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1.0 SOURCE IDENTIFICATION

1.1 Source

McCook Metals L.L.C.
4900 First Avenue
McCook, Illinois 60525
708/485-9000

I.D. No.: 031174AAF
Standard Industrial Classification: 3353, Secondary Aluminum;
Aluminum Sheet, Plate & Foil

1.2 Owner/Parent Company

McCook Metals L.L.C.
4900 First Avenue
McCook, Illinois 60525

1.3 Operator

McCook Metals L.L.C.
4900 First Avenue
McCook, Illinois 60525

John W. Lillquist, Director, Safety and Environmental Affairs
708/387-8432

1.4 General Source Description

McCook Metals L.L.C. is located at 4900 First Avenue, McCook, Cook County. Primary operations at the plant consist of casting aluminum alloy ingot, rolling the ingot into aluminum sheet or plate, heat treating the product to achieve desired physical properties, and various finishing operation.

2.0 LIST OF ABBREVIATIONS/ACRONYMS USED IN THIS PERMIT

| | |
|------------------|--|
| Act | Illinois Environmental Protection Act [415 ILCS 5/1 et seq.] |
| ACMA | Alternative Compliance Market Account |
| 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 |
| ASTM | American Society for Testing and Materials |
| ATU | Allotment Trading Unit |
| BAT | Best Available Technology |
| BMF | barrel melter furnace |
| Btu | British thermal unit |
| CAA | Clean Air Act [42 U.S.C. Section 7401 et seq.] |
| CAAPP | Clean Air Act Permit Program |
| CFR | Code of Federal Regulations |
| CO | carbon monoxide |
| EIF | electric induction furnace |
| ERMS | Emissions Reduction Market System |
| F | Fahrenheit |
| ft ³ | cubic foot |
| gr | grain |
| HAP | Hazardous Air Pollutant |
| HF | holding furnace |
| hr | hour |
| I.D. No. | Identification Number of Source, assigned by Illinois EPA |
| IAC | Illinois Administrative Code |
| Illinois EPA | Illinois Environmental Protection Agency |
| kg | kilogram |
| kW | kilowatts |
| lb | pound |
| MACT | Maximum Available Control Technology |
| MF | melting furnace |
| Mg | megagram |
| mg | milligram |
| mmBtu | Million British thermal units |
| mo | month |
| MW | megawatt |
| NESHAP | National Emission Standards for Hazardous Air Pollutants |
| NO _x | Nitrogen Oxides |
| NSPS | New Source Performance Standards |
| PM | Particulate Matter |
| PM ₁₀ | Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 microns as measured by applicable test or monitoring methods |
| ppm | parts per million |
| PSD | Prevention of Significant Deterioration |
| RACT | Reasonable Available Control Technology |

| | |
|-----------------|---|
| RMP | Risk Management Plan |
| scf | standard cubic foot |
| scm | standard cubic meter |
| 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 |
| VOM | Volatile Organic Material |
| yr | year |

3.0 INSIGNIFICANT ACTIVITIES

3.1 Identification of Insignificant Activities

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

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

Package Boilers
Space Heaters
Scrap Dryer
Sow Preheater
Diesel and Gasoline Storage Tanks
SNIF and LARS Filters

- 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:

Cold Rolling Mill
Slitting Operation
Bag slitter with hooded capture

- 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)].

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)].

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)].

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

3.2 Compliance with Applicable Requirements

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

- 3.2.1 For each cold cleaning degreaser, the Permittee shall comply with the applicable equipment and operating requirements of 35 IAC 215.182, 218.182, or 219.182.
- 3.2.2 For each particulate matter process emission unit, the Permittee shall comply with the applicable particulate matter emission limit of 35 IAC 212.321 or 212.322. For example, the particulate matter emissions from a process emission unit shall not exceed 0.55 pounds per hour if the emission unit's process weight rate is 100 pounds per hour or less, pursuant to 35 IAC 266.110.
- 3.2.3 For each organic material emission unit that uses organic material, e.g., a mixer or printing line, the Permittee shall comply with the applicable VOM emission limit of 35 IAC 215.301, 218.301, or 219.301, which requires that organic material emissions not exceed 8.0 pounds per hour or do not qualify as photochemically reactive material as defined in 35 IAC 211.4690.

3.3 Addition of Insignificant Activities

- 3.3.1 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type that is identified in Condition 3.1, until the renewal application for this permit is submitted, pursuant to 35 IAC 201.212(a).
- 3.3.2 The Permittee must notify the Illinois EPA of any proposed addition of a new insignificant activity of a type addressed by 35 IAC 201.210(a) and 201.211 other than those identified in Condition 3.1, pursuant to Section 39.5(12)(b) of the Act.
- 3.3.3 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type identified in 35 IAC 201.210(b).

4.0 SIGNIFICANT EMISSION UNITS AT THIS SOURCE

| Emission Unit | Description | Date Constructed | Emission Control Equipment |
|--------------------------------|-----------------------------------|------------------|----------------------------|
| Casting Process | MF8 | Pre-1972 | None |
| | HF8 | Pre-1972 | None |
| | MF24-26 | 11/87,1/89,4/85 | None |
| | HF24-26 | 11/87,1/89,4/85 | None |
| | MF27-30 | Pre-1972 | None |
| | HF27-30 | Pre-1972 | None |
| | BMF1 | 4/95 | None |
| | EIF1 | 3/88 | No. 3 Baghouse |
| | BMF3 | 9/95 | None |
| | EIF3 | 9/95 | No. 3 Baghouse |
| | Dross Pad | Pre-1972 | Dross Pad Baghouse |
| Rolling Process | 120" Hot Mill | Pre-1972 | None |
| | 96" Hot Mill | Pre-1972 | None |
| | 80" Hot Mill | Pre-1972 | None |
| