lead scrap, and other lead scrap purchased from off-site (i.e., lead sheathing, etc.).

b. The following requirements are applicable to the nitration tank (T-2) and spent acid storage tank (T-3):

i. Organic materials shall neither be stored or processed in the Nitration Tank or Spent Acid Storage Tank.

ii. Only sulfuric acid, nitric acid, resorcinol, water, and spent acid solutions shall be processed in the Nitration Tank and Spent Acid Storage Tank.

iii. Total nitric acid usage shall not exceed 100 tons per year on a 100% acid basis.

7.3.6 Production and Emission Limitations

In addition to Condition 5.3.2 and the source-wide emission limitations in Condition 5.6, the affected process emission units (as defined by Condition 7.3.3(a)) are subject to the following:

a. Lower Billet Melt Kettle Permit (Permit #97120071):

i. Natural gas shall be the only fuel fired in the lower billet melt kettle.

ii. Emissions and operation of equipment shall not exceed the following limits:

	Lower Billet Melt Kettle Mode 1	Lower Billet Melt Kettle Mode 2	
Operating Hours	8,400	4,000	(Hour/Year)
Throughput	39,480	18,800	Ton/Year
PM Emissions	0.16	0.89	Lb/Hour
	0.67	1.78	Ton/Year
Lead Emissions	0.04	0.15	Lb/Hour
	0.16	0.30	Ton/Year

These limits are based on maximum material usage and stack test results. Compliance shall be determined in accordance with Condition 7.3.12 [T1].

iii. 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].

iv. The above limitations were established in Permits 97120071, pursuant to 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 PSD [T1].

b. MRF Hammermills stages 1, 2 and 3 Permit #03010028:

i. The MRF Hammermills stages 1, 2, and 3 shall not exceed the following operational limits:

Affected Equipment Material Processed	Operating Hours	Throughput (Lbs/Hr)	Throughput (Tons/Year)
Stage I Hammermill: Ammunition Components	4,000 Annually	5,000	10,000
Stage II Hammermill: Scrap Metal, Smokeless Powder, Plastic and Paper	4,000 Annually	2.500	5,000
Stage III Hammermill: Distorted Primers and Distorted Empty Rim-Fire Shells	4,000 Annually	2,500	5,000

ii. Emissions from the MRF Hammermills stages 1, 2, and 3 shall not exceed the following limits:

Equipment	PM (Lb/Hr)	PM (T/Yr)	Pb (Lb/Hr)	Pb (T/Yr)	CO (Lb/Hr)	CO (T/Yr)
Stage I						
Hammermill	0.0067	0.0134	0.0019	0.0038	11.55	23.10
Stage II						
Hammermill	0.003	0.0067	0.0010	0.0019	5.78	11.55
Stage III						
Hammermill	0.0010	0.0019	0.00036	0.0006	0.37	0.75
Totals	0.011	0.0220	0.0032	0.0063	17.70	35.39

These limits are based on the throughput and annual operating hour limits in listed above and emission factors and limits (in the case of source total) as delineated in the permit application.

iii. 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].

iv. The above limitations were established in Permits 03010028, pursuant to 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 PSD [T1].

c. Building 7 Cobmeal Collection System (Permit #98120002):

i. This permit is issued based on negligible emissions of particulate matter from tumblers (TM-5, TM-6) and new collection system (CCS-1). For this purpose emissions from each emission source shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/year.

ii. 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].

iii. The above limitations were established in Permits 98120002, pursuant to 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 PSD [T1].

d. MRF Rotary Destruct System with Baghouse (Permit #97100026):

i. This permit is issued based on negligible emissions of particulate matter and lead from the MRF rotary destruct system with baghouse (RDRF-1). For this purpose, emissions shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/year.

ii. 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].

iii. The above limitations were established in Permits 97100026, pursuant to 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 PSD [T1].

e. OPTP Reactor Vessel Permit #00080073:

i. Maximum number of batches for the OPTP Reactor Vessel: 31 batches/month and 250 batches/year.

ii. Maximum amount of propellant per batch: 350 lbs.

iii. Emissions from the OPTP Reactor Vessel shall not exceed the following limits:

NO_x Emissions	
(Lbs/Hour)	(Tons/Year)
11.6	1.5

These limits are based on the maximum number of batches, maximum amount of propellant per batch and the compliance procedures specified in Condition 7.3.12.

iv. 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].

v. The above limitations were established in Permits 00080073, pursuant to 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 PSD [T1].

f. Shotshell Cut-Off Firing Machine (SSCOFM-1) with 2-stage filter (2-SF) Permit #02050092:

i. The Permittee shall follow good operating practices for the 2-stage filter, including periodic inspection, routine maintenance and prompt repair of defects.

ii. Operation of each Shotshell Cut-Off Firing Machine shall not exceed 2000 hours/year.

iii. This permit is issued based on negligible emissions of particulate matter from the Shotshell Cut-Off Firing Machine. For this purpose emissions from all such sources shall not exceed nominal emission rates of 0.1 lb/hour and 0.1 tons/year.

iv. This permit is issued based on negligible emissions of lead from the Shotshell Cut-Off Firing Machine. For this purpose emissions from all such sources shall not exceed nominal emission rates of 0.007 lb/hour and 0.007 tons/year.

v. Compliance with the particulate matter limitations in this section is assured and achieved by the proper operation and maintenance of the filters as required by this section and the work-practices inherent in operation of the Shotshell Cut-Off Firing Machine.

vi. 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].

vii. The above limitations were established in Permits 02050092, pursuant to 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 PSD [T1].

7.3.7 Testing Requirements

Testing requirements are not set for the affected process emission sources (as defined by Condition 7.3.3(a)). However, there are source-wide testing requirements in Condition 5.7 and general testing requirements in Condition 8.5.

7.3.8 Monitoring Requirements

The Permittee shall document the following as part of the recordkeeping and compliance procedures requirements in

Conditions 7.3.9 and 7.3.12 and, as applicable, the sources standard operating procedures:

a. Differential Pressure Monitoring: The Permittee shall monitor the differential pressure across each baghouse controlling an affected process emission unit (as defined by Condition 7.3.3(a)) according to the schedule shown in Attachment 5 (Pressure Drop Monitoring Schedule and Visible Emission Compliance Demonstration).

b. Monthly Operational Inspections: The Permittee shall perform monthly operational inspections of the equipment that is important to the performance of the capture system for each affected process emission unit (as defined by Condition 7.3.3(a)) (e.g., pressure sensors, dampers, and damper switches, scrubber pumps, as applicable). This inspection shall include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). Any deficiencies shall be noted and proper maintenance performed.

   Not withstanding the above if an affected process emission unit (as defined by Condition 7.3.3(a)) is not operated during a month, the above inspections need not be performed provided however that such an inspection shall be conducted as part of the resumption of operation of the aforementioned affected process emission unit.

c. Visible Emission Observations

   The Permittee shall comply with the visible emission monitoring requirements for each affected process emission unit (as defined by Condition 7.3.3(a)) according to the procedures shown in Attachment 5 (Pressure Drop Monitoring Schedule and Visible Emission Compliance Demonstration).

   For each emission source requiring visible emission observations as noted in Attachment 5, the Permittee shall comply with the following visible emission observation requirements:

   i. The Permittee shall conduct a qualitative visible emissions observation once each day during normal daylight operations when the process emission units and associated air pollution control equipment are in operation in order to observe for the presence of abnormal visible emissions. These observations shall be made and recorded by a trained employee. If such observations during operation do not detect observable emissions for a period of two weeks, the frequency of observations shall be reduced to once per week when operating. If the weekly observations

do not detect observable emissions for a period of two months, the frequency of observations shall be reduced to once per month when operating. If abnormal visible emissions are detected the frequency of observations shall be increased to once a day. Observations thereafter may be reduced again if visible emissions are not detected for the period outlined above.

If abnormal visible emissions are observed, the Permittee shall initiate corrective actions to eliminate the abnormal visible emissions. If the Permittee cannot eliminate the abnormal visible emissions within 24 hours, the Permittee shall conduct opacity testing pursuant to the methods and procedures in Method 9 (40 CFR Part 60, Appendix A) within three days after the qualitative observation showing abnormal emissions.

ii. For processes operated continuously, “normal” means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

iii. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

iv. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

v. The Permittee shall follow the sources standard operating procedures and manufactures specifications, as applicable, in order to correct periods of excess emissions. The program and/or the procedures for a specific emission units and associated air pollution control equipment shall contain troubleshooting contingency and response steps for when an abnormal emission are observed.

d. Broken Bag Observations

In the event of a bag failure that causes the Permittee to operate outside the parameters in the permit for pressure drop or to emit visible emissions, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the sources standard operating procedures and manufactures operating specifications shall be initiated, as applicable. For any failure with corresponding response

steps and timetable not described in the program or procedures indicated above, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion.

7.3.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for the affected process emission sources (as defined by Condition 7.3.3(a)) to demonstrate compliance with Conditions 5.6.1, 7.3.6, and 7.3.8, pursuant to Section 39.5(7)(b) of the Act:

a. As applicable, hours of operation (hours/month and hours/year) for each emission unit.

b. Lower Billet Melt Kettle Permit (Permit # 97120071):

i. Lead throughput (ton/month and ton/year) for each mode of operation (i.e., Mode 1 and 2); and

ii. Hours of operation (hours/month and hours/year) for each mode of operation (i.e., Mode 1 and 2).

c. Nitration Tank (T-2) and Spent Acid Storage Tank (T-3):

i. Nitric acid usage on a 100% acid basis;

ii. Production records of the number of nitration batches; and

iii. Annual PM and NO_x emissions from the Nitration Tank and Spent Acid Storage Tank based on the number of nitration batches and the applicable emission factors and formulas with supporting calculations.

d. MRF Hammermills stages 1, 2 and 3

i. Material throughput (lbs/hour and tons/year);

ii. Emissions of: PM, CO and Pb in lbs/hour and tons/year; and

iii. Operating hours for each Hammermill (monthly and annually).

e. OPTP Reactor Vessel

i. Number of batches (batches/month and batches/year);

ii. Amount of propellant per batch (pounds); and

iii. NO_x emissions for the OPTP Reactor Vessel (tons/month and tons/year).

f. Shotshell Cut-Off Firing Machine (SSCOFM-1) with 2-stage filter (2-SF):

i. Hours of operation for each Shotshell Cut-Off Firing Machine (hours/month);

ii. Records for periodic inspection of the filter with date, individual performing the inspection, and nature of inspection; and

iii. Records of prompt repair of defects of filters, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.

g. Air Pollution Control Equipment:

The Permittee shall document, maintain and retain records of the following:

i. Baghouse pressure monitoring, visible emission observations, and operational inspections required in Condition 7.3.8 and a log of all repairs and corrective actions implemented as a result of the above.

ii. The date and reason any required inspection was not performed.

7.3.10 Reporting Requirements

a. Reporting of Deviations

i. The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the affected process emission units (as defined by Condition 7.3.3(a))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 Deviations can include but are not limited to the following:

A. Emissions of PM, PM_{10}, VOM, SO_2, NO_x, CO, Pb and visible emissions from the affected process emission sources (as defined by Condition 7.3.3(a)) in excess of the limits specified in Conditions 7.3.3 through 7.3.6 within 30 days of such occurrence.

B. Operation of the affected process emission sources (as defined by Condition 7.3.3(a)) in excess of the limits specified in Conditions

7.3.3, 7.3.5 and 7.3.6 within 30 days of such occurrence.

ii. If there is a deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report within 30 days after the deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the deviation and efforts to reduce emissions and future occurrences.

b. Nitration Tank (T-2)

i. Any loading of any material not described in Condition 7.3.5 within five days of becoming aware of the noncompliance status. This notification shall include a description of the event, the cause for the noncompliance, actions taken to correct the noncompliance and the steps taken to avoid future noncompliance.

ii. Nitric acid usage in excess of 100 tons per year on a 100% acid basis within five days of becoming aware of the noncompliance status. This notification shall include a description of the event, the cause for the noncompliance, actions taken to correct the noncompliance and the steps taken to avoid future noncompliance.

iii. Annual NO_x emissions from the Nitration Storage Tank based on the material stored, the tank throughput, and the applicable emission factors and formulas with supporting calculations.

7.3.11 Operational Flexibility/Anticipated Operating Scenarios

Operational flexibility is not set for the affected process emission sources (as defined by Condition 7.3.3(a)). However, there may be provisions for source-wide operational flexibility set forth in Condition 5.11 of this permit.

7.3.12 Compliance Procedures

a. Compliance with the fugitive particulate matter and visible emissions limits in Conditions 5.3.2(a), 5.3.3 and 7.3.3(h) and the opacity limitations of Conditions 5.3.2(b) is based upon the operating program requirements of 5.3.3 and the air pollution control equipment and visible emissions monitoring required in Condition 7.3.8.

b. Compliance with the PM emissions limits in Conditions 7.3.3(b) and (c) is assured and achieved by the proper operation and maintenance of the air pollution control

equipment as required in Condition 7.3.5, the operational limitations in Conditions 7.3.6 and visible emissions and air pollution control equipment monitoring required in Condition 7.3.8 and the work-practices inherent in operation of the affected process emission units (as defined by Condition 7.3.3(a))

c. Compliance with the sulfur dioxide (SO_2) limit in Condition 7.3.3(e) is assured based upon the limitations on fuel usage in Condition 7.3.6.

d. i. To determine compliance with Conditions 5.6.1 and 7.3.6(d), NO_x emissions from the OPTP Reactor Vessel shall be calculated based on the following emission factors and formulas, or other calculation methods as approved by the IEPA:

NO_x (Tons/Month) = (Lbs Propellant/Batch)(15 Grams NO_x/Lbs Propellant*) (Number Batches/Month)/(454 Grams/Lbs) (2,000 Lbs/Ton)

* Based on the conversion of Nitrite ion to NO_x, 15 grams of NO_x are generated per pound of propellant treated.

See Condition 7.3.12(f)

ii. Compliance with the sulfuric acid and/or sulfur trioxide limit for the Olin Propellant Treatment Process (OPTP-1) in Condition 7.3.3(f) is assured based upon small quantities of sulfuric acid being used for pH adjustment in order to aid in the chemical breakdown (hydrolysis) of scrap propellant.

e. To determine compliance with Conditions 5.6.1 and 7.3.6, emissions from the fuel burning emission units shall be calculated based on the following emission factors and formulas:

Natural Gas

Pollutant	Emission Factor ($lb/10^6$ ft^3)
NO_x	100.0
PM	7.6
VOM	5.5
SO_2	0.6
CO	84.0

These are the emission factors for uncontrolled natural gas combustion in boilers (<100 mmBtu/hr), Tables 1.4.1 and 1.4.2, AP-42, Volume I, Supplement D, March, 1998.

Natural Gas Combustion Emissions (lb) = (Natural Gas Consumed, ft^3) x (The Appropriate Emission Factor)

f. To determine compliance with Conditions 5.6.1 and 7.3.6(e), emissions from the MRL Hammermills stages 1, 2, and 3 shall be calculated based on the following emission factors for each type of process material, or other calculation methods as approved by the IEPA:

Equipment	PM (Lbs/Hr)	Pb (Lbs/Hr)	CO (Lbs/Hr)
Stage I Hammermill	0.0067	0.0019	11.55
Stage II Hammermill	0.0033	0.0010	4.78
Stage III Hammermill	0.0010	0.0003	0.37

The MRL Hammermills stages 1, 2, and 3 PM & Pb emission factors are based upon engineering estimate using a maximum process rates, laboratory analysis data, and the control efficiency of the control equipment (i.e., Spray Mist and Hammermill Dust Collector (HMDC-1)). CO emissions are based upon maximum process rates and the emission factor in AP-42 Table 13.3-1 1/95 (77 lb CO per 1000 lb powder burned)

g. i. To determine compliance with Conditions 5.6.1 and 7.3.6, emissions from the affected process emission sources (as defined by Condition 7.3.3(a)) shall be calculated based on the following emission factors for each type of process emission unit, or other calculation methods as approved by the IEPA:

Description	Emission Control Equipment	Emission Factor
Lead Shot Melt Kettles (LK-1 to LK-3)	Baghouse (STBH-1)	PM = 0.0014 lb/hr[1] Pb = 0.00045 lb/hr[2]
Shot Drying and Polishing		
Drier (D-1 to D-3)	Rotoclone (RC-2)	PM = 0.051 lb/hr[3] Pb = 0.0004 lb/hr[4]
Drier Pots (DP-1 to DP-6)		
Polishers (P-1 to P-4)		
Scrap Elevator Pit (SP-1)		
Lower Lead Billet Melt Kettle (LK-4); Mode 1; Olin Scrap Mode 2: Outside Scrap	None	Mode 1: PM = 0.16 lb/hr[5] Pb = 0.04 lb/hr[6] Mode 2: PM = 0.89 lb/hr[7] Pb = 0.15 lb/hr[8]

Description	Emission Control Equipment	Emission Factor
Upper Lead Billet Holding Kettle (LK-6)	None	PM = 0.008 lb/hr[9] Pb = 0.00004 lb/hr[10]
Extrusion Press Tumblers (EPT-1 to EPT-4)	None	PM & Pb = 0.00075 lb/hr[11]
Buckshot Tumbling System (T-1 & T-2)	Baghouse (TBH-2)	PM & Pb = 0.031 lb/hr[12]
Lead Pump Chip-Out (LPC-1)		PM & Pb = 0.77 lb/hr[13]
Central Vacuum System (CVS-1)	Cyclone Separator (CS-1) & Baghouse (BS-1)	PM & Pb = 0.0017 lb/hr[14]
50 Caliber Bead Blaster	Cyclone (CYC-1) & Baghouse (BH-1)	PM = 0.0015 lb/hr[15]
Wad Tumblers (WTB-1, 2, & 3)	Rotoclones (WR-1, 2 & 3)	PM = 0.24 lb/hr[16]
Manurhin Powder Handling System	Wet Separator (WS-1) & Bag Separator (BS-1)	PM = 0.00002 lb/hr[17]
Nitration Tank (T-2)	None	NO_x = 7.76 lb/batch[18]
Spent Acid Storage Tank (T-3)	None	NO_x = 33.4 lb/batch[19]
Building 7 Cobmeal Collection System	Filters (CCF-1 & 2)	PM = 0.0024 lb/hr[20] Pb = 0.0005 lb/hr[21]
Rotary Destruct Retort (RDR-1):	Retort Destruct Dust Collector Filter (RDDC-1	PM = 0.027 lb/hr[22] Pb = 0.0075 lb/hr[23]
Olin Propellant Treatment Process (OPTP-1)	None	NO_x = 11.56 lb/batch[24]
Shotshell Cutoff Firing Machine (SSCOFM-1)	2-Stage Filter (2-SF)	PM = 0.0083 lb/machine hr[25] Pb = 0.0024 lb/machine hr[26]

[1] Combined Lead Shot Melt Kettles (LK-1 to LK-3) PM emissions are based upon engineering

estimate, using the maximum combined throughput for the units (30,000 lbs/hour); the emission factor for lead refining kettle in Table 12.11-2, AP-42, 5th edition January 1995 (0.03 lb PM/ton lead melted); and the maximum overall control efficiency of the Baghouse (STBH-1) (99.7%)

[2] Combined Lead Shot Melt Kettles (LK-1 to LK-3) lead emissions are based upon engineering estimate, using the maximum combined throughput for the units (30,000 lbs/hour); the emission factor for lead refining kettle in Table 12.11-2, AP-42, 5th edition January 1995 (0.01 lb Pb/ton lead melted); and the maximum overall control efficiency of the Baghouse (STBH-1) (99.7%) –

[3] Combined PM emission factor for the Shot Drying and Polishing Drier (D-1 to D-3), Drier Pots (DP-1 to DP-6), Polishers (P-1 to P-4), Scrap Elevator Pit (SP-1) is based upon the June 21, 1995 stack test for the Rotoclone (RC-2) (0.032 lb PM/hour @ combined process rate of 26.5 tons lb or 0.00114 lb PM/ton) and the maximum combined throughput from all emission units (45 tons/hour).

[4] Combined Pb emission factor for the Shot Drying and Polishing Drier (D-1 to D-3), Drier Pots (DP-1 to DP-6), Polishers (P-1 to P-4), Scrap Elevator Pit (SP-1) is based upon the June 21, 1995 stack test for the Rotoclone (RC-2) (0.00025 lb Pb/hour or 0.83% (0.00025/0.0302) of the particulate emissions). Using the combined PM factor (0.051 lb/hour), Pb emissions equal 0.0004 lb Pb/hour.

[5] The PM emission factor for Mode 1 (Olin Scrap) of the Lower Lead Billet Melt Kettle (LK-4) is based upon personal sampler tests performed in 1997 (0.53 lb per run) and a process weight rate of 24 tons per run (0.0220 lb PM/ton). The test results were adjusted to 150% of tested emissions or 0.033 lb PM/ton and the maximum process weight is estimated at 9,400 lb/hour (PM = 0.16 lb/hour).

[6] The Pb emission factor for Mode 1 (Olin Scrap) of the Lower Lead Billet Melt Kettle (LK-4) is based upon personal sampler tests performed in 1997 (0.124 lb per run) and a process weight rate of 24 tons per run (0.00515 lb Pb/ton). The test results were adjusted to 150% of tested emissions or 0.008 lb Pb/ton and the

maximum process weight is estimated at 9,400 lbs/hour (Pb = 0.038 lb/hour).

[7] The PM emission factor for Mode 2 (Outside Scrap) of the Lower Lead Billet Melt Kettle (LK-4) is based upon personal sampler tests performed in 1997 (2.69 lb per run) and a process weight rate of 21 tons (0.128 lb PM/ton). The test results were adjusted to 150% of tested emissions or 0.190 lb PM/ton and the maximum process weight is estimated at 9,400 lbs/hour (PM = 0.89 lb/hour).

[8] The Pb emission factor for Mode 2 (Outside Scrap) of the Lower Lead Billet Melt Kettle (LK-4) is based upon personal sampler tests performed in 1997 (0.450 lb per run) and a process weight rate of 21 tons (0.0214 lb PM/ton). The test results were adjusted to 150% of tested emissions or 0.0.032 lb PM/ton and the maximum process weight is estimated at 9,400 lbs/hour (PM = 0.89 lb/hour).

[9] The PM emission factor for the Upper Lead Billet Holding Kettle (LK-6) is based upon stack tests performed on June 29 through July 8, 1971 which indicated lead made up 20% of total PM. Therefore as per the factor below; 0.00004 lb Pb/hour/0.20 = 0.008 lb PM/hour.

[10] The Pb emission factor for the Upper Lead Billet Holding Kettle (LK-6) is based upon stack tests performed on April 23, 1971 (Pb = 30.6×10^{-6} grams/m^3) (Pb = 0.00004 lb Pb/hour).

[11] The Extrusion Press Tumblers (EPT-1 to EPT-4) PM & Pb emission factor is based upon engineering estimate.

[12] The combined Buckshot Tumbling System (T-1 & T-2) PM and Pb emission factor is based upon process exhaust factor for foundry tumbling "Modern Pollution Control Technology", Volume 1 - Air Pollution Control, R.E.A., 1978 (0.28 gr/ft^3) and a Baghouse (TBH-2) exhaust rate of 2175 cfm and a control efficiency of 99.7%.

[13] The Lead Pump Chip-Out (LPC-1) PM & Pb emission factor is based upon ambient industrial hygiene testing for lead dust (0.279 mg/m^3), and a Baghouse (TBH-2) a capture efficiency of 90%; exhaust rate of 2175 cfm; and a control efficiency of 99.7%.

[14] The Central Vacuum System (CVS-1) PM and Pb emission factor is based upon engineering estimate using the maximum Cyclone Separator (CS-1) waste collection rate of 3000 lbs/week @ 24 hour/day and 7 days per week (17.9 lbs/hour), a collection efficiency of 97%. Uncontrolled inlet loading to Baghouse (BS-1) was then estimated to be 0.56 lb/hour. Based on a control efficiency of 99.7%, Baghouse (BS-1) outlet emissions was then estimated to be 0.0017 lb/hour.

[15] The Central Vacuum System (CVS-1) PM emission factor is based upon engineering estimate using the maximum glass bead make-up rate to the blast cabinet 123 lbs/hour and maximum Cyclone (CYC-1) recycle/collection efficiency of 96%. Uncontrolled inlet loading to Baghouse (BH-1) was then estimated to be 4.9 lbs/hour. Based on a control efficiency of 99.97%, Baghouse (BH-1) emissions was then estimated to be 0.00147 lb/hour.

[16] The Wad Tumblers (WTB-1, 2, & 3) PM emission factor is based upon engineering estimate using the a mass balance of material lost per wad after tumbling (0.04 grams/wad) and a maximum process rate of 350,000 wads per 8 hour shift. Uncontrolled inlet loading to each Rotoclone (WR-1, 2 & 3) was then estimated to be 3.85 lb/hr. Based on a control efficiency of 97.9% for each Rotoclone (WR-1, 2 & 3), outlet emissions was then estimated to be 0.08085 lb/hr (Combined emissions 0.24 lb PM/hr).

17. The Manurhin Powder Handling System PM emission factor is based upon engineering estimate using the maximum combined process rate for the cyclone separator bins (CSB-1 through CSB-4) 231.42 lbs/hour and the powder transfer efficiency of the cyclone separator bins (99.9%). Note: Only one cyclone separator bin can be operated at a time.

    Uncontrolled inlet loading to Wet Separator (WS-1) was then estimated to be 0.24 lb/hour. Based on a control efficiency of 97.9% for each Wet Separator (WS-1), inlet loading to Bag Separator (BS-1) was then estimated to be outlet emissions was then estimated to be 0.0050 lb/hour. Based on a control efficiency of 99.7%, final outlet emissions was then estimated to be 0.0000150 lb/hour.

[18] The Nitration Tank (T-2) NO_x emission factor (7.76 lbs NO_x/batch) is based upon engineering estimate using the median emission factor (42 lbs NO_x/ton acid) shown in "Control Techniques for Nitrogen Oxide Emissions from Stationary Sources", USDHEW publication Number 67, Section 7.2.3.2 and the maximum nitric acid solution used per batch (560 lbs/batch @ 66% nitric acid).

[19] The Spent Acid Storage Tank (T-3) NO_x emission factor (33.4 lbs NO_x/batch) is based upon engineering estimate using the process rate of 3050 lbs of spent nitric acid and water solution (3.5% nitric acid) per tank, a final concentration of the solution of 2% prior to disposal, and the molecular weight ratio of NO_2 to nitric acid (HNO_3) 46/63.

[20] The Building 7 Cobmeal Collection System PM emission factor is based upon engineering estimate using a maximum process rate of the collector (400 lbs/hour), the vacuum collection efficiency of 98%, and the final HEPA filter (Filters (CCF-1 & 2)) efficiency of 99.97%.

[21] The Building 7 Cobmeal Collection System Pb emission factor is based upon engineering estimate using a maximum process rate of the collector (400 lbs/hour), the vacuum collection efficiency of 98%, the final HEPA filter (Filters (CCF-1 & 2)) efficiency of 99.97%, and an assumed lead (Pb) concentration of 20%.

[22] The Rotary Destruct Retort (RDR-1) PM emission factor is based upon engineering estimate using a maximum process rate of 42.9 lb primer mix per hour, laboratory analysis data (0.628 lb PM/lb/mix), and the Retort Destruct Dust Collector Filter (RDDC-1) control efficiency of 99.99%.

[23] The Rotary Destruct Retort (RDR-1) Pb emission factor is based upon engineering estimate using a maximum process rate of 42.9 lbs primer mix per hour, laboratory analysis data (0.628 lb PM/lb mix), the Retort Destruct Dust Collector Filter (RDDC-1) control efficiency of 99.99%, and a lead concentration of 28% of total PM.

[24] The Olin Propellant Treatment Process (OPTP-1) NO_x emission factor (11.56 lbs NO_x/batch) is based upon engineering estimate using the process rate of 350 lbs of propellant per

batch, a NO_x conversion rate of 15 grams NO_x per pound of propellant treated.

[25] The Shotshell Cutoff Firing Machine (SSCOFM-1) PM emission factor is based upon engineering estimate using a maximum process rate of 0.864 lb primer mix per hour, laboratory analysis data (0.607 lb PM/lb mix), the 2-Stage Filter (2-SF) control efficiency of 98.4%.

[26] The Shotshell Cutoff Firing Machine (SSCOFM-1) Pb emission factor is based upon engineering estimate using a maximum process rate of 0.864 lb primer mix per hour, laboratory analysis data (0.607 lb PM/lb mix), the 2-Stage Filter (2-SF) control efficiency of 98.4%, and a lead concentration of 29% of total PM.

ii. For Emission Factors based on hourly emission rate:

Emissions (tons/month) = Emission Rates (lbs/hour) x Hours of Operation (hours/month)/(2,000 lbs/ton).

iii. For Emission Factors based on Material Throughput:

Emissions (tons/month) = Emission Factor (lbs/ton) x Material Throughput (tons/month)/(2,000 lbs/ton).

iv. Annual Emissions

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 (i.e., a running 12 month total of emissions).

7.4 Unit 04: Subpart F Sources

7.4.1 Description

The Winchester Division of the Olin manufactures ammunition components and assembles the components to make small arms ammunition.

50 Caliber Cappers (50CA-1 to 50CA-3):

The 50 Caliber Cappers (50CA-1 to 50CA-3) purpose is to insert and assemble primers into empty shellcases. Part of the process can include the application capping sealant (cap lacquer) to seal the annular crevice between the primer and shellcase after the primer is inserted into the empty shellcase. Next mouth waterproofing can be applied to provide a waterproof barrier between the shellcase mouth and the projectile (bullet). This barrier is designed to prevent water from entering the shellcase and desensitizing the explosive powder. The mouth waterproofing compounds also helps to secure the bullet in the shellcase, preventing any movement of the bullet as it is cycled in a semi-automatic weapon.

50 Caliber Tip I.D. (50TIP-1 & 50TIP-2):

In the course of 50 Caliber manufacturing, different types of projectiles are loaded into the 50 caliber shellcases. Tip identification is necessary so that the types of projectile may be visually identified. A thin layer of lacquer is applied to the projectile and then air dried. Different colors of the tip identification are used to identify the different types of projectiles. It should be noted that there are other types of 50 Caliber ammunition that receive no tip identification lacquer.

50 Caliber Blank Sealant (50BS-1):

The sealing of blank 50 Caliber shellcases is necessary to prevent powder from leaking out of the star crimped which could create a safety hazard and would effect the performance of the ammunition. The blank sealant lacquer used must dry very quickly to prevent the blank ammunition from sticking together at the crimp and losing their seals. Blank ammunition contains no wadding or projectiles.

5.56 Penetrator Line, Tip I.D. (PE-1):

Production of 5.56 Penetrator ammunition includes marking the ammunition with lacquer “tip identification”. Tip identification of 5.56 Penetrator ammunition is applied so that it may be visually identified. A thick layer of lacquer is applied to the tip of the projectile in the loaded shellcase and then air dried.

Cappers, capping sealant (CA-1 thru CA-49):

The Cappers (CA-1 thru CA-49) consist of the insertion and assembly of primers into empty shellcases. After insertion and assembly some shellcases may require application of capping sealant and/or mouth waterproofing compound. For certain products, the capper does not apply either cap sealant or mouth waterproofing compound. All cappers are permitted for both types of application as the lacquer application hardware can easily be added or removed on the product being run.

After the insertion and assembly of the primers into the empty shellcases cap lacquer can be applied to seal the annular crevice between the primer and shellcase.

Next, if necessary, to meet product specifications, the Cappers apply mouth waterproofing compound to provide a waterproof barrier between the between the shellcase mouth and the projectile (bullet). This barrier is designed to prevent water from entering the shellcase and desensitizing the explosive powder. The mouth waterproofing compounds also helps to secure the bullet in the shellcase, preventing any movement of the bullet as it is cycled in a semi-automatic weapon.

Proof Load Line (PL-2):

Proof loads are used to verify the safety of guns under high pressure conditions. They contain larger propellant loads than standard ammunition of the same size. They are identified with a lacquer coating on the tip of the projectile in the loaded shellcase. Load identification of proof load ammunition is essential because proof loads must be distinguished from ordinary product ad identified as high pressure ammunition. Tip identification is an off-line manual operation which is performed following a production of the loads.

T-500 Blank Sealant Line (BSL-1):

Production of blank ammunition includes sealing of blank ammunition. The T-500 Blank Sealant Line (BSL-1) seals blank ammunition to prevent powder from leaking out of the star crimped which could create a safety hazard and would effect the performance of the ammunition. The blank sealant lacquer used must dry very quickly to prevent the blank ammunition from sticking together at the crimp and losing its seal. Blank ammunition contains no wadding or projectiles.

Manurhin Case Mouth Sealant Line (CSML-1):

The purpose of the Manurhin Case Mouth Sealant Line (CSML-1) is to provide a waterproof barrier between the between the shellcase mouth and the projectile (bullet) for a specific type of ammunition.

SRTA Coating Operation:

The source uses a tumbling system for coating of Short Range Training Ammunition (SRTA). The system consists of a Baird Barrel and an exhaust fan, Loaded rounds are introduced to the barrel and a coating solution is added.

As the loaded rounded are tumbled, the solvent will evaporate leaving a coating on the surface of the loaded rounds. Solvent emissions are vented through the roof with the use of a 500 cfm exhaust fan.

Note: This narrative description is for informational purposes only and is not enforceable.

7.4.2 List of Emission Units and Air Pollution Control Equipment

Description	Emission Control Equipment	Date Constructed
50 Caliber Cappers, capping sealant (50CA-1 to 50CA-3)	None	1983 50CA-3 2006
50 Caliber Cappers, mouth waterproofing (50CA-1 to 50CA-3)	None	1983 50CA-3 2006
50 Caliber Tip I.D. (50TIP-1 & 50TIP-2)	None	1983
50 Caliber Blank Sealant (50BS-1)	None	1983
5.56 Penetrator Line, Tip I.D. (PE-1)	None	1984
Cappers (CA-1 thru CA-49)[1] - capping sealant/mouth waterproofing	None	Prior 1972 CA-42 to CA-45 2006
Proof Load Line, (PL-2)	None	Prior 1972
T-500 Blank Sealant Line (BSL-1)	None	1984
Manurhin Case Mouth Sealant Line (CSML-1)	None	1999
SRTA Coating Operation	None	2005

[1] Does not include the 50 Caliber Cappers, which are in a different area than the metallic and T-500 units.

7.4.3 Applicable Provisions and Regulations

a. An “affected coating operation” for the purpose of the unit-specific conditions in Section 7.4 is an emission unit described in conditions 7.4.1 and 7.4.2.

b. 35 IAC 219 Subpart F: Coating Operations

The affected coating operations (as defined by Condition 7.4.3(a)) are subject to 35 IAC 219.204 which states that no owner or operator of a coating line shall apply at any time any coating in which the VOM content exceeds the following emission limitations for the specified coating. The following emission limitations are expressed in units of VOM per volume of coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied at each coating applicator, except where noted. Compounds which are specifically exempted from the definition of VOM should be treated as water for the purpose of calculating the "less water" part of the coating composition. The emission limitations are as follows:

i. Miscellaneous Metal Parts and Products Coating/Clear Coating 35 IAC 219.204(j)(1):

kg/l	lb/gal
0.40	4.3

ii. Miscellaneous Metal Parts and Products Coating/Extreme Performance Coating Air Dried [35 IAC 219.204(j)(2)(A)]:

kg/l	lb/gal
0.42	3.5

“Coating” means, for purposes of 35 Ill. Adm. Code 218 and 219, a material applied onto or impregnated into a substrate for protective, decorative, or functional purposes. Such materials include, but are not limited to, paints, varnishes, sealers, adhesives, thinners, diluents, and inks [35 IAC 211.1190(b)].

7.4.4 Non-Applicability of Regulations of Concern

a. No owner or operator of a coating operation subject to the limitations of 35 IAC 219.204 is required to meet the limitations of 35 IAC 219.301 or 219.302, Use of Organic Material, after the date by which the coating operation is required to meet 35 IAC 219.204 [35 IAC 219.209].

b. The affected coating operations (as defined by Condition 7.4.3(a))are not subject to control requirements specified in 35 IAC 219 Subpart TT, because the affected coating operations do not meet the applicability criteria shown in 35 IAC 219.980(a). Specifically, 35 IAC 219 Subpart TT does not apply to VOM emission units included within the category specified in 35 IAC 219 Subpart F: Coating Operations [35 IAC 219.980(a)].

7.4.5 Control Requirements and Work Practices

Control requirements are not set for the affected coating operations (as defined by Condition 7.4.3(a)). However, there may be requirements for source-wide control requirements set forth in Condition 5.5.

7.4.6 Production and Emission Limitations

In addition to the source-wide emission limitations in Condition 5.6, the affected coating operations (as defined by Condition 7.4.3(a)) are subject to the following:

a. Manurhin Case Mouth Sealant Line (CSML-1)

i. Miscellaneous Metal Parts and Products Coating/Extreme Performance Coating Air Dried [35 IAC 219.204(j)(2)(A)]:

kg/l	lb/gal
0.42	3.5

ii. A. Emissions and operation of the affected coating line shall not exceed the following limits:

Volatile Organic Material Emissions (Tons/Month)	(Tons/Year)
0.5	2.94

These limits are based on representations of the actual emissions resulting from the typical hourly coating (0.20 gallons/hour) using coatings with the highest actual VOM content (3.5 pounds VOM/hour) at the facility's maximum of 8,400 hours of operation [T1].

B. Emissions from clean-up shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year [T1].

iii. 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].

iv. The above limitations contain revisions to previously issued Permit 99020096, pursuant to MSSCAM and/or 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 PSD [T1].

b. Short Range Training Ammunition coating Permit #05030067:

i. Usage Limitations

A. The usage of VOM on the Short Range Training Ammunition line shall not exceed 0.2 tons/month and 0.7 tons/year.

B. The usage of HAPs on the Short Range Training Ammunition line shall not exceed 0.5 tons/month and 1.8 tons/year.

ii. Emission Limits

A. VOM emissions from the Short Range Training Ammunition line shall not exceed 3.6 lbs/hour and 0.7 tons/year.

B. HAP emissions from the Short Range Training Ammunition line shall not exceed 8.8 lbs/hour and 1.8 tons/year.

C. This permit is issued based on negligible emissions of particulate matter (PM) from the Short Range Training Ammunition line. For this purpose, emissions shall not exceed nominal emission rates of 0.1 lbs/hour and 0.44 tons/year.

iii. Source Wide Usage (Source Wide Limits are also shown in Condition 5.6.3.

A. The usage of each individual organic HAP in all coating lines at the source shall not exceed 1.5 tons/month and 9.5 tons/year, total.

B. The total usage of organic HAPs on all coating lines at the source shall not exceed 3.0 tons/month and 24 tons/year.

iv. Source Wide Emission Limits (Source Wide Limits are also shown in Condition 5.6.3.

HAP emissions from the source shall not exceed 1.5 ton/month and 9.9 tons/year for any single HAP and 3.5 tons/month and 24 tons/year for all combined HAPs.

v. 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].

vi. The above limitations contain revisions to previously issued Permit 05030067, pursuant to MSSCAM and/or 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 PSD [T1].

vii. These limits ensure that the source is not a major source of HAP emissions (See Conditions 5.4.1 and 5.6.2). It should be noted that the above limits were established prior to the compliance date of the NESHAP standards listed in Condition 5.6.2.

c. 49 Cappers (CA-1 to CA -49)Permit #07020049:

i. Usage and Emission Limitations

A. Usage of VOM and VOM emissions from the affected cappers shall not exceed 1.2 tons/month and 12.0 tons/year. These limits are based on the VOM content of lacquers, amount of lacquers applied, and information supplied in the permit application.

B. The emissions of Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act from the affected cappers shall be less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAP's.

C. 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).

ii. 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].

iii. The above limitations were established in Permit 07020049, pursuant to 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 PSD [T1].

iv. Source Wide Emission Limits (Source Wide Limits are also shown in Condition 5.6.3.

HAP emissions from the source shall not exceed 1.5 tons/month and 9.9 tons/year for any single HAP and 3.5 tons/month and 24 tons/year for all combined HAPs.

7.4.7 Testing Requirements

Testing for VOM content of each coating used in an affected coating operation (as defined in Condition 7.4.3(a)) shall be performed as follows [35 IAC 219.105(a), 219.211(a), and Section 39.5(7)(b) of the Act]:

a. Testing or recertification of formulation data shall be done at least once every five years, or whenever there is a change in the formulation, for each coating or solvent used. Initially, if this 5-year testing or recertification cycle condition is not met, testing or recertification will be completed within one year of permit issuance.

   i. The VOM content of each coating used on the affected coating operations (as defined by Condition 7.4.3(a)) shall be determined by one of the following methods (Any solvent or other VOM added after the VOM content has been determined must be measured and accounted for in the calculations specified in 7.4.12 in order to calculate the "as applied" VOM content):

      A. Testing in accordance with USEPA Reference Methods 24 and 24A of 40 CFR 60 Appendix A and the procedures of 35 IAC 219.105(a); or

      B. Calculations based on a supplier provided Certified Product Data Sheet (as defined in 40 CFR 63.801), where the CPDS must provide the data listed in 40 CFR 63.801, i.e., VHAP, solids content by weight and the density of coatings and the VOM content by percent weight, measured using the EPA Method 24, or an equivalent or formulation data) that includes sufficient information to calculate the VOM content of the coating; or

      C. Calculations based on formulation information certified and dated by the supplier that includes sufficient information to calculate the VOM content of the coating.

      "In the event of any inconsistency between a Method 24 test and a facility's formulation data, the Method 24 test will govern" [35 IAC 219.105(a)(2)(A)].

   ii. If testing is done, it may be performed by either the supplier of a material or by the Permittee.

Appropriate documentation for such testing must be maintained in the Permittee's records pursuant to Condition 7.4.9(b) that directly reflects the application of such material and separately accounts for any additions of solvent.

iii. Upon written request from the Permittee, the Illinois EPA may waive this requirement on a case-by-case basis, if prior testing shows a margin of compliance and no significant changes in coating supplies have occurred.

b. The Permittee shall comply with the testing requirements shown in Condition 5.7.2.

c. Upon reasonable request by the Illinois EPA, the VOM content of specific coatings and cleaning solvents used on the affected coating operations (as defined by Condition 7.4.3(a))shall be determined according to USEPA Reference Methods 24 and 24A of 40 CFR 60 Appendix A and the procedures of 35 IAC 219.105(a) [35 IAC 219.105(a) and 219.211(a)].

d. Testing or recertification of formulation data due to a formulation change or for any other change, as described above, shall be performed at least 30 days prior to the change.

7.4.8 Monitoring Requirements

Monitoring requirements are not set for the affected other coating operation (as defined in Condition 7.4.3(a)). However, there are provisions for source-wide monitoring requirements set forth in Condition 5.8 of this permit.

7.4.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for each affected coating operations (as defined by Condition 7.4.3(a)) to demonstrate compliance with Conditions 5.6.1, 7.4.3 and 7.4.6, pursuant to Section 39.5(7)(b) of the Act:

a. Records of the testing or certification of VOM content of coatings pursuant to Condition 7.4.7, which include the following [Section 39.5(7)(e) of the Act]:

i. Identification of material tested or certified;

ii. Results of analysis or supplier certifications of VOM content;

iii. Documentation of analysis methodology or dated supplier information; and

iv. Person performing analysis or source information.

b. Pursuant to 35 IAC 219.211(c)(2), the Permittee shall collect and record all of the following information each day for the affected coating operations (as defined by Condition 7.4.3(a))and maintain the information at the source for a period of three years:

i. The name and identification number of each coating as applied on each affected coating operation (as defined by Condition 7.4.3(a)); and

ii. The weight of VOM per volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each day on each affected coating operation (as defined by Condition 7.4.3(a)).

c. Types of substrate material coated on the affected coating operations (as defined by Condition 7.4.3(a));

d. Records of the coating usage for the affected coating operations (as defined by Condition 7.4.3(a)), gal/day and gal/yr;

e. The VOM and HAP content of coatings and solvents, % by Wt;

Note: That Certified Product Data Sheet must provide the data listed in 40 CFR 63.801 for the coatings used, i.e., VHAP, solids content by weight and the density of coatings and the VOM content by percent weight, measured using the EPA Method 24, or an equivalent or formulation data) that includes sufficient information to calculate the VOM content of the coating and supplier certifications for the solvents used are acceptable for these records.

f. Density of coatings, lb/gal;

g. Records of the solvent usage for the affected coating operations (as defined by Condition 7.4.3(a)), gal/day and gal/yr;

h. Density of solvent, lb/gal; and

i. The aggregate monthly and annual VOM and HAP emissions from the affected coating operations (as defined by Condition 7.4.3(a)) based on the material usage, with supporting calculations.

7.4.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of deviations of the affected coating operations (as defined by Condition 7.4.3(a)) 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 a deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report within 30 days after the deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the deviation and efforts to reduce emissions and future occurrences.

   i. Any record showing violation of 35 IAC 219.204 shall be reported by sending a copy of such record to the Illinois EPA within 30 days following the occurrence of the violation [35 IAC 219.211(c)(3)(A)].

   ii. Emissions of VOM in excess of the limits in Condition 7.4.6 based on the current month's records plus the preceding 11 months within 30 days of such an occurrence.

7.4.11 Operational Flexibility/Anticipated Operating Scenarios

Usage of coatings, thinners, or cleaning solvents at this source with various VOM and HAP contents provided that the materials are tested in accordance with Condition 5.7.2 and 7.4.7, the emission limitations in Conditions 5.6.1, 5.6.2, 5.6.3, and 7.4.6 are not exceeded and the affected coating operation (as defined by Condition 7.4.3(a)) remains in compliance with Condition 7.4.3.

7.4.12 Compliance Procedures

a. Compliance with the emission limits of Conditions 5.6.1, 7.4.3, and 7.4.6 shall be based on the recordkeeping requirements in Condition 7.4.9 and the testing required in Condition 7.4.7. or by use of the formulae listed below:

   VOM Coating Content = V x D/[1 - W x D],

   where

   V = percent VOM in the coating (%)

   D = overall coating density (lb/gal)

   $W = \sum(w_i/d_i)$,

where

w_i = percent exempt compound i in the coating,

d_i = overall density of exempt compound i, in lb/gal

and the summation $\sum$ is applied over water and all exempt compounds i, in the coating.

b. Emissions from coating operations shall be determined from the following equations:

$$E_{muc} = \sum_{i=1}^{n} C_i V_i$$

where

Summation (i) from 1 to n coatings

E_{muc} = lb VOM emitted per month from uncontrolled coating operations (lb/month)

C = amount of coating, thinners and solvents used (gal/month)

V = VOM content of coating, thinners and solvents excluding water and exempt compounds (lb/gal)

note, monthly emissions (lb/month) shall be converted to (ton/month) by a conversion factor of 2,000 lbs/ton.

c. Annual VOM emissions shall be determined by:

$$E_{at} = \sum_{i=1}^{n} E_{mti}$$

where

Summation (i) from current month plus the 11 previous months (n=12).

Eat = annual emissions of VOM from affected coating operation (as defined by Condition 7.4.3(a)) (tons/yr).

note, monthly emissions (lb/month) shall be converted to (ton/month) by a conversion factor of 2,000 lb/ton.

d. HAP Emissions

The Permittee shall demonstrate compliance with the emissions limitations in Conditions 5.6.2, 5.6.3 and 7.4.6 through the testing requirements in Conditions 5.7.2 and 7.4.7, the recordkeeping requirements in Conditions 5.9 and 7.4.9 and the reporting requirements of Conditions 5.10.

i. Monthly HAP emissions from the affected coating operations (as defined by Condition 7.4.3(a)) shall be determined by speciation of the individual HAP emissions as a percentage of each coatings and solvent throughputs and calculating individual HAP emissions as in procedures shown above. Total monthly HAP emissions will be based on the sum of the emissions for each individual HAP.

ii. Annual HAP emissions shall be calculated based upon the summation of the total of all HAP emissions.

7.5 Unit 5 – Cold Cleaning/Degreasing

7.5.1 Description

The cold cleaning/degreasing emission units utilize solvents for the purpose of cleaning soils from metal surfaces.

Posit Bond Brush Cleaner (PBBC-1):

The Posit Bond Brushing Cleaner is used to clean the brushes used on the Posit Bond Brushing Machines. One brush is cleaned at a time in an enclosed cabinet. Clean solvent is placed in the bottom of the cabinet and the ends of the brush are spun in the solvent solution until cleaned. Following the spinning cycle, the brush cleaning unit is allowed to drain solvent back into the bottom of the cabinet. The spent solvent is eventually collected and stored in a closed drum.

Note: This narrative description is for informational purposes only and is not enforceable.

7.5.2 List of Emission Units and Air Pollution Control Equipment

Description	Emission Control Equipment	Date Constructed
Posit Bond Brush Cleaner (PBBC-1)	None	May 1996 Modified August 1999

7.5.3 Applicable Provisions and Regulations

a. The “affected emission unit” for the purpose of the unit-specific conditions in Section 7.5, are described in Conditions 7.5.1 and 7.5.2.

b. 35 IAC 219 Subpart E: Solvent Cleaning

The Posit Bond Brush Cleaning unit is subject to the requirements for cold cleaning under 35 IAC 219.182. Therefore, the aforementioned affected emission unit must comply with the following:

i. No person shall operate a cold cleaning degreaser unless [35 IAC 219.182(a)]:

A. Waste solvent is stored in covered containers only and not disposed of in such a manner that more than 20% of the waste solvent (by weight) is allowed to evaporate into the atmosphere;

B. The cover of the degreaser is closed when parts are not being handled; and

C. Parts are drained until dripping ceases.

ii. Equipment Requirements: No person shall operate a cold cleaning degreaser unless [35 IAC 219.182(b)]:

A. The degreaser is equipped with a cover which is closed whenever parts are not being handled in the cleaner. The cover shall be designed to be easily operated with one hand or with the mechanical assistance of springs, counter-weights or a powered system if [35 IAC 219.182(b)(1)]:

1. The solvent vapor pressure is greater than 2 kPa (15 mmHg or 0.3 psi) measured at 38°C (100°F);

2. The solvent is agitated; or

3. The solvent is heated above ambient room temperature.

B. The degreaser is equipped with a device for draining cleaned parts. The drainage device shall be constructed so that parts are enclosed under the cover while draining unless [35 IAC 219.182(b)(2)]:

1. The solvent vapor pressure is less than 4.3 kPa (32 mmHg or 0.6 psi) measured at 38°C (100°F); or

2. An internal drainage device cannot be fitted into the cleaning system, in which case the drainage device may be external.

C. The degreaser is equipped with one of the following control devices if the vapor pressure of the solvent is greater than 4.3 kPa (32 mmHg or 0.6 psi) measured at 38°C (100°F) or if the solvent is heated above 50°C (120°F) or its boiling point [35 IAC 219.182(b)(3)]:

1. A freeboard height of 7/10 of the inside width of the tank or 91 cm (36 in), whichever is less; or

2. Any other equipment or system of equivalent emission control as approved by the Illinois EPA and further processed consistent with 35 IAC 219.108. Such a system may include a water cover, refrigerated chiller or carbon absorber.

D. A permanent conspicuous label summarizing the operating procedure is affixed to the degreaser [35 IAC 219.182(b)(4)]; and

E. If a solvent spray is used, the degreaser is equipped with a solid fluid stream spray, rather than a fine, atomized or shower spray [35 IAC 219.182(b)(5)].

iii. Material Requirements [35 IAC 219.182(c)(3)]:

On and after May 30, 2007, no person shall:

A. Cause or allow the sale of solvent with a vapor pressure which exceeds 1.0 mmHg (0.019 psi) measured at 20°C (68°F) in units greater than five gallons, for use in cold cleaning degreasing operations located in the area covered by Section 219.103, unless the purchaser provides a copy of a valid State or federal construction or operating permit or a copy of the Federal Register demonstrating that the purchaser is in compliance with the control requirements of 35 IAC 219.182(c)(4) or is exempt under 35 IAC 219.182(f) or (g) [35 IAC 219.182(c)(3)(A)].

B. Operate a cold cleaning degreaser with a solvent vapor pressure which exceeds 1.0 mmHg (0.019 psi) measured at 20°C (68°F), unless the person is in compliance with the control requirements of 35 IAC 219.182(c)(4) or is exempt under 35 IAC 219.182(f) or (g) [35 IAC 219.182(c)(3)(B)].

Note: At the time of issuance of this permit, the affected emission unit (as defined under Condition 7.5.3(a) was not equipped with a control device indicated in 35 IAC 219.182(b)(3) and 219.182(c)(4), nor was it exempt under 35 IAC 219.182(f) or (g). (See the solvent vapor pressure limits in Condition 7.5.6(c))

c. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from process emission unit, except as provided in 35 IAC 219.302, 219.303, 219.304 and the following exception: If no odor nuisance exists the limitation of this Subpart shall apply only to photochemically reactive material [35 IAC 219.301].

In regard to the above, “Photochemically reactive material” means any organic material with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified below or the composition of which

exceeds any of the following individual percentage composition limitations. Whenever any photochemically reactive material or any constituent of any organic material may be classified from its chemical structure into more than one of the above groups of organic materials, it shall be considered as a member of the most reactive group, that is, the group having the least allowable percent of the total organic materials [35 IAC 211.4690].

A combination of hydrocarbons, alcohols, aldehydes, esters, ethers or ketones having an olefinic or cyclo-olefinic types of unsaturation: 5 percent. This definition does not apply to perchloroethylene or trichloroethylene.

A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: 8 percent.

A combination of ethylbenzene, ketones having branched hydrocarbon structures or toluene: 20 percent.

7.5.4 Non-Applicability of Regulations of Concern

a. Posit Bond Brushing Cleaner is not subject to 40 CFR Part 63, Subpart T - National Emission Standards for Halogenated Solvent Cleaning, because the emission unit does not meet the applicability criteria shown in 40 CFR 63.460. (See Condition 7.5.6(b))

b. Posit Bond Brushing Cleaner is not subject to control requirements specified in 35 IAC 219 Subpart TT, because the emission unit does not meet the applicability criteria shown in 35 IAC 219.980(a). Specifically, 35 IAC 219 Subpart TT does not apply to VOM emission units included within the category specified in 35 IAC 219 Subpart E: Solvent Cleaning [35 IAC 219.980(a)].

c. Posit Bond Brushing Cleaner is not subject to control requirements specified in 35 IAC 219.182(b)(3) and 219.182(c)(4), because solvent vapor pressure for the unit is limited to less than 1.0 mmHg (0.019 psi) measured at 20°C (68°F) and because the solvent is not heated. (See Condition 7.5.6(c))

7.5.5 Control Requirements and Work Practices

Control requirements and work practices are not set for the Posit Bond Brushing Cleaner. However, there may be requirements for source-wide control requirements and work practices set forth in Condition 5.5.

7.5.6 Production and Emission Limitations

a. Emissions and operation of the Posit Bond Brushing Cleaner shall not exceed the following limits:

i. Posit bond brush cleaner (PBBC-1); Solvent

VOM Emissions (Tons/Month)	(Tons/Year)
0.25	2.0

ii. 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).

iii. The above limitations contain revisions to previously issued Permit 99070007, pursuant to 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 PSD [T1].

b. This permit is issued based upon the Posit Bond Brush Cleaner not using any solvent containing methylene chloride (CAS No. 75-09-2), perchloroethylene (CAS No. 127-18-4), trichloroethylene (CAS No. 79-01-6), 1,1,1-trichloroethane (CAS No. 71-55-6), carbon tetrachloride (CAS No. 56-23-5) or chloroform (CAS No. 67-66-3), or any combination of these halogenated HAP solvents, in a total concentration greater than 5 percent by weight, as a cleaning and/or drying agent.

The above limitations are being established in this permit in order to ensure that the Posit Bond Brush Cleaner is not subject to 40 CFR Part 63, Subpart T - National Emission Standards for Halogenated Solvent Cleaning, i.e., they ensure that the solvent cleaning unit do not meet the applicability criteria shown in 40 CFR 63.460. (See Condition 7.5.4(a))

c. This permit is issued based upon the Posit Bond Brush Cleaner the solvent in the unit not being heated or using any solvent with a solvent vapor pressure which exceeds 1.0 mmHg (0.019 psi) measured at 20°C (68°F). (See Conditions 7.5.3(b) and 7.5.4(c))

7.5.7 Testing Requirements

a. Upon reasonable request by the Illinois EPA, pursuant to Section 39.5(7)(b) of the Act, the vapor pressure of the cleaning solvent, the exhaust ventilation rates, and the

performance of any control devices shall be determine according to the methods specified in Condition 7.5.7(b).

b. The following test methods shall be used to demonstrate compliance with 35 IAC 219 Subpart E:

i. Vapor pressures shall be determined by using the procedure specified in 35 IAC 219.110 [35 IAC 219.186(a)];

ii. Exhaust ventilation rates shall be determined by using the procedures specified in 35 IAC 219.105(f)(3) [35 IAC 219.186(b)]; and

iii. The performance of control devices shall be determined by using the procedures specified in 35 IAC 219.105(f) [35 IAC 219.186(c)].

7.5.8 Monitoring Requirements

Monitoring requirements are not set for the affected emission unit (as defined by Condition 7.5.3(a)). However, there may be provisions for source-wide monitoring requirements set forth in Condition 5.8 of this permit.

7.5.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for the affected emission unit (as defined by Condition 7.5.3(a)) to demonstrate compliance with Conditions 5.6.1, 7.5.3, and 7.5.6, pursuant to Section 39.5(7)(b) of the Act:

a. Records required as per 35 IAC 219.182 - Cold Cleaning [35 IAC 219.182(d)]:

i. The name and address of the solvent supplier;

ii. The date of purchase;

iii. The type of solvent;

iv. The vapor pressure of the solvent measured in mmHg at 20°C (68°F); and

v. For any mixture of solvents, the vapor pressure of the mixture, as used, measured in mmHg at 20°C (68°F).

b. General Records

i. Records of the amount of solvent used and recovered from the Posit Bond Brush Cleaner, lb/mo and lb/yr;

ii. The operating schedule (i.e., number of cycles per month and per year);

iii. Records of monthly and annual aggregate VOM and HAP emissions from Posit Bond Brush Cleaner shall be maintained, based on solvent consumption and VOM and HAP content of the solvent, with supporting calculations; and

iv. Certified Product Data Sheet (CPDS) (as defined in 40 CFR 63.801, substituting VOM content for VHAP content) or Material Safety Data Sheets (MSDS) for the solvents used.

7.5.10 Reporting Requirements

a. Reporting of Deviations

The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the affected emission unit (as defined by Condition 7.5.3(a)) 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:

i. Emissions of VOM or HAP from the affected emission unit (as defined by Condition 7.5.3(a)) in excess of the limits specified in Condition 7.5.6(a) within 30 days of such occurrence.

ii. Operation of the affected emission unit (as defined by Condition 7.5.3(a)) in excess of the limits specified in Conditions 7.5.3(b) and (c) and 7.5.6(b) within 30 days of such occurrence.

iii. 35 IAC 219.182(d)(5) & (6):

A. Notification of the Illinois EPA at least 30 days before changing the method of compliance between 35 IAC 219.182(c)(3) and (c)(4). Such notification shall include a demonstration of compliance with the newly applicable requirements in 35 IAC 219.182(c)(4).

B. Notification of the Illinois EPA at least 30 days following the occurrence of a violation of the applicable requirements in 35 IAC 219.182(b) or (c) by sending a description of the violation and copies of records documenting such violations to the Illinois EPA.

7.5.11 Operational Flexibility/Anticipated Operating Scenarios

Operational flexibility is not set for the affected emission unit (as defined by Condition 7.5.3(a)). However, there may be provisions for source-wide operational flexibility set forth in Condition 5.11 of this permit.

7.5.12 Compliance Procedures

a. Compliance with the HAP and solvent limits in Condition 5.6.3 and 7.5.6(b) & (c) is addressed by the records required in Conditions 5.9.2 and 7.5.9 and the emissions calculation procedure in Conditions 7.5.12(b) through (d).

b. For determination of compliance with the limits of this permit, solvent usage shall be determined by the following equation:

$$U = V - W$$

Where:

U = Solvent usage for compliance determinations (gallons).

V = Virgin solvent added to the degreaser (gallons), as determined by daily addition log sheets.

W = Waste solvent removed from the degreasers and sent off-site for reclamation or disposal, as determined by monthly records. The waste solvent is not mixed with any other solvents, therefore the solvent content is the same as the virgin solvent (V).

c. Compliance with the monthly VOM emission limits shall be calculated using the solvent density as specified in the Material Safety Data Sheet, and the solvent usage (U) (gallon/month), as follows:

VOM Emission (ton/month) = Solvent usage (U) (gallon/month) x Solvent density (lb/gallon)/ 2,000 lb/ton

d. Annual VOM emissions shall be determined by:

$$E_{at} = \sum_{i=1}^{n} E_{mti}$$

where

Summation (i) from current month plus the 11 previous months (n=12).

E_{at} = annual emissions of VOM from Posit Bond Brush Cleaner (tons/year).

e. HAP Emissions

i. Monthly HAP emissions from the Posit Bond Brush Cleaner shall be determined by speciation of the individual HAP emissions as a percentage of each solvent throughputs and calculating individual HAP emissions as in procedures shown above. Total monthly HAP emissions will be based on the sum of the emissions for each individual HAP.

ii. Annual HAP emissions shall be calculated based upon the summation of the total of all HAP emissions.

7.6 Unit 06: Other VOM Emission Units

7.6.1 Description

This section applies to the source's VOM emission units, which are not included within any of the other emission units described in Section 7.

108 Primer Sealing Line (PS-8):

The 108 Primer Sealing Line is an automated centerfire primer sealing line. The Primer Sealant is applied to assembled primers to prevent the explosive priming mix from dusting during the transfer of primers in the Primer Manufacturing area and during subsequent ammunition assembly operations. Dusting of primers results in the reduction of the amount of explosive priming mix in the primer which affects the quality of the primer. Also, dusting of primers creates safety hazards due to the possibility of explosive priming mix accumulating and becoming an explosion hazard.

209 Battery Cup Sealing Line (BC-1):

The 209 Battery Cup is the primer assembly used in shotgun shells. The Primer Sealant is applied to an assembled battery cup to seal the annular space between the battery cup and the primer. The sealant prevents water from entering the primer and desensitizing the priming mix.

Centerfire Primer Sealing Lines (PS-1 To PS-6):

The Primer Sealant is applied to assembled primers to prevent the explosive priming mix from dusting during the transfer of primers in the Primer Manufacturing area and during subsequent ammunition assembly operations. Dusting of primers results in the reduction of the amount of explosive priming mix in the primer which affects the quality of the primer. Also, dusting of primers creates safety hazards due to the possibility of explosive priming mix accumulating and becoming an explosion hazard.

50 Caliber Primer Sealing Line (PS-7):

The 50 Caliber Primer Sealant is applied to the assembled 50 caliber primers with an air atomizing spray gun to prevent the explosive priming mix from dusting during the transfer of primers in the Primer Manufacturing area and during subsequent ammunition assembly operations. Dusting of primers results in the reduction of the amount of explosive priming mix in the primer which affects the quality of the primer. Also, dusting of primers creates safety hazards due to the possibility of explosive priming mix accumulating and becoming an explosion hazard.

Ejection Cartridge Sealant Line (EC-1):

The Ejection Cartridge Sealant Line consists of sealing the annular crevice between the primer and shellcase and sealing the crimped shellcase around the nitrocellulose wad. The Ejection Cartridge Sealant provides a waterproof barrier between the shellcase and the primer and between the shellcase and the nitrocellulose wad. This barrier will prevent water form entering the shellcase and desensitizing the explosive powder.

Gauge and Weigh Sealing Lines (GW-1 thru GW-13):

Olin's production of certain types of ammunition includes a final sealant (solvent) applied at the last station on each of the Gauge and Weigh machines. The mouth of the cartridge is passes under a wick which is saturated with final sealant (solvent). Just enough solvent is applied to soften the mouth waterproofing lacquer that seals the bullet in the shellcase. With the waterproofing lacquer softened, adjustments can be made to the length of the ammunitions. Following adjustment of the length, the solvent must evaporate in order to allow the mouth waterproofing lacquer to re-seal the bullet in the mouth of the shellcase.

Bridgewire Primer Sealant Line – Post (BW-1):

Bridgewire Primer assembly includes a process for the application of a sealant to the post of the Bridgewire primer. A Bridgewire Primer must be able to pass a "5 minute no-fire" specification. The post primer sealant, when applied to the post, acts as a heat sink which aids in meeting its specifications.

Bridgewire Primer Sealant Line – Foil (BW-2):

Bridgewire Primer assembly includes a process for the application of a sealant to the foil of the Bridgewire primer. A Bridgewire Primer must be able to pass a "5 minute no-fire" specification. The foil is placed on the top of the explosive priming mix to consolidate the priming mix and prevent dusting. The Foil Primer sealant is applied directly on top of the foil in order to secure the foil.

Strip Lubrication - Brass Mill Drip-On Oil Process (DOP-5):

The Brass Mill Drip-On Oil Process consists of application of a lubricant oil onto the metal strip prior to recoil. The lubricant oils can be applied at various locations throughout the Brass Operations. These include but are not limited to the following: 5 Rolling Mill; No. 20 Rolling Mill; No. 4 Tandem Mill; No. 21 Tandem Mill; Posit Bond; No. 8 Strip Anneal; No. 9. Strip Anneal and Four Stand Tandem Mill.

Pre-Annealing Lubricant Process (PAL):

A pre-annealing lubricant oil can be dripped onto to copper alloy strip after the rolling process prior to recoil. The pre-annealing lubricant oil is applied specifically to copper alloy strip that will be bell annealed. The lubricant oils can be applied at various locations, these include but are not limited to the following: No. 6 Strip Anneal; 8 Strip Anneal; No. 9. Strip Anneal; No. 6 Cleaning Line; No. 8 Cleaning Line; No. 10 Cleaning Line; No. 19 Mill; No. 23 Z-Mill; No. 3 Rewind; No. 22 MG Slitter; No. 6 MG Slitter; No. 9 Mg Slitter; and No 14 Slitter at the Brass Mill and No. 28 Rolling Mill (Z-Mill); No. 35 Rolling Mill and No. 34 Strip Anneal at Plant 3.

Anti-Fretting Lubricant Application (AFA):

Wide coils of Hot Dipped Brass Strip are uncoiled and fed through a rotary head slitter that slits the metal into multiple, narrow width strips. As the wide width strip enters the slitter head, Anti-Fretting Lubricant can be applied to the top surface of the strip. A wipe at the entry side of the slitter head distributes the lubricant across the strip. After slitting, the lubricated, narrow width strips are re-coiled at the take-up reel. Anti-Fretting Lubricant may also be applied as the strip is re-coiled at rewind or inspection stations. The lubricant oils can be applied at various locations, these include but are not limited to the following: No. 4 Slitter; No. 5 Slitter; No. 9 Slitter; No. 20 Slitter; at the Brass Mill and No. 30L Slitter and inspection lines at Plant 3.

Zone 4 Tumblers (TM-1 to TM-4):

The Zone 4 tumblers utilize cobmeal and solvents to remove excess oils and lacquers from ammunition prior to packaging. Solvent is added to the cobmeal which is then tumbled with the ammunition until the ammunition is cleaned and polished.

Fabricating Stamping Operations (SO-1 to SO-12):

Fabricating Stamping operations consists of presses that use a lubricant for stamping out parts from a metal strip. A portion of the products require a lubricant that that does not leave any oily residue following the stamping operation in accordance with customer specifications. For this type of product a special lubricant is used that lubricates during the stamping operation and then evaporates without leaving any oily residual.

Fabricating Stamping operations consists of presses (SO-1 to SO-12) that use a lubricant for stamping out parts from a metal strip. Some products require a lubricant that evaporates without leaving any oily residual. The lubricant is assumed to be 100% evaporated as VOM emissions.

Glycol Preheat System (GT-1):

The Glycol Preheat System is used to preheat a glycol solution before it is added to the heat transfer fluid used to form plastic tubing for shotshells. The system either preheats new glycol solution or scrap glycol solution. When scrap glycol solution is added, the preheater operates until the solution reaches approximately 90% glycol before it is added to the heat transfer system. During this time, water vapor and some glycol are evaporated into the room.

Posit Bond Brushing Machines – Cleaning Tanks (PBCT-1 & PBCT-2):

As preparation for the copper alloy strip bonding operation, the metal strip must be thoroughly cleaned prior to the brushing process. Each of the two Posit Bond Brushing Lines has a cleaning tank where a caustic cleaner is used to remove any residual oils from the surface of the metal strip. Cleaning solution is added to a make-up tank where the proper concentration is maintained and the solution is recirculated. The cleaning solution can also contain up to 10% volatile organics. After the cleaning tank the metal strip passes through a rinse tank and dryer before is enters the brushing section.

Cleaning Solvents:

Cleaning solvents are used throughout the facility. Emissions from clean-up operations are determined on a plant-wide basis using a material balance.

BTA in Water Operations:

BTA in water operations consists of a process that provides a temporary oxidation barrier for brass strip. A product containing Benzotriazole (BTA) is diluted to less than 1% BTA with water in a rinse tank or rinse solution. The brass strip is either immersed or sprayed with the diluted solution. In its diluted state, the BTA product provided by the supplier has up to 55% isopropyl alcohol and 45% BTA. The application of BTA in water usually occurs in the final step of a cleaning or slitting process so that the brass strip reaches the customer or the next stage of processing with a minimal surface oxidation. The BTA in water process can occur at 16 locations (BTA-1 to BTA-16) as listed below.

3 Strip Anneal	BTA-1
4 Strip Anneal	BTA-2
5 Strip Anneal	BTA-3
6 Strip Anneal	BTA-4
7 Strip Anneal	BTA-5
8 Strip Anneal	BTA-6
9 Strip Anneal	BTA-7
1 Cleaning Line	BTA-8

6 Cleaning Line	BTA-9
8 Cleaning Line	BTA-10
9 Cleaning Line	BTA-11
Barco Cleaning Line	BTA-12
10 Slitter	BTA-13
14 Slitter	BTA-14
18 Slitter	BTA-15
2 Tension Leveler	BTA-16

Note: This narrative description is for informational purposes only and is not enforceable.

7.6.2 List of Emission Units and Air Pollution Control Equipment

Description	Emission Control Equipment	Date Constructed
108 Primer Sealing Line (PS-8)	None	1985
209 Battery Cup (BC-1)	None	Prior 1972
Centerfire Primer Sealing Line (PS-1 to PS-6)	None	Prior 1972
50 Caliber Primer Sealing Line (PS-7)	None	1983
Ejection Cartridge Sealing Line (EC-1)	None	Prior 1972
Gauge & Weigh Sealing Lines (GW-1 to GW-16)	None	1995 Added GW-14 thru GW-16 2007
Bridgewire Primer Sealing Line (Post)	None	1955
Bridgewire Primer Sealing Line (Foil)	None	1995
Strip Lubrication, Drip-On Oil	None	Prior 1972
Strip Lubrication, Pre-Anneal Lubricant	None	Prior 1972
Strip Lubrication, Anti-Fretting Lubricant	None	1994
Zone 4 Tumblers (TM-1 to TM-3)	None	1995
Fabricating Stamping Operations (SO-1 to SO-12)		
60 Ton Minster Press (SO-1)	None	1981
90 Ton Minster Press (SO-2)	None	1990
100 Ton Minster Press (SO-3)	None	1981
150 Ton Minster Press (SO-4)	None	1979 (est.)
180 Ton Minster Press (SO-5)	None	1999
200 Ton Minster Press (SO-6)	None	1986
300 Ton Minster Press (SO-7)	None	1997
100 Ton Bliss Press (SO-8)	None	1994
200 Ton Bliss Press (1) (SO-9)	None	prior to 1972
200 Ton Bliss Press (2) (SO-10)	None	1989

Description	Emission Control Equipment	Date Constructed
Model 675 Bliss Press (SO-11)	None	prior to 1972
800 Ton Aida Press (SO-12)	None	1994
Glycol Preheat System (GT-1)	None	prior to 1972
Posit Bond Brushing Machines – Cleaning Tanks (PBCT-1 * PBCT-2)	None	PBCT-1 1972 PBCT-2 1999
Cleaning Solvents	None	--
BTA in Water Operations (BTA-1 to BTA-16)	None	1990 (est.)

7.6.3 Applicable Provisions and Regulations

a. An "affected other emission unit" for the purpose of the unit-specific conditions in Section 7.6 is an emission unit described in conditions 7.6.1 and 7.6.2.

b. The affected other emission units (as defined by Condition 7.6.3(a)) meet the applicability criteria in 35 IAC 219 Subpart TT: Other Emission Units (35 IAC 219.980(a)) but are excluded from being applicable to the subpart under 35 IAC 219.980(a)(2).

i. The requirements of 35 IAC 219 Subpart TT shall apply to a source's VOM emission units, which are not included within any of the categories specified in 35 IAC 219 Subparts B, E, F, H, Q, R, S, T, V, X, Y, Z, AA, BB, PP, QQ, or RR, or are not exempted from permitting requirements pursuant to 35 Ill. Adm. Code 201.146, if the source is subject to 35 IAC 219 Subpart TT. A source is subject to 35 IAC 219 Subpart TT if it contains process emission units, not regulated by 35 IAC 219 Subparts B, E, F (excluding Section 219.204(1) of this Part), H (excluding Section 219.405 of this Part), Q, R, S, T, (excluding Section 219.486 of this Part), V, X, Y, Z or BB of this Part, which as a group both [35 IAC 219.980(a)]:

A. Have maximum theoretical emissions of 91 Mg (100 tons) or more per calendar year of VOM if no air pollution control equipment were used; [35 IAC 219.980(a)(1)] and

B. Are not limited to less than 91 Mg (100 tons) of VOM emissions per calendar year in the absence of air pollution control equipment, through production or capacity limitations

contained in a federally enforceable permit or a SIP revision [35 IAC 219.980(a)(2)].

ii. Pursuant to Conditions 7.6.4(a) and 7.6.6, the source is excluded from the requirements of 35 IAC 219 Subpart TT, since the Permittee has elected to impose federally enforceable production and/or capacity limitations on the affected other emission units (as defined by Condition 7.6.3(a)), as a group, which limit VOM emissions to less than 100 tons per calendar year in the absence of air pollution control equipment.

iii. For the purposes of 35 IAC 219 Subpart TT, an emission unit shall be considered regulated by a Subpart if it is subject to the limits of that Subpart. An emission unit is not considered regulated by a Subpart if it is not subject to the limits of that Subpart, e.g., the emission unit is covered by an exemption in the Subpart or the applicability criteria of the Subpart are not met [35 IAC 219.980(d)].

iv. No person shall violate any condition in a permit when the condition results in exclusion of the source or an emission unit from 35 IAC 219 Subpart TT [35 IAC 219.983].

c. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from an affected other emission unit (as defined by Condition 7.6.3(a)), except as provided in 35 IAC 219.302, 219.303, 219.304 and the following exception: If no odor nuisance exists the limitation of this Subpart shall apply only to photochemically reactive material [35 IAC 219.301].

7.6.4 Non-Applicability of Regulations of Concern

a. The source is not subject to control requirements specified in 35 IAC 219 Subpart TT, because the Permittee has elected to impose federally enforceable production and/or capacity limitations on the affected other emission units (as defined by Condition 7.6.3(a)) which limit VOM emissions to less than 100 tons per calendar year in the absence of air pollution control equipment. An emission unit is not considered regulated by 35 IAC 219 Subpart TT if it is not subject to the limits of that 35 IAC 219 Subpart TT, e.g., the emission unit is covered by an exemption in the Subpart or the applicability criteria of the Subpart are not met. (See Conditions 7.6.3(b) and 7.6.6) [35 IAC 219.980(a) & (d)].

b. The affected other emission units (as defined by Condition 7.6.3(a)) are not subject to control requirements specified in 40 CFR 60 Subpart TT - Standards of Performance for Metal Coil Surface Coating, because the emission units do not meet the applicability criteria shown in 40 CFR 60.460(a).

7.6.5 Control Requirements and Work Practices

Control requirements and work practices are not set for the affected other emission units (as defined by Condition 7.6.3(a)). However, there may be requirements for source-wide control requirements and work practices set forth in Condition 5.5.

7.6.6 Production and Emission Limitations

In addition to the source-wide emission limitations in Condition 5.6, the affected other emission units (as defined by Condition 7.6.3(a)) are subject to the following:

a. The following limitations were established in Permits 07020050, 93050056 and 99030110, respectively [T1].

Description	VOM Usage and Emissions	
	Tons/Mo	Tons/Yr
Gauge & Weigh Sealing Lines (GW-1 thru GW-16) Final Sealant	0.60	6.0
Strip Lubrication – Antifretting Lubricant	0.20	2.0
Fabricating Stamping Operations (SO-1 to SO-12) – Evaporative Lubricant	2.65	14.0

These limits are based on the VOM content, the amount of material applied or used, and the testing, recordkeeping, and compliance procedures specified in Conditions 7.6.7, 7.6.9, and 7.6.12, respectively.

b. The following limitations are being established in this permit:

Description	VOM Usage and Emissions	
	Tons/Mo	Tons/Yr
108 Primer Sealing Line (PS-8)	0.48	4.83
209 Battery Cup Sealing Line (BC-1) Primer Sealant	0.14	1.39
Centerfire Primer Sealing Line (PS-1 to PS-6) Primer Sealant	2.18	21.80
50 Caliber Primer Sealing Line (PS-7) Primer sealant	1.10	11.03

Description	VOM Usage and Emissions	
	Tons/Mo	Tons/Yr
Ejection Cartridge Sealant Line (EC-1) Ejection Cartridge Sealant	0.10	0.863
Bridgewire Primer Sealing Line-Post (BW-1) Primer Sealant	0.04	0.39
Bridgewire Primer Sealing Line-Foil (BW-2) Primer Sealant	0.03	0.33
Strip Lubrication – Drip-On Oil	0.88	8.84
Strip Lubrication – Pre-Annealing Lubricant	0.40	4.00
Zone 4 Tumblers (TM-1 to TM-4)	1.40	8.75
Glycol Preheat System (GT-1)	0.10	1.01
Posit Bond Brushing Machines – Cleaning Tanks (PBCT-1 * PBCT-2)	0.50	4.90
Cleaning Solvents	5.00	50.00

These limits are based on the VOM content, the amount of material applied or used, and the testing, recordkeeping, and compliance procedures specified in Conditions 7.6.7, 7.6.9, and 7.6.12, respectively.

The above limitations contain revisions to previously issued Permits 78010031, 78010039, 94030071, and 99030110. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically MSSCAM and/or PSD. These limits continue to ensure that the construction and/or modification addressed in this permit does not constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. Specifically, applicant has requested adjustment to the above referenced limits in order to allow additional flexibility and in order to demonstrate compliance with the limits in 35 IAC 219.204 [T1R].

c. VOM emissions from the affected other emission units (as defined by Condition 7.6.3(a)) shall not exceed 99.0 tons per calendar year in the absence of air pollution control equipment.

This limit is being established in this permit to ensure that the affected other emission units are not subject to the control requirements of 35 IAC Part 219, Subpart TT [T1N].

d. 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 & T1N].

7.6.7 Testing Requirements

Testing for VOM content of each solvent and/or lubricant shall be performed as follows [35 IAC 219.105(a), 219.211(a), and Section 39.5(7)(b) of the Act]:

a. Testing or recertification of reformulation data shall be done at least once every five years, or whenever there is a change in the formulation, for each coating or cleaning solvent. Initially, if this 5-year testing or recertification cycle condition is not met, testing will be completed within one year of permit issuance.

i. The VOM content of each solvent and/or evaporative (vanishing) lubricant on the affected other emission units (as defined by Condition 7.6.3(a)) shall be determined by one of the following methods (Any solvent or other VOM added after the VOM content has been determined must be measured and accounted for in the calculations specified in 7.6.12 in order to calculate the "as applied" VOM content):

A. Testing in accordance with USEPA Reference Methods 24 and 24A of 40 CFR 60 Appendix A and the procedures of 35 IAC 219.105(a); or

B. Calculations based on a supplier provided Certified Product Data Sheet (as defined in 40 CFR 63.801) that includes sufficient information to calculate the VOM content of the solvent and/or lubricant; or

C. Calculations based on formulation information certified and dated by the supplier that includes sufficient information to calculate the VOM content of the solvent and/or lubricant; or

D. Calculations based on supplier provided data on the density or specific gravity of the solvent or lubricant using 100% as the VOM content of the solvent or lubricant.

"In the event of any inconsistency between a Method 24 test and a facility's formulation data, the Method 24 test will govern" [35 IAC 219.105(a)(2)(A)].

ii. If testing is done, it may be performed by either the supplier of a material or by the Permittee. Appropriate documentation for such testing must be maintained in the Permittee's records pursuant to Condition 7.6.9 that directly reflects the application of such material and separately accounts for any additions of solvent.

iii. Upon written request from the Permittee, the Illinois EPA may waive this requirement on a case-by-case basis, if prior testing shows a margin of compliance and no significant changes in sealants, marking paints, lubricant or solvent supplies have occurred.

b. Upon reasonable request by the Illinois EPA, the VOM content of specific solvents and/or evaporative (vanishing) lubricants used on the affected other emission units (as defined by Condition 7.6.3(a)) shall be determined according to USEPA Reference Methods 24 and 24A of 40 CFR 60 Appendix A and the procedures of 35 IAC 219.105(a) [35 IAC 219.105(a) and 219.211(a)].

7.6.8 Monitoring Requirements

Monitoring requirements are not set for the affected other emission units (as defined by Condition 7.6.3(a)). However, there may be provisions for source-wide monitoring requirements set forth in Condition 5.8 of this permit.

7.6.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for each affected other emission unit (as defined by Condition 7.6.3(a)) to demonstrate compliance with Conditions 5.6.1, 7.5.3, and 7.6.6, pursuant to Section 39.5(7)(b) of the Act:

a. Records of the testing or certification of VOM and HAP content of each sealant, marking paint, lubricant or solvent pursuant to Condition 7.6.7, which include the following [Section 39.5(7)(e) of the Act]:

i. Identification of material tested or certified;

ii. Results of analysis or supplier certifications of the VOM content;

iii. Documentation of analysis methodology or dated supplier information; and

iv. Person performing analysis or source of information.

b. Pursuant to 35 IAC 219.211(c)(2), the Permittee shall collect and record all of the following information each

day for the affected other emission units (as defined by Condition 7.6.3(a)) and maintain the information at the source for a period of three years:

i. The name and identification number of each sealant, marking paint, lubricant or solvent as applied on each affected other emission units (as defined by Condition 7.6.3(a)); and

ii. The weight of VOM (lb/gal) and HAP per volume of each sealant, marking paint, lubricant or solvent (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each day on each affected other emission units (as defined by Condition 7.6.3(a)).

iii. Certified Product Data Sheet (CPDS) (as defined in 40 CFR 63.801, substituting VOM content for VHAP content) for the solvents and lubricants used are acceptable for weight of VOM records.

c. General Records:

i. Records of the amount of sealant, marking paint, lubricant or solvent used for each affected other emission unit, ton/mo and ton/yr;

ii. As applicable, waste solvent content of waste materials (i.e., waste lubricants, solvents, cobmeal, ...etc.) for each affected other emission unit; and

iii. Records of monthly and annual aggregate VOM and HAP emissions from each affected other emission unit, based on records required above and the compliance procedures in Condition 7.6.12.

7.6.10 Reporting Requirements

a. Reporting of Deviations

The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the affected other emission units (as defined by Condition 7.6.3(a)) 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:

i. Emissions of VOM or HAP from the affected other emission unit (as defined by Condition 7.6.3(a)) in excess of the limits specified in Condition 7.6.6(a) within 30 days of such occurrence.

ii. Operation of the affected other emission unit (as defined by Condition 7.6.3(a)) in excess of the limits specified in Conditions 7.6.3(b) and (c) within 30 days of such occurrence.

b. Upon request by the Illinois EPA, the Permittee owner or operator of an emission unit which is exempt from the requirements of 35 IAC 219 Subparts TT shall submit records to the Illinois EPA within 30 calendar days from the date of the request that document that the emission unit is exempt from those requirements (See Condition 7.6.6(c)) [35 IAC 219.990].

7.6.11 Operational Flexibility/Anticipated Operating Scenarios

Usage of sealants, marking paints, lubricants, thinners, or cleaning solvents at this source with various VOM and HAP contents provided that the materials are tested in accordance with Condition 5.7.2 and 7.6.7, the emission limitations in Conditions 5.6.1, 5.6.2, 5.6.3, and 7.6.6 are not exceeded.

7.6.12 Compliance Procedures

Compliance with the emission limits of Conditions 5.6.1, 7.5.3, and 7.5.6 shall be based on the recordkeeping requirements in Condition 7.5.9 and formulas listed below:

a. Compliance with the HAP and VOM limits in Condition 5.6.2, 5.6.3 and 7.6.6 is addressed by the records required in Conditions 5.9.2 and 7.6.9 and the emissions calculation procedure in Conditions 7.6.12(b) through (f).

b. VOM Emissions per Emission Unit

Mass Balance Calculation

VOM (ton/month) = (Solvent or Evaporating Lubricant Usage, gal/month) x VOM Content (VOM lb/gal) x (1 ton/2,000 lbs)

c. VOM Emissions from Cleaning Solvent Usage

Mass Balance Calculation

VOM Emission (ton/year) = Solvent Usage (gal/yr) x Solvent Density (lb/gal) – Solvent Quantity Reclaimed (gal/yr) x VOM Content of Reclaimed Solvent (lb VOM/gal)

d. VOM Emissions from the Glycol Preheat System (GT-1)

Using the resulting emission factor (0.25 lb/gal) from the Chemical Engineering vapor displacement equations provided in the application.

VOM Emission (ton/year) = Waste Glycol Usage (gal/mo or gal/yr) x 0.25 lb/gal

e. Annual VOM emissions shall be determined by:

$$E_{at} = \sum_{i=1}^{n} E_{mti}$$

where

Summation (i) from current month plus the 11 previous months (n=12).

E_{at} = annual emissions of VOM from each affected other emission unit (as defined by Condition 7.6.3(a)) tons/yr).

f. HAP Emissions

i. Monthly HAP emissions from the affected other emission units (as defined by Condition 7.6.3(a))shall be determined by speciation of the individual HAP emissions as a percentage of each solvent throughputs and calculating individual HAP emissions as in procedures shown above. Total monthly HAP emissions will be based on the sum of the emissions for each individual HAP.

ii. Annual HAP emissions shall be calculated based upon the summation of the total of all HAP emissions.

7.7 Unit 07: Chrome Plating Line

7.7.1 Description

The chrome plating facility, located in Olin's Main Plant Machine Shop, is used to plate steel parts with a protective chrome coating. The process is a batch-type in which the parts are first submerged in a stripping tank and then a cleaning tank. Both tanks contain a hot water and sodium hydroxide solution. The parts are then rinsed in cold water and later activated in a surface activating tank containing 10% sulfuric acid. After the surface activation tank, the parts are then warmed in a hot water rinse tank prior to the actual chrome plating process.

The chrome plating process contains an electroplating system in which a small current passes through the tanks to plate the chrome onto the parts. There are four chrome plating tanks identified at the facility. Chrome plating tanks 1 and 2 (PT-3) are located within a single tank and each has a 12-volt DC rectifier with a maximum output of 500 amperes.. Chrome plating tanks 3 and 4 (PT-2 and PT-1) each have a single 12-volt DC rectifier with a maximum output of 500 amperes. The maximum total output for the four rectifiers is 2,000 amperes. A chemical fume suppressant containing a wetting agent is used to keep the surface tension of the electroplating baths from exceeding 45 dynes per centimeter at any time during operation of the plating tanks.

The initial compliance stack test run on September 5, 1996 showed that emissions from the plating tanks were met by keeping the surface tension of the plating baths below 45 dynes/cm. Therefore, only surface tension adjustment is used to demonstrate compliance.

Note: This narrative description is for informational purposes only and is not enforceable.

7.7.2 List of Emission Units and Air Pollution Control Equipment

Description	Emission Control Equipment	Date Constructed
Chrome Plating Tanks (PT-1, PT-2 & PT-3)	None (Chemical Fume Suppressant containing a wetting agent is used to achieve compliance)	Nov. 1982

7.7.3 Applicable Provisions and Regulations

a. The "affected emission units" for the purpose of the unit-specific conditions in Section 7.7, are the chromium electroplating tanks described in Conditions 7.7.1 and 7.7.2.

b. The chromium electroplating tanks are subject to 40 CFR, Part 63, Subparts A and N - National Emission Standards For Chromium Emissions From Hard And Decorative Chromium Electroplating And Chromium Anodizing Tanks [40 CFR 63.340].

i. Based upon information provided in the application and the definitions in 40 CFR 63.341, the source has been determined to be a small hard chromium electroplating facility and the affected emission units (chromium electroplating tanks) have been determined to be open surface hard chromium electroplating tanks performing hard chromium electroplating [40 CFR 63.341].

Small hard chromium electroplating facility means a facility that performs hard chromium electroplating and has a maximum cumulative potential rectifier capacity less than 60 million amp-hr/yr.

ii. Process tanks associated with a chromium electroplating or chromium anodizing process, but in which neither chromium electroplating nor chromium anodizing is taking place, are not subject to the provisions of this subpart. Examples of such tanks include, but are not limited to, rinse tanks, etching tanks, and cleaning tanks. Likewise, tanks that contain a chromium solution, but in which no electrolytic process occurs, are not subject to this subpart. An example of such a tank is a chrome conversion coating tank where no electrical current is applied [40 CFR 63.340(c)].

c. Each chromium electroplating tank at the source is subject to 35 IAC 212.321(a), which requires that:

i. 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, 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 35 IAC 212.321 (see also Attachment 1) [35 IAC 212.321(a)].

7.7.4 Non-Applicability of Regulations of Concern

Non-applicability of regulations of concern are not set for the chromium electroplating tanks. However, there may be source-wide non-applicability of regulations of concern set forth in Condition 5.4.

7.7.5 Control Requirements and Work Practices

40 CFR 63 Subpart N: National Emission Standards For Chromium Emissions From Hard And Decorative Chromium Electroplating And Chromium Anodizing Tanks

All owners or operators subject to the standards in 40 CFR 63.342(c) are subject to the following operation and maintenance practices [40 CFR 63.342(f)].

a. i. At all times, including periods of startup, shutdown, and malfunction, owners or operators shall operate and maintain any affected source [as defined by 40 CFR 63.340(a)], including associated air pollution control devices and monitoring equipment, in a manner consistent with good air pollution control practices, consistent with the operation and maintenance plan required by Condition 7.7.5(c) and 40 CFR 63.342(f)(3) [40 CFR 63.342(f)(1)(i)].

ii. Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the operation and maintenance plan required by Condition 7.7.5(c) and 40 CFR 63.342(f)(3) [40 CFR 63.342(f)(1)(ii)].

iii. Operation and maintenance requirements established pursuant to section 112 of the CAA (i.e., section 112 [42 USC 7412]- National Emission Standards for Hazardous Air Pollutants) are enforceable independent of emissions limitations or other requirements in relevant standards [40 CFR 63.342(f)(1)(iii)].

b. i. Determination of whether acceptable operation and maintenance procedures are being used will be based on information available to the Illinois EPA, which may include, but is not limited to, monitoring results; review of the operation and maintenance plan, procedures, and records; and inspection of the source [40 CFR 63.342(f)(2)(i)].

ii. Based on the results of a determination made under Condition 7.7.5(b)(i)) and 40 CFR 63.342(f)(2)(i), the Illinois EPA may require that an owner or operator of an affected source [as defined by 40 CFR 63.340(a)] make changes to the operation and maintenance plan required by Condition 7.7.5(c) and 40 CFR 63.342(f)(3). Revisions may be required if the Illinois EPA finds that the plan [40 CFR 63.342(f)(2)(ii)]:

A. Does not address a malfunction that has occurred [40 CFR 63.342(f)(2)(ii)(A)];

B. Fails to provide for the proper operation of the affected source [as defined by 40 CFR 63.340(a)], the air pollution control techniques, or the control system and process monitoring equipment during a malfunction in a manner consistent with good air pollution control practices [40 CFR 63.342(f)(2)(ii)(B)]; or

C. Does not provide adequate procedures for correcting malfunctioning process equipment, air pollution control techniques, or monitoring equipment as quickly as practicable [40 CFR 63.342(f)(2)(ii)(C)].

c. Operation and maintenance plan [40 CFR 63.342(f)(3)].

i. The Permittee shall prepare an operation and maintenance plan which shall include the following elements [40 CFR 63.342(f)(3)(i)]:

A. The plan shall specify the operation and maintenance criteria for the affected source [as defined by 40 CFR 63.340(a)], the add-on air pollution control device (if such a device is used to comply with the emission limits), and the process and control system monitoring equipment, and shall include a standardized checklist to document the operation and maintenance of this equipment [40 CFR 63.342(f)(3)(i)(A)];

B. For sources using an add-on air pollution control device or monitoring equipment to comply with 40 CFR 63 Subpart N, the plan shall incorporate the following work practice standards for that device or monitoring equipment, as identified below and in 40 CFR 63.342 - Table 1 --Summary of Operation and Maintenance Practices [40 CFR 63.342(f)(3)(i)(B)];

1. Stalagmometer or Tensiometer: Follow manufacturers recommendations

2. Backup Fiber-Bed Mist Eliminator:

I. At least once per quarter: Visually inspect fiber-bed unit and prefiltering device to ensure there is proper drainage, no chromic acid buildup in the units, and no evidence of chemical attack on the

structural integrity of the devices.

II. At least once per quarter: Visually inspect ductwork from tank or tanks to the control device to ensure there are no leaks.

III. Perform wash down of fiber elements in accordance with manufacturer's recommendations.

C. The plan shall specify procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions do not occur [40 CFR 63.342(f)(3)(i)(D)]; and

D. The plan shall include a systematic procedure for identifying malfunctions of process equipment, add-on air pollution control devices, and process and control system monitoring equipment and for implementing corrective actions to address such malfunctions [40 CFR 63.342(f)(3)(i)(E)].

ii. If the operation and maintenance plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan is initially developed, the owner or operator shall revise the operation and maintenance plan within 45 days after such an event occurs. The revised plan shall include procedures for operating and maintaining the process equipment, add-on air pollution control device, or monitoring equipment during similar malfunction events, and a program for corrective action for such events [40 CFR 63.342(f)(3)(ii)].

iii. Recordkeeping associated with the operation and maintenance plan is identified in Condition 7.7.9 and 40 CFR 63.346(b). Reporting associated with the operation and maintenance plan is identified in Condition 7.7.10 and 40 CFR 63.347(g) and (h) and Condition 7.7.5(c)(iv) and 40 CFR 63.342(f)(3)(iv) [40 CFR 63.342(f)(3)(iii)].

iv. If actions taken by the owner or operator during periods of malfunction are inconsistent with the procedures specified in the operation and maintenance plan required by Condition 7.7.5(c) and 40 CFR 63.342(f)(3)(i), the owner or operator shall record the actions taken for that event and shall report by phone such actions within two (2) working days after

commencing actions inconsistent with the plan. This report shall be followed by a letter within seven (7) working days after the end of the event, unless the owner or operator makes alternative reporting arrangements, in advance, with the Illinois EPA [40 CFR 63.342(f)(3)(iv)].

v. The owner or operator shall keep the written operation and maintenance plan on record after it is developed to be made available for inspection, upon request, by the Administrator for the life of the affected source [as defined by 40 CFR 63.340(a)] or until the source is no longer subject to the provisions of this subpart. In addition, if the operation and maintenance plan is revised, the owner or operator shall keep previous (i.e., superseded) versions of the operation and maintenance plan on record to be made available for inspection, upon request, by the Administrator for a period of 5 years after each revision to the plan [40 CFR 63.342(f)(3)(v)].

vi. To satisfy the requirements of Condition 7.7.5(c) and 40 CFR 63.342(f), the owner or operator may use applicable standard operating procedure (SOP) manuals, Occupational Safety and Health Administration (OSHA) plans, or other existing plans, provided the alternative plans meet the requirements of Condition 7.7.5(c) and 40 CFR 63.342(f) [40 CFR 63.342(f)(3)(vi)].

7.7.6 Production and Emission Limitations

In addition the source-wide emission limitations in Condition 5.6, the affected emission units (chromium electroplating tanks) are subject to the following:

a. Standards for open surface hard chromium electroplating tanks.

During tank operation, the Permittee shall control chromium emissions discharged to the atmosphere from that affected source [as defined by 40 CFR 63.340(a)]by the following:

i. The Permittee shall operate the fume suppressant wetting agent at all times during the operation of chromium electroplating tanks.

ii. The surface tension of the electroplating or anodizing bath contained within the chromium electroplating tank to exceed 45 dynes per centimeter (dynes/cm) (3.1 x 10-3 pound-force per foot (lbf/ft)) as measured by a stalagmometer or 35 dynes/cm (2.4 x

10-3 lbf/ft) as measured by a tensiometer at any time during tank operation [40 CFR 63.342(c)(1)(iii)].

iii. The above limit is from 40 CFR 63 Subpart N: National Emission Standards for Chromium Emissions from Hard Chromium Electroplating Tanks, 40 CFR Part 63, Subpart N and is based on the maximum cumulative potential rectifier capacity of the hard chrome electroplating tanks being less than 60 million ampere-hours per year. Compliance with this limit is based upon the initial performance testing and ongoing compliance monitoring requirements, as required by conditions of this permit.

Emissions from each of the plating tanks as well as the strip tank the clean tank and the chrome destruct unit are all ducted through the Chrome Plating Mist Eliminator.

A chemical fume suppressant containing a wetting agent is used to keep the surface tension of the electroplating baths from exceeding 45 dynes per centimeter at any time during operation of the plating tanks. The initial compliance stack test run on September 5, 1996 demonstrated that emissions from the plating tanks were met prior to the mist eliminator by keeping the surface tension of the plating baths below 45 dynes/cm.

The mist eliminator as it is, is not needed for compliance, since the emission limits from the chrome plating system are met prior to the mist eliminator.

Emission limits for PM is not set for the chromium electroplating tanks as potential to emit in the absence of permit limit is less than the significant and major source thresholds for the pollutant pursuant to Title I of the CAA, specifically 40 CFR 52.21, Prevention of Significant Deterioration (PSD).

7.7.7 Testing Requirements

a. Upon reasonable request by the Illinois EPA, the Permittee is required to demonstrate compliance with 40 CFR 63 Subpart N using the methods and procedures shown in the referenced subpart.

b. Test methods. Each owner or operator subject to the provisions of this subpart and required by 40 CFR 63.343(b) to conduct an initial performance test shall use the test methods identified in 40 CFR 63.344 to demonstrate compliance with the standards in 40 CFR 63.342. These include but are not limited to the following [40 CFR 63.344(c)]:

Method 306B, “Surface Tension Measurement and Recordkeeping for Tanks Used at Decorative Chromium Electroplating and Anodizing Facilities,” appendix A of this part shall be used to measure the surface tension of electroplating and anodizing baths [40 CFR 63.344(c)(3)].

c. Establishing site-specific operating parameter values

i. Each owner or operator required to establish site-specific operating parameters shall follow the procedures in this section [40 CFR 63.344(d)(1)].

ii. All monitoring equipment shall be installed such that representative measurements of emissions or process parameters from the affected source [as defined by 40 CFR 63.340(a)] are obtained. For monitoring equipment purchased from a vendor, verification of the operational status of the monitoring equipment shall include execution of the manufacturer’s written specifications or recommendations for installation, operation, and calibration of the system [40 CFR 63.344(d)(2)].

iii. The surface tension of electroplating and anodizing baths shall be measured using Method 306B, “Surface Tension Measurement and Recordkeeping for Tanks used at Decorative Chromium Electroplating and Anodizing Facilities,” Appendix A to 40 CFR Part 63 — Test Methods. This method should also be followed when wetting agent type or combination wetting agent/foam blanket type fume suppressants are used to control chromium emissions from a hard chromium electroplating tank and surface tension measurement is conducted to demonstrate continuous compliance [40 CFR 63.344(d)(3)].

7.7.8 Monitoring Requirements

a. Monitoring to demonstrate continuous compliance. The owner or operator of an affected source [as defined by 40 CFR 63.340(a)] subject to the emission limitations of this 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 [as defined by 40 CFR 63.340(a)] [40 CFR 63.343(c)].

Wetting agent-type or combination wetting agent-type/foam blanket fume suppressants [40 CFR 63.343(c)(5)].

i. During the initial performance test, the owner or operator of an affected source [as defined by 40 CFR 63.340(a)] complying with the emission limitations in Condition 7.7.6 and 40 CFR 63.342 through the use of a wetting agent in the electroplating or anodizing bath shall determine the outlet chromium concentration using the procedures in Condition 7.7.7(b) and 40 CFR 63.344(c). The owner or operator shall establish as the site-specific operating parameter the surface tension of the bath using Method 306B, "Surface Tension Measurement and Recordkeeping for Tanks used at Decorative Chromium Electroplating and Anodizing Facilities," Appendix A to 40 CFR Part 63 – Test Methods, setting the maximum value that corresponds to compliance with the applicable emission limitation. In lieu of establishing the maximum surface tension during the performance test, the owner or operator may accept 45 dynes/cm as measured by a stalagmometer or 35 dynes/cm as measured by a tensiometer as the maximum surface tension value that corresponds to compliance with the applicable emission limitation. However, the owner or operator is exempt from conducting a performance test only if the criteria of 40 CFR 63.343(b)(2) are met [40 CFR 63.343(c)(5)(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 [as defined by 40 CFR 63.340(a)] shall monitor the surface tension of the electroplating or anodizing bath. Operation of the affected source [as defined by 40 CFR 63.340(a)] at a surface tension greater than 45 dynes/cm as measured by a stalagmometer or 35 dynes/cm as measured by a tensiometer, shall constitute noncompliance with the standards. The surface tension shall be monitored according to the following schedule [40 CFR 63.343(c)(5)(ii)]:

A. The surface tension shall be measured once every 4 hours during operation of the tank with a stalagmometer or a tensiometer as specified in Method 306B, "Surface Tension Measurement and Recordkeeping for Tanks used at Decorative Chromium Electroplating and Anodizing Facilities," Appendix A to 40 CFR Part 63 – Test Methods [40 CFR 63.343(c)(5)(ii)(A)].

B. The time between monitoring can be increased if there have been no exceedances. The surface tension shall be measured once every 4 hours of tank operation for the first 40 hours of tank operation after the compliance date. Once there are no exceedances during 40 hours of

tank operation, surface tension measurement may be conducted once every 8 hours of tank operation. Once there are no exceedances during 40 hours of tank operation, surface tension measurement may be conducted once every 40 hours of tank operation on an ongoing basis, until an exceedance occurs. The minimum frequency of monitoring allowed by this subpart is once every 40 hours of tank operation [40 CFR 63.343(c)(5)(ii)(B)].

C. Once an exceedance occurs as indicated through surface tension monitoring, the original monitoring schedule of once every 4 hours must be resumed. A subsequent decrease in frequency shall follow the schedule laid out in Condition 7.7.8(a)(ii)(B) and 40 CFR 63.343(c)(5)(ii)(B). For example, if an owner or operator had been monitoring an affected source [as defined by 40 CFR 63.340(a)] once every 40 hours and an exceedance occurs, subsequent monitoring would take place once every 4 hours of tank operation. Once an exceedance does not occur for 40 hours of tank operation, monitoring can occur once every 8 hours of tank operation. Once an exceedance does not occur for 40 hours of tank operation on this schedule, monitoring can occur once every 40 hours of tank operation [40 CFR 63.343(c)(5)(ii)(C)].

iii. Once a bath solution is drained from the chromium electroplating tank and a new solution added, the original monitoring schedule of once every 4 hours must be resumed, with a decrease in monitoring frequency allowed following the procedures of Conditions 7.7.8(a)(ii)(B) and (C) and 40 CFR 63.343(c)(5)(ii)(B) and (C) [40 CFR 63.343(c)(5)(iii)].

7.7.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for the chromium electroplating tanks to demonstrate compliance with Conditions 5.6.1, and 7.7.6 through 7.7.8, pursuant to Section 39.5(7)(b) of the Act:

a. 40 CFR 63 Subpart N: National Emission Standards For Chromium Emissions From Hard And Decorative Chromium Electroplating And Chromium Anodizing Tanks

i. The Permittee shall fulfill all recordkeeping requirements outlined in 40 CFR 63.346 and in the

General Provisions to 40 CFR part 63, according to the applicability of 40 CFR 63 Subpart A as identified in Table 1 of 40 CFR 63 Subpart N (See Attachment 6) [40 CFR 63.346(a)].

ii. The owner or operator of an affected source [as defined by 40 CFR 63.340(a)] subject to the provisions of this subpart shall maintain the following records for such source [40 CFR 63.346(b)]:

A. 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 Condition 7.7.5 and 40 CFR 63.342(f) and Condition 7.7.5(c)(i)(B) 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)].

B. Records of all maintenance performed on the affected source [as defined by 40 CFR 63.340(a)], the add-on air pollution control device, and monitoring equipment [40 CFR 63.346(b)(2)];

C. 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)];

D. 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)];

E. Other records, which may take the form of checklists, necessary to demonstrate consistency with the provisions of the operation and maintenance plan required by Condition 7.7.5(c) and 40 CFR 63.342(f)(3) [40 CFR 63.346(b)(5);

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

G. Records of monitoring data required by Condition 7.7.8 and 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)];

H. 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);

I. 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)];

J. The total process operating time of the affected source [as defined by 40 CFR 63.340(a)] during the reporting period [40 CFR 63.346(b)(11);

K. Records of the actual cumulative rectifier capacity of hard chromium electroplating tanks at a facility expended during each month of the reporting period, and the total capacity expended to date for a reporting period, if the owner or operator is using the actual cumulative rectifier capacity to determine facility size (See Condition 7.7.3(b)(i)) in accordance with Condition 7.7.6 and 40 CFR 63.342(c)(2) [40 CFR 63.346(b)(12);

L. All documentation supporting the notifications and reports required by Condition 7.7.10 and 40 CFR 63.9, 63.10, and 63.347 [40 CFR 63.346(b)(16)].

b. General Records

i. Records for the total process operating time of the hard chrome electroplating tank(s) during the reporting period;

ii. Records of the date and time that fume suppressant wetting agents are added to the bath; and

iii. Records of the bath components purchased, with the wetting agent clearly identified as a bath constituent contained in one of the components.

7.7.10 Reporting Requirements

a. 40 CFR 63 Subpart N: National Emission Standards For Chromium Emissions From Hard And Decorative Chromium Electroplating And Chromium Anodizing Tanks

The Permittee shall comply with the reporting requirements shown in 40 CFR 63.347. These include but are limited to the following:

i. The Permittee shall fulfill all reporting requirements outlined in 40 CFR 63.347 and in the General Provisions to 40 CFR part 63, according to the applicability of 40 CFR 63 Subpart A as identified in Table 1 of 40 CFR 63 Subpart N (See Attachment 6). These reports shall be made to the Illinois EPA - Air Compliance Unit at the appropriate address identified in Condition 8.6.4 [40 CFR 63.347(a)].

Reports required by 40 CFR 63 Subpart A and 40 CFR 63.347 may be sent by U.S. mail, fax, or by another courier [40 CFR 63.347(a)(1)].

A. Submittals sent by U.S. mail shall be postmarked on or before the specified date [40 CFR 63.347(a)(1)(i)].

B. Submittals sent by other methods shall be received by the Illinois EPA on or before the specified date [40 CFR 63.347(a)(1)(ii)].

ii. The reporting requirements of 40 CFR 63.347 apply to the owner or operator of an affected source [as defined by 40 CFR 63.340(a)] when such source becomes subject to the provisions of 40 CFR 63 Subpart N [40 CFR 63.347(b)].

iii. As applicable, the Permittee shall comply with the initial and performance test notification requirements shown in 40 CFR 63.347(c) and (d).

iv. As applicable, the Permittee shall comply with the notification of compliance status requirements shown in 63.347(e) [40 CFR 63.347(e)].

A. A notification of compliance status is required each time that an affected source [as defined by 40 CFR 63.340(a)] becomes subject to the requirements of 40 CFR 63 Subpart N [40 CFR 63.347(e)(1)].

B. The Permittee shall submit the notification of compliance status shall be submitted to

Illinois EPA - Air Compliance Unit (See the address in Condition 8.6.4). The notification shall list for each chromium electroplating tanks [40 CFR 63.347(e)(2)]:

1. The applicable emission limitation and the methods that were used to determine compliance with this limitation [40 CFR 63.347(e)(2)(i)];

2. If a performance test is required by this subpart, the test report documenting the results of the performance test, which contains the elements required by 40 CFR 63.344(a), including measurements and calculations to support the special compliance provisions of 40 CFR 63.344(e) if these are being followed [40 CFR 63.347(e)(2)(ii)];

3. The type and quantity of hazardous air pollutants emitted by the source reported in mg/dscm or mg/hr if the source is using the special provisions of 40 CFR 63.344(e) to comply with the standards. (If the owner or operator is subject to the construction and reconstruction provisions of 40 CFR 63.345 and had previously submitted emission estimates, the owner or operator shall state that this report corrects or verifies the previous estimate.) For sources not required to conduct a performance test in accordance with 40 CFR 63.343(b), the surface tension measurement may fulfill this requirement [40 CFR 63.347(e)(2)(iii)];

4. For each monitored parameter for which a compliant value is to be established under 40 CFR 63.343(c), the specific operating parameter value, or range of values, that corresponds to compliance with the applicable emission limit [40 CFR 63.347(e)(2)(iv);

   It should be noted that compliance in this case is based upon the surface tension and monitoring limits shown Condition 7.7.6 and 7.7.8, respectively.

5. The methods that will be used to determine continuous compliance, including a description of monitoring and

reporting requirements, if methods differ from those identified in 40 CFR 63 Subpart N [40 CFR 63.347(e)(2)(v)];

6. A description of the air pollution control technique for each emission point [40 CFR 63.347(e)(2)(vi)];

7. A statement that the owner or operator has completed and has on file the operation and maintenance plan as required by the work practice standards in Condition 7.7.5 and 40 CFR 63.342(f) [40 CFR 63.347(e)(2)(vii)];

8. If the owner or operator is determining facility size based on actual cumulative rectifier capacity in accordance with Conditions 7.7.3(b) and 7.7.6 and 40 CFR 63.342(c)(2), records to support that the facility is small. For existing sources, records from any 12-month period preceding the compliance date shall be used or a description of how operations will change to meet a small designation shall be provided. For new sources, records of projected rectifier capacity for the first 12-month period of tank operation shall be used [40 CFR 63.347(e)(2)(viii)]; and

9. A statement by the owner or operator of the affected source [as defined by 40 CFR 63.340(a)] as to whether the source has complied with the provisions of this 40 CFR 63 Subpart N [40 CFR 63.347(e)(2)(ix)].

C. For sources required to conduct a performance test by 40 CFR 63.343(b), the notification of compliance status shall be submitted to the Illinois EPA - Air Compliance Unit no later than 90 calendar days following completion of the compliance demonstration required by 40 CFR 63.7 and 63.343(b) [40 CFR 63.347(e)(3)].

D. For sources that are not required to complete a performance test in accordance with 40 CFR 63.343(b), the notification of compliance status shall be submitted to the Illinois EPA - Air Compliance Unit no later than 30 days after the compliance date specified in 40 CFR 63.343(a) [40 CFR 63.347(e)(4)].

v. Reports of performance test results [40 CFR 63.347(f)].

A. As applicable, the Permittee shall report performance test results to the Illinois EPA - Air Compliance Unit (See the address in Condition 8.6.4). [40 CFR 63.347(f)(1)].

B. Reports of performance test results shall be submitted no later than 90 days following the completion of the performance test, and shall be submitted as part of the notification of compliance status required by Condition 7.7.10(a)(iv) and 40 CFR 63.347(e) [40 CFR 63.347(f)(1) and (2)].

vi. Ongoing compliance status reports for area sources.

The requirements of this paragraph do not alleviate affected area sources from complying with the requirements of State or Federal operating permit programs under the Illinois CAAPP and 40 CFR Part 71 [40 CFR 63.347(h)].

A. The owner or operator of an affected source that is located at an area source site shall prepare a summary report to document the ongoing compliance status of the affected source. The report shall contain the information identified in 40 CFR 63.347(g)(3) (See below), shall be completed annually and retained on site, and made available to the Illinois EPA upon request. The report shall be completed annually except as provided in Condition 7.7.10(a)(vi)(B) and 40 CFR 63.347(h)(2) [40 CFR 63.347(h)(1)].

Contents of ongoing compliance status reports. The owner or operator of an affected source for which compliance monitoring is required in accordance with Condition 7.7.8 and 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:

1. The company name and address of the affected source;

2. An identification of the operating parameter that is monitored for compliance determination, as required by Condition 7.7.8 and 40 CFR 63.343(c);

3. 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 Condition 7.7.10(a)(iv) and 40 CFR 63.347(e);

4. The beginning and ending dates of the reporting period;

5. A description of the type of process performed in the affected source;

6. The total operating time of the affected source during the reporting period;

7. If the affected source is a hard chromium electroplating tank and the owner or operator is limiting the maximum cumulative rectifier capacity in accordance with Condition 7.7.3(b)(i)) in accordance with Condition 7.7.6 and 40 CFR 63.342(c)(2), the actual cumulative rectifier capacity expended during the reporting period, on a month-by-month basis;

8. 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;

9. A certification by a responsible official, as defined in 40 CFR 63.2, that the work practice standards in Condition 7.7.5 and 40 CFR 63.342(f) were followed in accordance with the operation and maintenance plan for the source;

10. If the operation and maintenance plan required by Condition 7.7.5(c) and 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 Condition 7.7.5(c)(iv) and 40 CFR 63.342(f)(3)(iv) documenting that the operation and maintenance plan was not followed;

11. A description of any changes in monitoring, processes, or controls since the last reporting period;

12. The name, title, and signature of the responsible official who is certifying the accuracy of the report; and

13. The date of the report.

B. Reports of exceedances [40 CFR 63.347(h)(2)].

1. If both of the following conditions are met, semiannual reports shall be prepared and submitted to the Illinois EPA [40 CFR 63.347(h)(2)(i)]:

I. The total duration of excess emissions (as indicated by the monitoring data collected by the owner or operator of the affected source in accordance with Condition 7.7.8 and 40 CFR 63.343(c)) is 1 percent or greater of the total operating time for the reporting period [40 CFR 63.347(h)(2)(i)(A)]; and

II. The total duration of malfunctions of the add-on air pollution control device and monitoring equipment is 5 percent or greater of the total operating time [40 CFR 63.347(h)(2)(i)(B)].

2. Once an owner or operator of an affected source reports an exceedance as defined in Condition 7.7.10(a)(vi)(B)(1) and 40 CFR 63.347(h)(2)(i), ongoing compliance status reports shall be submitted semiannually until a request to reduce reporting frequency under Condition 7.7.10(a)(vi)(B)(C) and 40 CFR 63.347(h)(3) is approved [40 CFR 63.347(h)(2)(ii)].

3. The Illinois EPA may determine on a case-by-case basis that the summary report shall be completed more frequently and submitted, or that the annual report shall be submitted instead of being retained on site, if these measures are necessary to accurately assess the compliance status of the source [40 CFR 63.347(h)(2)(iii)].

C. Request to reduce frequency of ongoing compliance status reports [40 CFR 63.347(h)(3)].

1. An owner or operator who is required to submit ongoing compliance status reports on a semiannual (or more frequent) basis, or is required to submit its annual report instead of retaining it on site, may reduce the frequency of reporting to annual and/or be allowed to maintain the annual report onsite if all of the following conditions are met [40 CFR 63.347(h)(3)(i)]:

I. For 1 full year (e.g., 2 semiannual or 4 quarterly reporting periods), the ongoing compliance status reports demonstrate that the affected source is in compliance with the relevant emission limit [40 CFR 63.347(h)(3)(i)(A)];

II. The owner or operator continues to comply with all applicable recordkeeping and monitoring requirements of 40 CFR 63 Subpart A and 40 CFR 63.347; [40 CFR 63.347(h)(3)(i)(B)] and

III. The Illinois EPA does not object to a reduced reporting frequency for the affected source, as provided in Condition 7.7.10(a)(vi)(C)(2) and (3) and 40 CFR 63.347(h)(3)(ii) and (iii) [40 CFR 63.347(h)(3)(i)(C)].

2. The frequency of submitting ongoing compliance status reports may be reduced only after the owner or operator notifies the Illinois EPA in writing of his or her intention to make such a change, and the Illinois EPA does not object to the intended change. In deciding whether to

approve a reduced reporting frequency, the Illinois EPA may review information concerning the source's 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 to make a judgment about the source's potential for noncompliance in the future. If the Illinois EPA disapproves the owner or operator's request to reduce reporting frequency, the Illinois EPA 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 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(h)(3)(ii).

3. As soon as the monitoring data required by Condition 7.7.8 and 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 semiannual, 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 to reduce the reporting frequency as allowed by Condition 7.7.10(a)(vi)(C) and 40 CFR 63.347(h)(3) [40 CFR 63.347(h)(3)(iii)].

b. Reporting of Deviations

The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the chromium electroplating 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:

i. Report of any deviation from the conditions in Section 7.7 shall be reported to the Illinois EPA within 30 days of such occurrence. The report shall include the identity of the requirements for which a deviation occurred, a description of the deviation, its probable cause, and any corrective actions or preventive measures taken [39.5(7)(f)(ii) of the Act].

7.7.11 Operational Flexibility/Anticipated Operating Scenarios

Operational flexibility is not set for the affected emission units (chromium electroplating tanks). However, there may be provisions for source-wide operational flexibility set forth in Condition 5.11 of this permit.

7.7.12 Compliance Procedures

The testing, monitoring, recordkeeping and reporting requirements in section 7.7.7, 7.7.8, 7.7.9, and 7.7.10 shall be used to determine compliance.

7.8 Unit 08: Utility Operations

7.8.1 Description

Propane Plant Vaporizer Flare:

The purpose of the Propane Plant is to vaporize propane liquid and mix it with air to make a natural gas equivalent from propane gas, which can be used as fuel supply to Olin's East Alton manufacturing facilities. The natural gas equivalent can be supplied to natural gas fired equipment without requiring modification to the equipment. It can be used to either supplement the natural gas supply or to completely replace it.

Liquid propane is pumped from six storage tanks to a propane gas fired vaporizer where it is vaporized and piped to a mixing building. In the mixing building, compressed air and propane are combined in the ratio required to produce the natural gas equivalent having a heating value of approximately 1450 BTU per cubic foot. The natural gas equivalent is piped directly from the building to the natural gas supply line.

During start-up or testing operations, the natural gas equivalent is burned off to the atmosphere through the propane plant vaporizer flare (FL-1).

Limestone Silos:

The two (2) limestone silos with fabric filter dust collectors are part of Olin's Waste Water Treatment Facility (WWTF). Limestone is metered into the WWTF to control the pH of the wastewater.

A collector is installed on each silo and functions as bin vent filters to eliminate limestone dust emission during the pneumatic loading. The automatic continuous cleaning action of the collectors deposits the collected dust back into the silo.

The Limestone Silos are filled approximately every 10 days. The average amount added to the silos during filling process is approximately 40,000 lb. It takes approximately 2 hours to add the 40,000 lb.

Package Boilers:

The facility operates six package Cleaver Brooks boilers (B-1 thru B-6) to generate steam, which is used for process heating and space heating purposes. The boilers B-1 to B-6 were constructed in year 1982 while the boiler B-6 was added in year 1995. Natural gas is the primary fuel with #2 fuel oil or propane-air mixture used as back-ups.

Note: This narrative description is for informational purposes only and is not enforceable.

7.8.2 List of Emission Units and Air Pollution Control Equipment

Description	Emission Control Equipment	Date Constructed
Propane plant vaporizer flare (FL-1), 145 mmBtu/hr Propane gas fired	None	1992
2 Limestone silos (S-1, S-2)	Filters (FF-1, FF-2)	Prior 1972
Package Boilers: Cleaver Brooks Boilers (B-1 thru B-6) 32.66 mmBtu/hr each	None	B-1 thru B-5 in 1982 B-6 in 1995

7.8.3 Applicable Provisions and Regulations

a. The "affected emission unit" for the purpose of the unit-specific conditions in Section 7.8 are the emission units described in conditions 7.8.1 and 7.8.2.

b. Package Boiler B-6, added in 1995, is a steam generating unit that is fired with natural gas (with distillate fuel backup), with a maximum heat input capacity of 100 mmBtu/hr or less, but greater than or equal to 10 mmBtu/hr, and constructed, modified or reconstructed after June 9, 1989. As a consequence, the Package Boiler B-6 is subject to the Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60 Subpart Dc because the boiler was constructed after June 9, 1989 and the firing rates of Package Boiler B-6 is less than 100 mmBtu/hr and greater than 10 mmBtu/hr [40 CFR 60.40c(a)].

c. i. The emissions of particulate matter (PM) into the atmosphere in any one hour period shall not exceed 0.15 kg/MW-hr (0.10 lb/mmBtu) of actual heat input from any fuel combustion emission unit (Package Boilers) using liquid fuel exclusively [35 IAC 212.206].

ii. The emission of carbon monoxide (CO) into the atmosphere from any Package Boiler with actual heat input greater than 2.9 MW (10 mmBtu/hr) shall not exceed 200 ppm, corrected to 50 percent excess air [35 IAC 216.121].

iii. A. The emission of sulfur dioxide (SO_2) into the atmosphere in any one hour period from any Package Boiler burning liquid fuel exclusively shall not exceed 0.46 kg of sulfur dioxide per MW-hr of actual heat input when distillate fuel

oil is burned (0.3 lb/mmBtu) [35 IAC 214.161(b)].

B. Pursuant to the New Source Performance Standard, the emission of sulfur dioxide (SO_2) into the atmosphere in any one hour period from Package Boiler B-6 burning liquid fuel exclusively shall not exceed 215 ng/J of actual heat input when distillate fuel oil is burned (0.5 lb/mmBtu); as an alternative the Permittee shall not combust oil in Package Boilers that contains greater than 0.5 weight percent sulfur. All limits shall be based on a 30-day rolling average [40 CFR 60.42c(d) and (g)].

The SO_2 limitations in 35 IAC 214.122(b) supersedes the 40 CFR 60 Subpart Dc (40 CFR 60.42c(d) and (g)) requirements since 35 IAC 214.122(b) is more stringent than the 40 CFR 60 Subpart Dc, (See Conditions 7.8.6(a) and (b)(iii)(B)).

iv. A. Pursuant to 35 IAC 212.123(a), excluding Package Boiler B-6, 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 affected emission unit (as described in Condition 7.8.3(a)), except as allowed by 35 IAC 212.123(b) and 212.124. (See Condition 5.3.2(b)).

B. Pursuant to the New Source Performance Standard, the emission of gases into the atmosphere from an Package Boiler B-6, except during periods of startup, malfunction and shutdown, shall not exhibit an opacity greater than 20 percent (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity [40 CFR 60.43c(c) and (d)].

For the Package Boiler B-6, the opacity limitations in 40 CFR 60 Subpart Dc (40 CFR 60.42c(c) and (d)) supersedes the 35 IAC 212.123(a) requirements since 40 CFR 60 Subpart Dc is more stringent than the 35 IAC 212.123(a).

d. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from the Propane Plant Vaporizer Flare and Limestone Silos, except as provided in 35 IAC 219.302, 219.303, 219.304 and the following exception: If no odor nuisance exists the limitation of this Subpart shall apply only to photochemically reactive material [35 IAC 219.301].

The Limestone Silos compliance with this limitation is based upon the silos not processing organic material.

e. The Limestone Silos at the source are subject to 35 IAC 212.321(a), which requires that:

i. 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, 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 35 IAC 212.321 (see also Attachment 1) [35 IAC 212.321(a)].

The Limestone Silos compliance with this limitation is based upon the silos being controlled with the silo filters.

7.8.4 Non-Applicability of Regulations of Concern

a. The affected emission units (as described in Condition 7.8.3(a)) are not subject to the opacity limitations in 35 IAC 212.122 since boiler capacities are less than 250 mmBtu/hr (See 35 IAC 212.122(a)) and the Propane Plant Vaporizer Flare and Limestone Silos are not by definition fuel combustion emission units (See 35 IAC 211.2470).

b. The propane plant vaporizer flare (FL-1) is not subject to the sulfur limitations in 35 IAC 214.122 since it does not burn solid fuel or liquid fuel as per 35 IAC 214.122.

c. The propane plant vaporizer flare (FL-1) and Package Boilers are not subject to 35 IAC 217.141, since boiler capacities are less than 250 mmBtu/hr (See 35 IAC 212.122(a)) and the Propane Plant & Vaporizer Flare and Limestone Silos are not by definition fuel combustion emission units (See 35 IAC 211.2470).

d. The package boilers are not subject to 35 IAC 219.301, “Use of Organic Material” since, pursuant to 35 IAC 219.303, fuel combustion emission units are excluded from applicability from 35 IAC 219.301.

e. The Propane Plant Vaporizer Flare is not subject to 35 IAC 212.321(a) since the flare combusts exclusively gaseous fuels, and liquid and gaseous fuels are excluded from the definition of process weight rate (35 IAC 211.5250) (consistent with the IEPA’s practical applications of 35 IAC 212.321(a) for flares).

7.8.5 Control Requirements and Work Practices

Control requirements and work practices are not set for the affected emission units (as defined by Condition 7.8.3(a)). However, there may be requirements for source-wide control requirements and work practices set forth in Condition 5.5.

7.8.6 Production and Emission Limitations

In addition to the source-wide emission limitations in Condition 5.6, the affected emission units (as defined by Condition 7.8.3(a)) are subject to the following:

a. Distillate Fuel Oil:

The Permittee shall not utilize distillate fuel oil (Grades No. 1 and 2) in the boiler(s) with a sulfur content greater than the larger of the following values, pursuant to 35 Ill. Adm. Code 214.161(b).

A. 0.28 weight percent; or

B. The wt. percent given by the following formula: Maximum Wt. Percent Sulfur = (0.000015) x (Gross Heating Value of the Oil, Btu/Lb.).

The above limitation assures compliance with the SO_2 limitations in 35 IAC 214.122(b) (See Conditions 7.8.3(c)(iii)). Compliance with these limits shall be based upon the recordkeeping and compliance procedures in Conditions 7.8.9 and 7.8.12, respectively.

b. Package Boilers:

i. Natural gas, natural gas equivalent propane-air mixture and/or No. 2 fuel oil shall be the only fuel(s) combusted in the above referenced boiler(s) subject to the following limitations.

The combustion of a natural gas equivalent propane-air mixture is allowed in any emission units permitted to combust natural gas as described in Condition 5.6.4 and 7.8.1 [T1R].

ii. Annual fuel consumption for the six (6) package boilers (B-1 through B-6) is limited to 800 million cubic feet of natural gas or natural gas equivalent propane-air mixture. Up to 1,200,000 gallons of No. 2 fuel oil may be used to replace up to 168 million cubic feet of natural gas at a ratio of 7,138.46 gallons of No. 2 fuel oil per one (1) million cubic feet of natural gas [T1R].

iii. Emissions of particulate matter (TSP), nitrogen oxide (NO_x), volatile organic material (VOM), carbon monoxide (CO) and sulfur dioxide (SO_2) and operation of the six (6) package boilers shall not exceed the following limits:

A. Natural Gas/Natural Gas Equivalent Propane-Air Mixture Mode of Operation:

Firing Rate	Million Ft^3/Mo 150 Tons/Month	Million Ft^3/Yr 800 Tons/Year
VOM	0.42	2.20
PM	0.57	3.04
NO_x	7.50	40.00
CO	6.30	33.60
SO_2	0.05	0.24

* Up to 1,200,000 gallons of No. 2 fuel oil may be used to replace up to 168 million cubic feet of natural gas/natural gas equivalent propane-air mixture (See Condition 7.8.6(a)(ii)).

B. No. 2 Fuel Oil Mode of Operation (See Condition 7.8.6(a)(ii)):

	Gallons/Year	Gallons/Month
Firing Rate	1,200,000	464,000
Percent Sulfur Content	0.28	0.28
	Tons/Year	Tons/Month
VOM	0.15	0.06
PM	1.20	0.46
NO_x	12.00	4.64
CO	3.00	1.16
SO_2	23.88	9.23

These limits are based on standard emission factors and procedures and the fuel(s), maximum firing rates, and maximum hours of operation indicated in the application. SO_2 limits are based on compliance with 35 Ill. Adm. Code 214.122(b)(2), which is more stringent than the NSPS.

iv. 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) [T1R].

v. The above limitations contain revisions to previously issued Permit 85100062. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically MSSCAM and/or PSD. These limits continue to ensure that the construction and/or modification addressed in this permit does not constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. Specifically, these limits allow the use of natural gas equivalent propane-air mixture as fuel in the boilers with no corresponding increase in emissions. Additional limitations regarding source wide combustion limitations have been added in Condition 5.6.4 [T1R].

c. Propane Plant Vaporizer Flare

i. Emission and operation of the propane vaporizer shall not exceed the following limits:

Hours of Operation	Carbon Monoxide		Nitrogen Oxides	
Hours/Year	Lbs/Hour	Tons/Year	Lbs/Hour	Tons/Year
2,184	0.15	0.16	2.06	2.25

These limits are the product of the hourly limit and the maximum hours of operation. Compliance with annual limits shall be based upon the recordkeeping and compliance procedures in Conditions 7.8.9 and 7.8.12, respectively.

ii. 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].

iii. The above limitations are being established in this permit pursuant to Title I of the CAA, specifically MSSCAM and/or PSD. The source has requested that the Illinois EPA establish emission limitations and other appropriate terms and conditions in this permit that limit the CO and NO_x emissions from the Propane Plant Vaporizer Flare below the levels that would trigger

the applicability of these rules, consistent with the information provided in the CAAPP application [T1N].

7.8.7 Testing Requirements

Testing requirements are not set for the affected emission units (as defined by Condition 7.8.3(a)). However, there are source-wide testing requirements in Condition 5.7 and general testing requirements in Condition 5.8.

7.8.8 Monitoring Requirements

Monitoring requirements are not set for the affected emission units (as defined by Condition 7.8.3(a)). However, there may be provisions for source-wide monitoring requirements set forth in Condition 5.8 of this permit.

7.8.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for each affected emission unit (as defined by Condition 7.8.3(a)) to demonstrate compliance with Conditions 5.6.1 and 7.8.6, pursuant to Section 39.5(7)(b) of the Act:

a. The Permittee is required to compile monthly records of the following items, and such other items as may be appropriate to allow the Agency to review compliance with the limits in Condition 7.8.6:

   i. Total natural gas usage for Package Boiler B-6 (ft^3/day) [40 CFR 60.48c(g)];

   ii. Total distillate fuel usage for Package Boiler B-6 (gal/day) [40 CFR 60.48c(g)];

   iii. Monthly and Annual usage of natural gas and No. 2 fuel oil for the Package Boilers (ft^3/month & ft^3/year and gal/month and gal/year, respectively).

   iv. Monthly and Annual usage of propane in Propane Vaporizer and Flare (gal/month and gal/year);

   v. The maximum sulfur content (in Wt.%) for each shipment of distillate fuel oil used in the Package Boilers;

   vi. Fuel oil supplier certification for Package Boiler B-6, including:

      A. The name of the oil supplier [40 CFR 60.48c(f)(i)]; and

B. A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil found at 40 CFR 60.41c [40 CFR 60.48c(f)(ii)].

b. Monthly and annual aggregate NO_x, PM, CO, SO_2, and VOM emissions, as applicable, from each affected emission unit (as defined by Condition 7.8.3(a)), based on the compliance procedures in Condition 7.8.12, with supporting calculations.

c. i. Except as noted in Condition 7.8.9(c)(ii), the Permittee shall comply with the recordkeeping requirements of the NSPS (40 CFR 60 Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units) as applicable to Package Boiler B-6.

ii. As per a March 17, 2004 letter from EPA Region V to the Permittee, the U.S. EPA has approved the Permittee's request for alternative monitoring and recordkeeping to collect monthly records of fuel usage for Package Boiler B-6, as opposed to daily records, as is required by NSPS Subpart Dc. Accordingly, the Permittee shall maintain records of fuel usage for Package Boiler B-6 on a monthly basis only.

7.8.10 Reporting Requirements

a. Reporting of Deviations

The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the affected emission units (as defined by Condition 7.8.3(a)) 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:

i. Notification within 60 days of operation of a Package Boilers that may not have been in compliance with the opacity limitations in Condition 5.5.2(b) only or Conditions 5.5.2(b) and 7.8.3(c)(iv)(A), with a copy of such record for each incident.

ii. If there is an exceedance of sulfur content of distillate fuel oil in excess of the limit specified in Condition 7.8.6, the Permittee shall submit a report within 30 days after receipt of a noncompliant shipment of distillate fuel oil.

iii. The Permittee shall submit a quarterly report, which shall include, in addition to the fuel supplier

certification required in Condition 7.8.9(a)(vi), a certified statement signed by the Permittee that the records of fuel supplier certifications submitted represent all of the fuel consumed during the quarter [40 CFR 60.48c(e)(11)].

b. Emissions of NO_x, PM, SO_2, or VOM from the Package Boilers in excess of the limits specified in Condition 5.6.1 based on the current month's records plus the preceding 11 months within 30 days of such an occurrence.

c. The Permittee shall comply with the reporting requirements of the NSPS (40 CFR 60 Subpart Dc—Standards of Performance for Small Industrial- Commercial-Institutional Steam Generating Units) as applicable to Package Boilers B-6.

7.8.11 Operational Flexibility/Anticipated Operating Scenarios

Operational flexibility is not set for the affected emission units (as defined by Condition 7.8.3(a)). However, there may be provisions for source-wide operational flexibility set forth in Condition 5.11 of this permit.

7.8.12 Compliance Procedures

a. Compliance with Condition 7.8.3(c)(i) and (ii) is demonstrated through operation and maintenance of the package boilers according to manufacturers specifications and the operating conditions in Condition 7.8.6, so that no compliance procedures are set in this permit addressing this requirement.

b. Compliance with Condition 7.8.3(d) for the Propane Plant Vaporizer Flare is demonstrated through operation and maintenance of the flare according to manufacturers specifications and the operating conditions in Condition 7.8.6 (based upon the maximum firing capacity of the flare, 145 mmBtu/hr) so that no compliance procedures are set in this permit addressing this requirement.

c. Compliance with Conditions 7.8.3(c)(iii) and (iv) is demonstrated based upon the Package Boilers using distillate oil with a sulfur content meeting the specification of Conditions 7.8.6(a) and (b)(iii)(B)) and following the recordkeeping and reporting requirements in Conditions 7.8.9(a) and 7.8.10, respectively.

d. To determine compliance with Conditions 5.6.1 and 7.8.6, emissions from the Package Boilers, shall be calculated based on the following emission factors and formulas or the current version of AP-42, or other calculation methods as approved by the IEPA:

i. Natural Gas

Pollutant	Emission Factor ($lbs/10^6$ ft^3)
NO_x	100.0
PM	7.6
VOM	5.5
SO_2	0.6
CO	84.0

These are the emission factors for uncontrolled natural gas combustion in boilers (<100 mmBtu/hr), Tables 1.4.1 and 1.4.2, AP-42, Volume I, Supplement D, March, 1998.

Natural Gas Combustion Emissions (lb) = (Natural Gas Consumed, ft^3) x (The Appropriate Emission Factor)

ii. No. 2 Fuel Oil (Distillate Fuel)

Pollutant	Emission Factor ($lbs/10^3$ gal)
VOM	0.25
PM	2.0
NO_x	20.0
CO	5.0
SO_2	39.8[1]

1 The emission factor for SO_2 emissions is based upon the AP-42 factor referenced below (142 x S) and a sulfur concentration based on compliance with 35 Ill. Adm. Code 214.122(b)(2) (See Condition 7.8.6(a)(iii)(A) where fuel oil sulfur content (S) is limited to less than 0.28 percent.

These are the emission factors for uncontrolled distillate oil fired in boilers (<100 mmBtu/hr), Tables 1.3.1, AP-42, Volume I, Supplement D, March, 1998.

No. 2 Fuel Oil Emissions (lb) = (No. 2 Fuel Oil consumed, gallons) x (The appropriate emission factor in lb/1000 gallons)

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 (i.e., a running 12 month total of emissions).

e. To determine compliance with Conditions 5.6.1 and 7.8.6, emissions from the affected emission units (as defined by Condition 7.8.3(a)) shall be calculated based on the following emission factors for each type of process emission unit, or other calculation methods as approved by the IEPA:

i. Propane plant Vaporizer Flare (FL-1)

Pollutant	Emission Factor ($lb/10^3$ gal)
NO_x	19.0
PM	0.6
VOM	0.5
SO_2	0.1 S
CO	3.2

S Equals the sulfur content expressed in gr/100 ft^3 gas vapor. For example, if the propane sulfur content is 0.15 gr/100 ft^3, the emission factor would be (0.15 x 0.1) = 0.015 lb of $SO_2/10^3$ gal propane burned. Sulfur concentration based on Gas Processors Association Engineering Data Book (Ninth Edition, 1972), Figure 15-50 (GPA Liquefied Petroleum Gas Specifications, rev. 1979), Commercial Propane = 15 gr/100 scf

These are the emission factors for uncontrolled propane air mixture combustion in boilers - Table 1.5-1, AP-42, Volume I, Supplement B, October 1996.

Propane Air Mixture Combustion Emissions (lb) = (Propane consumed, gallons) x (The appropriate emission factor in lb/1000 gallons).

ii. Emissions from the limestone silos is based upon the emission factor (0.8 lb/ton) for lime manufacturing (SCC 3-05-016-07) taken from the USEPA AIRS database, the maximum PM filter efficiency (99.9%) and maximum filling rate (20,000 lb/hr)

Description	Emission Control Equipment	Emission Rate lbs/hr
2 Limestone Silos (S-1 & S-2)	Filters (FF-1, FF-2)	0.008[2]

7.9 Unit 09: Gasoline Tanks

7.9.1 Description

The small gasoline storage tanks are used to dispense gasoline to plant vehicles.

Note: This narrative description is for informational purposes only and is not enforceable.

7.9.2 List of Emission Units and Air Pollution Control Equipment

Description	Emission Control Equipment	Date Constructed
Zone 17 Gasoline Tank (AST-15); 500 gallons	None	01/1961
Zone 17 Onan Gasoline Tank (AST-16); 525 Gallons	None	01/1995
Zone 2 Gasoline Tank (AST-5); 500 Gallons	None	12/1992
Zone 7 Gasoline Tank (AST-2); 500 Gallons	None	11/1993

7.9.3 Applicable Provisions and Regulations

a. The “affected storage tank”, for the purpose of the unit-specific conditions in Section 7.9 is an emission unit described in conditions 7.9.1 and 7.9.2.

b. No person shall cause or allow the loading of any organic material in any stationary tank having a storage capacity of greater than 946 liter (250 gallon), unless such tank is equipped with a permanent submerged loading pipe [35 IAC 219.122(b)].

   Except as provided in the following exemptions: If the tank is a pressure tank then the limitations of 35 IAC 219.122(b) shall not apply [35 IAC 219.121(a)] or if no odor nuisance exists then the limitation of 35 IAC 219.122(b) shall only apply when the tank is used to store a volatile organic liquid with a vapor pressure of 2.5 psia or greater at 70°F [35 IAC 219.122(c)].

c. No person shall cause or allow the transfer of gasoline from any delivery vessel into any stationary tank at gasoline dispensing operation, unless such tank is equipped with a submerged loading pipe [35 IAC 219.583(a)(1)].

7.9.4 Non-Applicability of Regulations of Concern

a. The affected storage tanks (as defined by Condition 7.9.3(a))are not subject to the requirements of 35 IAC 219.121, because the capacity of each tank is less than 40,000 gal [35 IAC 219.121].

b. The affected storage tanks (as defined by Condition 7.9.3(a))are not subject to the requirements of 35 IAC 219.122(a), because the capacity of each tank is less than 40,000 gal [35 IAC 219.122(a)].

c. The affected storage tanks (as defined by Condition 7.9.3(a))are not subject to the requirements of 35 IAC 219.583(a)(2) and (3), because the capacity of each tank is less than 575 gal [35 IAC 219.583(b)].

d. The affected tanks (as defined by Condition 7.9.3(a))are not subject to control requirements specified in 35 IAC 219 Subpart TT, because the affected tanks do not meet the applicability criteria shown in 35 IAC 219.980(a). Specifically, 35 IAC 219 Subpart TT does not apply to VOM emission units included within the category specified in 35 IAC 219 Subparts B (Organic Emissions from Storage and Loading Operations) and Y (Gasoline Distribution) [35 IAC 219.980(a)].

7.9.5 Control Requirements and Work Practices

Each affected storage tank (as defined by Condition 7.9.3(a))is subject to the applicable provisions of Condition 7.9.3. The affected storage tank (as defined by Condition 7.9.3(a))shall be equipped and operated with a submerged loading pipe, submerged fill, or an equivalent device approved by the Illinois EPA, pursuant to 35 IAC 219.122(b) and/or 219.583(a).

The Illinois EPA has not approved use of other equivalent equipment in lieu of a submerged loading pipe or submerged loading fill.

7.9.6 Production and Emission Limitations

Production and emission limitations are not set for the affected storage tanks (as defined by Condition 7.9.3(a)). However, there are source-wide production and emission limitations set forth in Condition 5.6.

7.9.7 Testing Requirements

Testing requirements are not set for the affected storage tanks (as defined by Condition 7.9.3(a)). However, there are source-wide testing requirements in Condition 5.7 and general testing requirements in Condition 8.5.

7.9.8 Monitoring Requirements

Monitoring requirements are not set for the affected storage tanks (as defined by Condition 7.9.3(a)). However, there may be provisions for source-wide monitoring requirements set forth in Condition 5.8 of this permit.

7.9.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for each affected storage tanks (as defined by Condition 7.9.3(a)) to demonstrate compliance with Conditions 5.6.1, 7.9.5 and 7.9.6, pursuant to Section 39.5(7)(b) of the Act:

a. Design information for the tank showing the presence of a submerged loading pipe or submerged fill;

b. Maintenance and repair records for the tank, as related to the repair or replacement of the loading pipe;

c. The throughput of the affected storage tanks (as defined by Condition 7.9.3(a)), gal/yr; and

d. The annual VOM emissions from the affected storage tanks (as defined by Condition 7.9.3(a)) based on the material stored, the tank throughput, and the applicable emission factors and formulas with supporting calculations.

7.9.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the affected storage tanks (as defined by Condition 7.9.3(a)) 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. Operation of the affected storage tanks (as defined by Condition 7.9.3(a)) in excess of the limits specified in Conditions 7.9.3 and 7.9.5 within 30 days of such occurrence.

7.9.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to the affected storage tanks (as defined by Condition 7.9.3(a)) without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee’s obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

a. Changes to components related to either the “submerged loading pipe or submerged fill”, including addition of new components and repair and replacement of components; and

b. Changes in the material stored in a tank provided the tank continue to comply with the Conditions 7.9.5 of this permit.

7.9.12 Compliance Procedures

Compliance with the emission limits in condition 5.5 and 7.9.6 shall be based on the recordkeeping requirements in Condition 7.9.9 and the emission factors and formulas listed below:

a. For the purpose of estimating VOM emissions from the affected gasoline storage tank (as defined by Condition 7.9.3(a)), the methods and procedures in Chapter 5.2 of AP-42 and/or the methods and procedures provided in the Illinois EPA annual emission report instructions, which are based upon the AP-42 procedures, are acceptable, or any subsequent procedure or method submitted by the Permittee and approved by Illinois EPA.

7.10 Unit 10: Fugitive emissions

7.10.1 Description

Fugitive emissions are defined as those emissions, which would not reasonably pass through a stack, vent or other functionally equivalent opening.

7.10.2 List of Emission Units and Air Pollution Control Equipment

Description	Emission Control Equipment	Date Constructed
Vehicular Mile Traveled (VMT) on Roads	None	--
Material Storage Piles	None	--
Contact Cooling Towers	None	--
Casting Fugitives	None	--

7.10.3 Applicable Provisions and Regulations

a. The “affected fugitive emission sources” for the purpose of the unit-specific conditions in Section 7.10, are emission sources described in Conditions 7.10.1 and 7.10.2.

b. As applicable, affected fugitive emission sources (as defined by Condition 7.10.3(a)) shall comply with the requirements and regulations shown in Condition 5.3.2(a) and 5.3.3. These include but are not limited to the following:

i. 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.

ii. As required under 35 IAC 212.302(a) and as required by the operating program required in Condition 5.3.3:

A. Traffic Areas: All normal traffic pattern roads and parking facilities which are located on mining or manufacturing property shall be paved or treated with water, oils or chemical dust suppressants. All paved areas shall be cleaned on a regular basis. All areas treated with water, oils or chemical dust suppressants shall have the treatment applied on a regular basis, as needed, in accordance with the operating program required by Conditions

5.3.3(d) through (g) (see also 35 IAC 212.309, 212.310 and 212.312) [35 IAC 212.306].

B. Materials Collected by Pollution Control Equipment: All unloading and transporting operations of materials collected by pollution control equipment shall be enclosed or shall utilize spraying, pelletizing, screw conveying or other equivalent methods [35 IAC 212.307].

C. Spraying or Choke-Feeding Required: 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].

7.10.4 Non-Applicability of Regulations of Concern

a. The affected fugitive road emission sources and material storage piles (as defined by Condition 7.10.3(a)) are not subject to the requirements of 35 IAC 212.321, Emissions of Particulate Matter from Process Emission Units, because the fugitive road emission sources are not considered to be process emissions unit and because material storage piles are considered to be unique process in which the rules cannot reasonably be applied.

b. The storage piles, along with associated conveyor loading operations to the piles and the normal traffic pattern access areas surrounding the piles, are not subject to 35 IAC 212.304 through 212.306 because uncontrolled emissions of fugitive particulate matter from all storage piles at the source are less than 50 tons/year [35 IAC 212.304].

7.10.5 Control Requirements and Work Practices

Control requirements and work practices are not set for the affected fugitive emission sources (as defined by Condition 7.10.3(a)). However, there may be requirements for source-wide control requirements and work practices set forth in Condition 5.5.

7.10.6 Production and Emission Limitations

Production and emission limitations are not set for the affected fugitive emission sources (as defined by Condition 7.10.3(a)). However, there are source-wide production and emission limitations set forth in Condition 5.6.

7.10.7 Testing Requirements

Testing requirements are not set for the affected fugitive emission sources (as defined by Condition 7.10.3(a)). However, there are source-wide testing requirements in Condition 5.7 and general testing requirements in Condition 8.5.

7.10.8 Monitoring Requirements

The Permittee shall document the following as part of the recordkeeping and compliance procedures requirements in Conditions 7.10.9 and 7.10.12 and, as applicable, the sources standard operating procedures:

a. Visible Emission Observations

The Permittee shall comply with the visible emission monitoring requirements for the affected fugitive emission sources (as defined by Condition 7.10.3(a)) according to the procedures shown in Attachment 5 (Pressure Drop Monitoring Schedule and Visible Emission Compliance Demonstration).

For each emission source requiring visible emission observations as noted in Attachment 5, the Permittee shall comply with the following visible emission observation requirements:

i. The Permittee shall conduct a qualitative visible emissions observation once each day during normal daylight operations when the process emission units and associated air pollution control equipment are in operation in order to observe for the presence of abnormal visible emissions. These observations shall be made and recorded by a trained employee. If such observations during operation do not detect observable emissions for a period of two weeks, the frequency of observations shall be reduced to once per week when operating. If the weekly observations do not detect observable emissions for a period of two months, the frequency of observations shall be reduced to once per month when operating. If abnormal visible emissions are detected the frequency of observations shall be increased to once a day. Observations thereafter may be reduced again if visible emissions are not detected for the period outlined above.

If abnormal visible emissions are observed, the Permittee shall initiate corrective actions to eliminate the abnormal visible emissions. If the Permittee cannot eliminate the abnormal visible emissions within 24 hours, the Permittee shall conduct opacity testing pursuant to the methods and

procedures in Method 9 (40 CFR Part 60, Appendix A) within three days after the qualitative observation showing abnormal emissions.

ii. For processes operated continuously, “normal” means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

iii. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

iv. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

v. The Permittee shall follow the sources standard operating procedures and manufactures specifications, as applicable, in order to correct periods of excess emissions. The program and/or the procedures for a specific emission units and associated air pollution control equipment shall contain troubleshooting contingency and response steps for when an abnormal emission are observed.

7.10.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for the affected fugitive emission sources (as defined by Condition 7.10.3(a)) to demonstrate compliance with Conditions 5.6.1 and 7.10.7, pursuant to Section 39.5(7)(b) of the Act:

a. Paved and unpaved roads (VMT/mo, VMT/yr)*;

b. Storage pile activity (T/mo, T/yr)*;

c. Cooling tower flow rate (gallons/mo, gallons/yr)*;

d. Emissions as calculated by Condition 7.10.12 (T/mo, T/yr).

* These quantities may be estimated as described in the permit application.

e. The Permittee shall document, maintain and retain records of the following:

i. Visible emission observations, and operational inspections required in Condition 7.10.8 and a log of all repairs and corrective actions implemented as a result of the above.

ii. The date and reason any required inspection was not performed.

7.10.10 Reporting Requirements

a. Reporting of Deviations

The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the affected fugitive emission sources (as defined by Condition 7.10.3(a)) 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:

i. If there is a deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report within 30 days after the deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the deviation and efforts to reduce emissions and future occurrences.

7.10.11 Operational Flexibility/Anticipated Operating Scenarios

Operational flexibility is not set for the affected fugitive emission sources (as defined by Condition 7.10.3(a)). However, there may be provisions for source-wide operational flexibility set forth in Condition 5.11 of this permit.

7.10.12 Compliance Procedures

a. Compliance with the fugitive particulate matter and visible emissions limits in Conditions 5.3.2(a), 5.3.3 and 7.10.3(b) is based upon the operating program requirements of Conditions 5.3.3 and the air pollution control procedures in Condition 7.10.3(b) and visible emissions monitoring required in Condition 7.10.8.

b. Compliance with the limits in Conditions 5.6.1 shall be based on the recordkeeping requirements in Condition 7.10.9 and the emission factors listed below:

i. PM Emissions from Vehicular Mile Traveled (VMT) on roads:

PM Emission factors for paved roads:

Zone	PM Emission Factor lb/VMT
1	0.13
2	0.15
4 & 5	0.066
17	0.34

PM Emission factors for unpaved roads:

Zone	PM Emission Factor lb/VMT
2	1.75
17	3.35

The above emission factors and rates are from the application derived from various USEPA publications such as AP-42, Control of Open Dust Sources (EPA-450/3-88-008) and AIRS.

ii. PM Emissions from storage piles:

Total emissions = adding to pile + wind erosion during storage + removing from pile

Material	Batch pickup/drop Lb/ton	Wind erosion g/m^2
Salt	0.0016	48.7
Cinders	0.0016	48.7
Skimmings – Conical Pile	0.0010	541.8
Skimmings – Rectangle Pile	0.0010	883.2
Skimmings – Flat Pile	0.0010	170.2

The above emission factors and rates are from the application derived from various USEPA publications such as AP-42, Control of Open Dust Sources (EPA-450/3-88-008) and AIRS.

iii. PM Emissions from contact cooling towers:

D.C. Casting 0.001773 lbs/1000 gallons
Hot Mill 0.001773 lbs/1000 gallons

The above emission factors are from the application derived from USEPA publication AP-42, Table 13.4-1, Fifth edition, January 1995.

iv. Fugitive PM Emissions from Casting Operations

PM Emissions (ton/month) = 0.14 (lb PM/ton) x Tons of Metal Cast per Month (ton/month) / 2000

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 _____Error! Bookmark not defined. (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].

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 if applicable test methods are not specified by the applicable regulations or otherwise identified in the conditions of this permit. 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 Conditions 8.6.3 and 8.6.4.

8.6 Reporting Requirements

8.6.1 Monitoring Reports

Reports summarizing required monitoring as specified in the conditions of this permit shall be submitted to the Illinois EPA

every six months as follows, unless more frequent submittal of such reports is required in Sections 5 or 7 of this permit [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 determinations of emissions and operation that are intended to be made, including sampling and monitoring locations;

e. The test method(s) that 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. Unless otherwise specified in the particular provision of this permit or in the written instructions distributed by the Illinois EPA for particular reports, reports and notifications shall be sent to the Illinois EPA - Air Compliance Unit with a copy sent to the Illinois EPA - Air Regional Field Office.

b. As of the date of issuance of this permit, the addresses of the offices that should generally be utilized for the submittal of reports and notifications are as follows:

i. Illinois EPA - Air Compliance Unit

Illinois Environmental Protection Agency
Bureau of Air
Compliance & Enforcement Section (MC 40)
P.O. Box 19276
Springfield, Illinois 62794-9276

ii. Illinois EPA - Air Quality Planning Section

Illinois Environmental Protection Agency
Bureau of Air
Air Quality Planning Section (MC 39)
P.O. Box 19276
Springfield, Illinois 62794-9276

iii. Illinois EPA - Air Regional Field Office

Illinois Environmental Protection Agency
Division of Air Pollution Control
2009 Mall Street
Collinsville, Illinois 62234

iv. USEPA Region 5 - Air Branch

USEPA (AR - 17J)
Air & Radiation Division
77 West Jackson Boulevard
Chicago, Illinois 60604

c. Permit applications should be addressed to the Air Permit Section. As of the date of issuance of this permit, the address of the Air Permit Section is as follows:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Permit Section (MC 11)
P.O. Box 19506
Springfield, Illinois 62794-9506

8.7 Title I Conditions

Notwithstanding the expiration date on the first page of this CAAPP permit, Title I conditions in this permit, which are identified by a T1, T1N, or T1R designation, remain in effect until such time as the Illinois EPA takes action to revise or terminate them in accordance with applicable procedures for action on Title I conditions. This is because these conditions either: (a) incorporate conditions of earlier permits that were issued by the Illinois EPA pursuant to authority that includes authority found in Title I of the CAA (T1 conditions), (b) were newly established in this CAAPP permit pursuant to authority that includes such Title I authority (T1N conditions), or (c) reflect a revision or combination of conditions established in this CAAPP permit (T1R conditions). (See also Condition 1.5.)

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.

9.1.2 In particular, this permit does not alter or affect the following [Section 39.5(7)(j)(iv) of the Act]:

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, pursuant to Section 39.5(7)(j) and (p) of the Act, 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, or 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 this permit provides for such continued operation consistent with the Act and applicable Illinois Pollution Control Board regulations [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 there under.

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 as may be required by law and in accordance with constitutional limitations, the Permittee shall allow the Illinois EPA, or an authorized representative to perform the following [Sections 4 and 39.5(7)(a) and (p)(ii) of the Act]:

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 applicable requirements; 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 regulated 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. At 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 including any logs, plans, procedures, or instructions required to be kept 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, Air Quality Planning 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 Unit, 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 and applicable regulations [Section 39.5(7)(p)(i) of the Act]. An example Certification by a Responsible Official is included as Attachment 1 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 [Section 39.5(7)(k) of the Act]:

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.

Note: For this purpose, emergency means a situation arising from sudden and reasonably unforeseeable events beyond the control of the source, as further defined by Section 39.5(7)(k)(iv) of the Act.

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 [Section 39.5(7)(k)(iv) of the Act].

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, revoked, reopened and reissued, or terminated for cause in accordance with applicable provisions of Section 39.5 of the Act. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, 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 that inaccurate statement were made in establishing the emission standards or limitations, or other terms or conditions of this permit.

d. The Illinois EPA or USEPA determines that this permit must be revised or revoked to ensure compliance with the applicable requirements.

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 and reissuance under Section 39.5(15) of the Act, pursuant to Sections 39.5(5)(e) and (i) 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. In the event of a challenge to any portion of the permit, other portions of the permit may continue to be in effect. Should any portion of this permit be determined to be illegal or unenforceable, the validity of the other provisions shall not be affected and 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

Upon the expiration of this permit, if the source is operated, it shall be deemed to be operating without a permit unless a timely and complete CAAPP application has been submitted for renewal of this permit. However, if a timely and complete application to renew this CAAPP permit has been submitted, the terms and all conditions of this CAAPP permit will remain in effect until the issuance of a renewal permit [Section 39.5(5)(l) and (o) of the Act].

Note: Pursuant to Sections 39.5(5)(h) and (n) of the Act, upon submittal of a timely and complete renewal application, the permitted source may continue to operate until final action is taken by the Illinois EPA on the renewal application, provided, however, that this protection shall cease if the applicant fails to submit any additional information necessary to evaluate or take final action on the renewal

application as requested by the Illinois EPA in writing. For a renewal application to be timely, it must be submitted no later than 9 months prior to the date of permit expiration.

9.15 General Authority for the Terms and Conditions of this Permit

The authority for terms and conditions of this permit that do not include a citation for their authority is Section 39.5(7)(a) of the Act, which provides that the Illinois EPA shall include such provisions in a CAAPP permit as are necessary to accomplish the purposes of the Act and to assure compliance with all applicable requirements. Section 39.5(7)(a) of the Act is also another basis of authority for terms and conditions of this permit that do include a specific citation for their authority.

Note: This condition is included in this permit pursuant to Section 39.5(7)(n) of the Act.

10.0 ATTACHMENTS

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: _____

Attachment 2 Emissions of Particulate Matter from Process Emission Units

a. New Process Emission Units for Which Construction or Modification Commenced On or After April 14, 1972 [35 IAC 212.321].

i. 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 35 IAC 212.321 [35 IAC 212.321(a)].

ii. Interpolated and extrapolated values of the data in subsection (c) of 35 IAC 212.321 shall be determined by using the equation [35 IAC 212.321(b)]:

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

where:

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

A. Up to process weight rates of 408 Mg/hr (450 T/hr):

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

B. 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	lb/hr
A	11.42	24.8
B	0.16	0.16

iii. Limits for Process Emission Units For Which Construction or Modification Commenced On or After April 19, 1972 [35 IAC 212.321(c)]:

Metric		English	
P	E	P	E
Mg/hr	kg/hr	T/hr	lb/hr
0.05	0.25	0.05	0.55
0.1	0.29	0.10	0.77
0.2	0.42	0.2	1.10
0.3	0.64	0.30	1.35
0.4	0.74	0.40	1.58
0.5	0.84	0.50	1.75
0.7	1.00	0.75	2.40
0.9	1.15	1.00	2.60
1.8	1.66	2.00	3.70
2.7	2.1	3.00	4.60
3.6	2.4	4.00	5.35
4.5	2.7	5.00	6.00
9.0	3.9	10.00	8.70
13.0	4.8	15.00	10.80
18.0	5.7	20.00	12.50
23.0	6.5	25.00	14.00
27.0	7.1	30.00	15.60
32.0	7.7	35.00	17.00
36.0	8.2	40.00	18.20
41.0	8.8	45.00	19.20
45.0	9.3	50.00	20.50
90.0	13.4	100.00	29.50
140.0	17.0	150.00	37.00
180.0	19.4	200.00	43.00
230.0	22.0	250.00	48.50
270.0	24.0	300.00	53.00
320.0	26.0	350.00	58.00
360.0	28.0	400.00	62.00
408.0	30.1	450.00	66.00
454.0	30.4	500.00	67.00

b. Existing Process Emission Units for Which Construction or Modification Prior to April 14, 1972 [35 IAC 212.322].

i. 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 35 IAC 212.322 [35 IAC 212.322(a)].

ii. Interpolated and extrapolated values of the data in subsection (c) of 35 IAC 212.321 shall be determined by using the equation [35 IAC 212.322(b)]:

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

where:

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

A. Up to process weight rates up to 27.2 Mg/hr (30 T/hr):

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

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

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

iii. Limits for Process Emission Units For Which Construction or Modification Commenced Prior to April 14, 1972 [35 IAC 212.322(c)]:

Metric		English	
P	E	P	E
Mg/hr	kg/hr	T/hr	lb/hr
0.05	0.27	0.05	0.55
0.1	0.42	0.10	0.87
0.2	0.68	0.2	1.40
0.3	0.89	0.30	1.83
0.4	1.07	0.40	2.22
0.5	1.25	0.50	2.58
0.7	1.56	0.75	3.38
0.9	1.85	1.00	4.10
1.8	2.9	2.00	6.52
2.7	3.9	3.00	8.56
3.6	4.7	4.00	10.40
4.5	5.4	5.00	12.00
9.0	8.7	10.00	19.20
13.0	11.1	15.00	25.20
18.0	13.8	20.00	30.50
23.0	16.2	25.00	35.40
27.2	18.15	30.00	40.00
32.0	18.8	35.00	41.30
36.0	19.3	40.00	42.50
41.0	19.8	45.00	43.60
45.0	20.2	50.00	44.60
90.0	23.2	100.00	51.20
140.0	25.3	150.00	55.40
180.0	26.5	200.00	58.60
230.0	27.7	250.00	61.00
270.0	28.5	300.00	63.10
320.0	29.4	350.00	64.90
360.0	30.0	400.00	66.20
400.0	30.6	450.00	67.70
454.0	31.3	500.00	69.00

Attachment 3 Compliance Assurance Monitoring (CAM) Plan

There are no specific emission units that require a CAM plan as identified in the Monitoring Requirements of Subsection 8 for each Section 7, Unit Specific Conditions for Specific Emission Units.

Attachment 4 Guidance

The Illinois has prepared guidance for sources on the Clean Air Act Permit Program (CAAPP) that is available on the Internet site maintained by the Illinois EPA, www.epa.state.il.us. This guidance includes instructions on applying for a revision or renewal of the CAAPP permit.

Guidance On Revising A CAAPP Permit:

www.epa.state.il.us/air/caapp/caapp-revising.pdf

Guidance On Renewing A CAAPP Permit:

www.epa.state.il.us/air/caapp/caapp-renewing.pdf

The application forms prepared by the Illinois EPA for the CAAPP are also available from the Illinois EPA's Internet site:

www.epa.state.il.us/air/caapp/index.html

These CAAPP application forms should also be used by a CAAPP source when it applies for a construction permit. For this purpose, the appropriate CAAPP application forms and other supporting information, should be accompanied by a completed Application For A Construction Permit form (199-CAAPP) and Fee Determination for Construction Permit Application form (197-FEE):

www.epa.state.il.us/air/caapp/199-caapp.pdf
www.epa.state.il.us/air/permits/197-fee.pdf

MED:psj

Attachment 5 Pressure Drop Monitoring Schedule and Visible Emission Compliance Demonstration

Unit 01 – Casting Operations

Description	Emission Control Equipment	Date Constructed	Visible Emission & Opacity *Compliance w/ 5.3.2 & 7.1.12	Pressure Drop Compliance w/ 7.1.8
#1 D.C. Casting Units (MF-11 to MF-15 & HF-3)	Cyclone (MC-3), American Air Filter #2 Baghouse (BH-4)	Modification 1998	1, 2, 7	Weekly
#4 D.C. Casting Units (MF-17 to MF-21 & HF-5)		Modification 1998	1, 2, 7	
#1 Ascast Furnace (ASC-1)		Modification 07/2005	1, 2, 7	
#2 Ascast Furnace (ACS-2)		Modification 01/2005	1, 2, 7	
#2 D.C. Casting Units (MF-1 to MF-5 & HF-1)	Cyclone (MC-1) Wheelabrator #1 Baghouse (BH-1)	Modification 1998	1, 2, 7	Weekly
#3 D.C. Casting Units (MF-6 to MF-10 & HF-2)		Modification 1998	1, 2, 7	
#5 D.C. Casting Units (MF-22 to MF-26 & HF-6)	Cyclone (MC-2), Lear-Siegler #3 Baghouse (BH-5)	Modification 1998	1, 2, 7	Weekly
#2 Horizontal Caster (MF-16 & HF-8)	Carborundum Baghouse (BH-3)	1982 Modified 2006	1, 2, 7	Weekly
#1 Horizontal Caster (MF-27 & HF-7)		1982 Modified 2006	1, 2, 7	
Metals Research Lab (MRL) Caster (MF-29)	AAF Baghouse (BH-8)	2004	1, 2	Monthly
Aerofall Mill (AM-1, FSB-1, VF-1, FH-1)	Custom System Baghouse (BH-7) & Pangborn Baghouse (BH-2)	1976	1	Monthly
1F Mix Muller (MM-3)	Cartridge Filter System (CF-1)	1983	1	Monthly
Low Profile Turbine Mixer (LP-1)		1983	1	
Induction Form Operations (IF-1 & IF-2)		1983	1	

Description	Emission Control Equipment	Date Constructed	Visible Emission & Opacity *Compliance w/ 5.3.2 & 7.1.12	Pressure Drop Compliance w/ 7.1.8
2F Mix Muller (MM-1)	Rotoclone (RC-1)	1974	1, 5	N/A
Abrasive Cleaner (ABRC-1)	Cyclone (ACCR-1) & Baghouse (ACBH-1)	1975	1, 5	Monthly
Charcoal Burners (CB-1 To CB-12)	None	Prior 1972	5	N/A

Unit 02 – Brass Operations

Description	Emission Control Equipment	Date Constructed/ Last Modified	Visible Emission & Opacity *Compliance w/ 5.3.2 & 7.2.12	Pressure Drop Compliance w/ 7.2.8
Slab Heating Furnaces				
#1 Slab Furnace (SF-1)	None	Prior 1972	3, 4	N/A
#2 Slab Furnace (SF-2)	None	1979	3, 4	N/A
#3 Slab Furnace (SF-3)	None	1999	3, 4	N/A
Hot Mill (HM-1)	None	Prior 1972/1998	2, 3	N/A
Surface Milling Operations				
#2 Coil Miller (CM-1)	Skimmer (SK-1) and Collector (GS-4)	1973/2000	1, 2	N/A
#3 Coil Miller (CM-2)	Skimmer (SK-2) and Baffled Settling Chamber BSC-1	1977/1998	1, 2	N/A
#1 Horizontal Caster Inline Miller (SM-2)	Chip Collector (SK-4)	1982	1	N/A
Polygage Miller (RM-25) and Skive Line	Cyclone (CYC-1); and Drop-out Box (DOB-1); Moisture Separator (MS-1)	1986/1988	1	N/A
Solution Rolling Mills				
Old Tandem Mill (RM-1)	None	Prior 1972	3	N/A
New Tandem Mill (RM-7)	Mist Eliminator (FE-6)	1978/1999	1	N/A
4-Stand Tandem Mill (Mill 4)	Mist Eliminator (OME-4)	1993	1	N/A

Description	Emission Control Equipment	Date Constructed/ Last Modified	Visible Emission & Opacity *Compliance w/ 5.3.2 & 7.2.12	Pressure Drop Compliance w/ 7.2.8
#5 Rolling Mill (RM-2)	Mist Eliminator (FE-1)	Prior 1972/1995	1	N/A
#20 Rolling Mill (RM-6)	Mist Eliminator (FE-5)	1976/1999	1	N/A
Mineral Oil Rolling Mills				
#6 Rolling Mill (RM-9)	Mist Eliminator (FE-8)	1976/1995	1	N/A
#9 Rolling Mill (RM-3)	Mist Eliminator (FE-2)	Prior 1972/1994	1	N/A
#18 Rolling Mill (RM-4)	Mist Eliminator (FE-3)	Prior 1972/1999	1	N/A
#19 Rolling Mill (RM-5)	Mist Eliminator (FE-4)	1974/1999	1	N/A
#23 Rolling Mill (RM-8)	Mist Eliminator (FE-7)	1984/1995	1	N/A
#24 Rolling Mill (Mill-24)	Mist Eliminator (OME-24)	1988/1995	1	N/A
#29 Rolling Mill (Mill-29)	Mist Eliminator (OME-29)	2001	1	N/A
#34 Rolling Mill (Mill-28)	Mist Eliminator (OMC-28)	1988	1	N/A
Bell Anneals				
#7 Bell Anneal (BA-7)	None	Prior 1972/1999	3	N/A
#9 Bell Anneal (BA-9)	None	1984/2003	3	N/A
#12 Bell Anneal (BA-12)	None	1983/2002	3	N/A
#31 Bell Anneal (BA-31)	None	2000/2003	3	N/A
#11 Bell Anneal (BA-11)	None	1984	3	N/A
#13 Bell Anneal (BA-13)	None	1993/1999	3	N/A
Strip Anneals				
#3 Strip Anneal (SA-3)	None	Prior 1972	3, 4	N/A
#4 Strip Anneal (SA-4)	None	Prior 1972/2003	3, 4	N/A
#5 Strip Anneal (SA-5)	None	Prior 1972	3, 4	N/A
#6 Strip Anneal (SA-6)	None	Prior 1972	3, 4	N/A
#7 Strip Anneal (SA-7)	None	1976	3, 4	N/A

Description	Emission Control Equipment	Date Constructed/ Last Modified	Visible Emission & Opacity *Compliance w/ 5.3.2 & 7.2.12	Pressure Drop Compliance w/ 7.2.8
Bonding Mills				
#35 Rolling /Clad Bonding Mill (#35 Mill) (RCM-3)	3-Stage Filter System (SFS-3)	1985/1988	1	N/A
Posit Bond Bonding Mill (BM-2)	Filters (F-1 & F-2)	Prior 1972	1	N/A
Brushing Units				
#1 Posit Bond Brush Line	Rotoclone (RC-1)	1981	1	N/A
#2 Posit Bond Brush Line (BM-2)	Drop-out Box (PBDOB-1) & Baghouse (PBBH-1)	2002	1	Monthly
Other Brass Mill Operations				
Hot Dip Tin Line (HD-1)	Fume Scrubber (SCRUB-1)	1987	1	N/A
#9 Cleaning Line (CT-17)	Fume Scrubber (FS-2)	1993	1	N/A

Unit 03 – Ammunition Operations

Description	Emission Control Equipment	Date Constructed	Visible Emission & Opacity *Compliance w/ 5.3.2 & 7.3.12	Pressure Drop Compliance w/ 7.3.8
Lead Shot Manufacturing				
Lead Shot Melt Kettles (LK-1 to LK-3)	Baghouse (STBH-1)	Prior 1972	1	Weekly
Shot Drying/Polishing				
Drier (D-1 to D-3)	Rotoclone RC-2	1976	1, 2	N/A
Drier Pots (DP-1 to DP-6)			1, 2	
Polishers (P-1 to P-4)			1, 2	
Scrap Elevator Pit (SP-1)			1, 2	
Lower Lead Billet Melt Kettle (LK-4)	None	Prior 1972	3	N/A
Lead Billet Holding Kettle (LK-6)	None	1982	3	N/A
Extrusion Press Tumblers (EPT-1 to EPT-4)	None	Prior 1972	3	N/A

Description	Emission Control Equipment	Date Constructed	Visible Emission & Opacity *Compliance w/ 5.3.2 & 7.3.12	Pressure Drop Compliance w/ 7.3.8
Buckshot Tumbling System (T-1 & T-2)	Baghouse (TBH-2)	1980	1	Monthly
Lead Pump Chip-Out (LPC-1)		1991	1	
Central Vacuum System (CVS-1)	Cyclone Separator (CS-1) & Baghouse (BS-1)	1976	1	Weekly
Other Ammunition Operations				
50 Caliber Bead Blaster (BB-1)	Cyclone (CYC-1) & Baghouse (BH-1)	1987	1	Monthly
Wad Tumblers (WTB-1, 2, & 3)	Rotoclones (WR-1, 2 & 3)	Prior 1972	1	Monthly
Manurhin Powder Handling System (B-1 thru B-4)	Wet Separator (WS-1) & Bag Separator (BS-1)	1980	1	N/A
Nitration Tank (T-2)	None	Prior 1972	3	N/A
Spent Acid Storage Tank (T-3)	None	1974	3	N/A
Building 7 Cobmeal Collection System (CCS-1)	Filters (CCF-1 & 2)	1999	1	N/A
MRF Rotary Destruct System Retort (RDR-1)	Retort Destruct Dust Collector Filter (RDDC-1)	1997	1	N/A
Stage I Hammermill (HM-1)	Hamermill Dust Collector (HMDC-1)	February 2003 Modified 2006	1	Monthly
Stage II Hammermill (HM-2)			1	
Stage III Hammermill (HM-3)			1	
Olin Propellant Treatment Process (OPTP-1)	None	2000	3	N/A
Shotshell Cutoff Firing Machine (SSCOFM-1)	2-Stage Filter	2002	1	N/A

Unit 10 – Fugitive Emissions

Description	Emission Control Equipment	Date Constructed	Visible Emission & Opacity *Compliance w/ 5.3.2 & 7.3.12	Pressure Drop Compliance w/ 7.3.8
Vehicle Mile Traveled (VMT) on Roads	None		3, 7	N/A
Material Storage Piles	None		3, 7	N/A
Contact Cooling Towers	None		3	N/A
Casting Fugitives	None		3, 7	N/A

* Compliance with this requirement shall be demonstrated by one or a combination of the following:

1. By normal work practices and maintenance activities of the emission source’s pollution control equipment as demonstrated by historical operation.

2. Previous Stack Test.

3. By normal work practices as demonstrated by historical operation.

4. The exclusive burning of clean fuels.

5. Exhausts inside the building.

6. By compliance with the Operation and Maintenance Plan required by 40 CFR 63.342(f)(3).

7. The Permittee shall conduct a qualitative visible emissions observation in accordance with the procedures of Conditions 7.1.8(c), 7.2.8(c), 7.3.8(c), and 7.10.8(a), as applicable.

Attachment 6 Table 1 to Subpart N of Part 63--General Provisions Applicability to Subpart N (National Emission Standards for Chromium Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks)

Table 1 to Subpart N of Part 63--General Provisions Applicability to Subpart N

General provisions reference	Applies to subpart N	Comment
63.1(a)(1).....	Yes.....	Additional terms defined in §63.341; when overlap between subparts A and N occurs, subpart N takes precedence.
63.1(a)(2).....	Yes.....	
63.1(a)(3).....	Yes.....	
63.1(a)(4).....	Yes.....	Subpart N clarifies the applicability of each paragraph in subpart A to sources subject to subpart N.
63.1(a)(6).....	Yes.....	
63.1(a)(7).....	Yes.....	
63.1(a)(8).....	Yes.....	
63.1(a)(10).....	Yes.....	
63.1(a)(11).....	Yes.....	§63.347(a) of subpart N also allows report submissions via fax and on electronic media.
63.1(a)(12)-(14)....	Yes.....	
63.1(b)(1).....	No.....	§63.340 of subpart N specifies applicability.
63.1(b)(2).....	Yes.....	
63.1(b)(3).....	No.....	This provision in subpart A is being deleted. Also, all affected area and major sources are subject to subpart N; there are no exemptions.
63.1(c)(1).....	Yes.....	Subpart N clarifies the applicability of each paragraph in subpart A to sources subject to subpart N.
63.1(c)(2).....	Yes.....	§63.340(e) of Subpart N exempts area sources from the obligation to obtain Title V operating permits.
63.1(c)(4).....	Yes.....	
63.1(c)(5).....	No.....	Subpart N clarifies that an area source that becomes a major source is subject to the requirements for major sources.
63.1(e).....	Yes.....	
63.2.....	Yes.....	Additional terms defined in §63.341; when overlap between subparts A and N occurs, subpart N takes precedence.
63.3.....	Yes.....	Other units used in subpart N are defined in that subpart.

63.4.....	Yes.....	
63.5(a).....	Yes.....	Except replace the term 'source' and 'stationary source' in §63.5(a)(1) and (2) of subpart A with 'affected sources.'
General provisions reference	Applies to subpart N	Comment
63.5(b)(1).....	Yes.....	
63.5(b)(3).....	Yes.....	Applies only to major affected sources.
63.5(b)(4).....	No.....	Subpart N (§63.345) specifies requirements for the notification of construction or reconstruction for affected sources that are not major.
63.5(b)(5).....	Yes.....	
63.5(b)(6).....	Yes.....	
63.5(d)(1)(i).....	No.....	§63.345(c)(5) of subpart N specifies when the application or notification shall be submitted.
63.5(d)(1)(ii).....	Yes.....	Applies to major affected sources that are new or reconstructed.
63.5(d)(1)(iii).....	Yes.....	Except information should be submitted with the Notification of Compliance Status required by §63.347(e) of subpart N.
63.5(d)(2).....	Yes.....	Applies to major affected sources that are new or reconstructed except: (1) replace 'source' in §63.5(d)(2) of subpart A with 'affected source'; and (2) actual control efficiencies are submitted with the Notification of Compliance Status required by §63.347(e).
63.5(d)(3)-(4).....	Yes.....	Applies to major affected sources that are new or reconstructed.
63.5(e).....	Yes.....	Applies to major affected sources that are new or reconstructed.
63.5(f)(1).....	Yes.....	Except replace 'source' in §63.5(f)(1) of subpart A with 'affected source.'
63.5(f)(2).....	No.....	New or reconstructed affected sources shall submit the request for approval of construction or reconstruction under §63.5(f) of subpart A by the deadline specified in §63.345(c)(5) of subpart N.
63.6(a).....	Yes.....	
63.6(b)(1)-(2).....	Yes.....	Except replace 'source' in §63.6(b)(1)-(2) of part A with 'affected source.'
63.6(b)(3)-(4).....	Yes.....	
63.6(b)(5).....	Yes.....	Except replace 'source' in §63.6(b)(5) of subpart A with 'affected source.'
63.6(b)(7).....	No.....	Provisions for new area sources that become major sources are contained in §63.343(a)(4) of subpart N.

63.6(c)(1)-(2).....	Yes.....	Except replace 'source' in §63.6(c)(1)-(2) of subpart A with 'affected source.'
63.6(c)(5).....	No.....	Compliance provisions for existing area sources that become major sources are contained in §63.343(a)(3) of subpart N.
63.6(e).....	No.....	§63.342(f) of subpart N contains work practice standards (operation and maintenance requirements) that override these provisions.
63.6(f)(1).....	No.....	§63.342(b) of subpart N specifies when the standards apply.
63.6(f)(2)(i)-(ii).....	Yes.....	
63.6(f)(2)(iii).....	No.....	§63.344(b) of subpart N specifies instances in which previous performance test results for existing sources are acceptable.
63.6(f)(2)(iv).....	Yes.....	
63.6(f)(2)(v).....	Yes.....	
63.6(f)(3).....	Yes.....	
63.6(g).....	Yes.....	
63.6(h).....	No.....	Subpart N does not contain any opacity or visible emission standards.
63.6(i)(1).....	Yes.....	
63.6(i)(2).....	Yes.....	Except replace 'source' in §63.6(i)(2)(i) and (ii) of subpart A with 'affected source.'
63.6(i)(3).....	Yes.....	
63.6(i)(4)(i).....	No.....	§63.343(a)(6) of subpart N specifies the procedures for obtaining an extension of compliance and the date by which such requests must be submitted.
63.6(i)(4)(ii).....	Yes.....	
63.6(i)(5).....	Yes.....	
63.6(i)(6)(i).....	Yes.....	This paragraph only references 'paragraph (i)(4) of this section' for compliance extension provisions. But, §63.343(a)(6) of subpart N also contains provisions for requesting a compliance extension.

Table 1 to Subpart N of Part 63--General Provisions Applicability to Subpart N--Contd.

General provisions reference	Applies to subpart N	Comment
63.6(i)(6)(ii).....	Yes.....	
63.6(i)(7).....	Yes.....	
63.6(i)(8).....	Yes.....	This paragraph only references 'paragraphs (i)(4) through (i)(6) of this section' for compliance extension provisions. But, §63.343(a)(6) of subpart N also contains provisions for requesting a compliance extension.
63.6(i)(9).....	Yes.....	This paragraph only references 'paragraphs (i)(4) through (i)(6) of this section' and 'paragraphs (i)(4) and (i)(5) of this section' for compliance extension provisions. But, §63.343(a)(6) of subpart N also contains provisions for requesting a compliance extension.
63.6(i)(10)(i)-(iv).....	Yes.....	
63.6(i)(10)(v)(A)...	Yes.....	This paragraph only references 'paragraph (i)(4)' for compliance extension provisions. But, §63.343(a)(6) of subpart N also contains provisions for requesting a compliance extension.
63.6(i)(10)(v)(B)...	Yes.....	
63.6(i)(11).....	Yes.....	
63.6(i)(12)(i).....	Yes.....	This paragraph only references 'paragraph (i)(4)(i) or (i)(5) of this section' for compliance extension provisions. But, §63.343(a)(6) of subpart N also contains provisions for requesting a compliance extension.
63.6(i)(12)(ii)-(iii).....	Yes.....	
63.6(i)(13).....	Yes.....	
63.6(i)(14).....	Yes.....	
63.6(i)(16).....	Yes.....	
63.6(j).....	Yes.....	
63.7(a)(1).....	Yes.....	
63.7(a)(2)(i)-(vi).....	Yes.....	
63.7(a)(2)(ix).....	Yes.....	
63.7(a)(3).....	Yes.....	
63.7(b)(1).....	No.....	§63.347(d) of subpart N requires notification prior to the performance test. §63.344(a) of subpart N requires

		submission of a site-specific test plan upon request.
63.7(b)(2).....	Yes.....	
63.7(c).....	No.....	§63.344(a) of subpart N specifies what the test plan should contain, but does not require test plan approval or performance audit samples.
63.7(d).....	Yes.....	Except replace 'source' in the first sentence of §63.7(d) of subpart A with 'affected source.'
63.7(e).....	Yes.....	Subpart N also contains test methods specific to affected sources covered by that subpart.
63.7(f).....	Yes.....	§63.344(c)(2) of subpart N identifies CARB Method 425 as acceptable under certain conditions.
63.7(g)(1).....	No.....	Subpart N identifies the items to be reported in the compliance test [§63.344(a)] and the timeframe for submitting the results [§63.347(f)].
63.7(g)(3).....	Yes.....	
63.7(h)(1)-(2).....	Yes.....	
63.7(h)(3)(i).....	Yes.....	This paragraph only references '§63.6(i)' for compliance extension provisions. But, §63.343(a)(6) of subpart N also contains provisions for requesting a compliance extension.
63.7(h)(3)(ii)-(iii).....	Yes.....	
63.7(h)(4)-(5).....	Yes.....	
63.8(a)(1).....	Yes.....	
63.8(a)(2).....	No.....	Work practice standards are contained in §63.342(f) of subpart N.
63.8(a)(4).....	No.....	
63.8(b)(1).....	Yes.....	
63.8(b)(2).....	No.....	§63.344(d) of subpart N specifies the monitoring location when there are multiple sources.
63.8(b)(3).....	No.....	§63.347(g)(4) of subpart N identifies reporting requirements when multiple monitors are used.
63.8(c)(1)(i).....	No.....	Subpart N requires proper maintenance of monitoring devices expected to be used by sources subject to subpart N.
63.8(c)(1)(ii).....	No.....	§63.342(f)(3)(iv) of subpart N specifies reporting when the O & M plan is not followed.
63.8(c)(1)(iii).....	No.....	§63.343(f)(2) identifies the criteria for whether O & M procedures are acceptable.
63.8(c)(2)-(3).....	No.....	§63.344(d)(2) requires appropriate use of monitoring devices.
63.8(c)(4)-(7).....	No.....	
63.8(d).....	No.....	Maintenance of monitoring devices is

		required by §§63.342(f) and 63.344(d)(2) of subpart N.
63.8(e)	No	There are no performance evaluation procedures for the monitoring devices expected to be used to comply with subpart N.
63.8(f)(1)	Yes	
63.8(f)(2)	No	Instances in which the Administrator may approve alternatives to the monitoring methods and procedures of subpart N are contained in §63.343(c)(8) of subpart N.
63.8(f)(3)	Yes	
63.8(f)(4)	Yes	
63.8(f)(5)	Yes	
63.8(f)(6)	No	Subpart N does not require the use of CEM's.
63.8(g)	No	Monitoring data does not need to be reduced for reporting purposes because subpart N requires measurement once/day.
63.9(a)	Yes	
63.9(b)(1)(i)-(ii)	No	§63.343(a)(3) of subpart N requires area sources to comply with major source provisions if an increase in HAP emissions causes them to become major sources.
63.9(b)(1)(iii)	No	§63.347(c)(2) of subpart N specifies initial notification requirements for new or reconstructed affected sources.
63.9(b)(2)	No	§63.347(c)(1) of subpart N specifies the information to be contained in the initial notification.
63.9(b)(3)	No	§63.347(c)(2) of subpart N specifies notification requirements for new or reconstructed sources that are not major affected sources.
63.9(b)(4)	No	
63.9(b)(5)	No	
63.9(c)	Yes	This paragraph only references '§63.6(i)(4) through §63.6(i)(6)' for compliance extension provisions. But, §63.343(a)(6) of subpart N also contains provisions for requesting a compliance extension. Subpart N provides a different timeframe for submitting the request than §63.6(i)(4).

Table 1 to Subpart N of Part 63--General Provisions Applicability to Subpart N--Contd.

General provisions reference	Applies to subpart N	Comment
63.9(d).....	Yes.....	This paragraph only references 'the notification dates established in paragraph (g) of this section.' But, §63.347 of subpart N also contains notification dates.
63.9(e).....	No.....	Notification of performance test is required by §63.347(d) of subpart N.
63.9(f).....	No.....	
63.9(g).....	No.....	Subpart N does not require a performance evaluation or relative accuracy test for monitoring devices.
63.9(h)(1)-(3).....	No.....	§63.347(e) of subpart N specifies information to be contained in the notification of compliance status and the timeframe for submitting this information.
63.9(h)(5).....	No.....	Similar language has been incorporated into §63.347(e)(2)(iii) of subpart N.
63.9(h)(6).....	Yes.....	
63.9(i).....	Yes.....	
63.9(j).....	Yes.....	
63.10(a).....	Yes.....	
63.10(b)(1).....	Yes.....	
63.10(b)(2).....	No.....	§63.346(b) of subpart N specifies the records that must be maintained.
63.10(b)(3).....	No.....	Subpart N applies to major and area sources.
63.10(c).....	No.....	Applicable requirements of §63.10(c) have been incorporated into §63.346(b) of subpart N.
63.10(d)(1).....	Yes.....	
63.10(d)(2).....	No.....	§63.347(f) of subpart N specifies the timeframe for reporting performance test results.
63.10(d)(3).....	No.....	Subpart N does not contain opacity or visible emissions standards.
63.10(d)(4).....	Yes.....	
63.10(d)(5).....	No.....	§63.342(f)(3)(iv) and §63.347(g)(3) of subpart N specify reporting associated with malfunctions.
63.10(e).....	No.....	§63.347(g) and (h) of subpart N specify the frequency of periodic reports of monitoring data used to establish compliance. Applicable requirements of §63.10(e) have been incorporated into §63.347(g) and (h).

63.10(f).....	Yes.....	
63.11.....	No.....	Flares will not be used to comply with the emission limits.
63.12-63.15.....	Yes.....	

[Table 1 to Subpart N amended at 61 FR 27787, June 3, 1996; 70 FR 75345, Dec. 19, 2005]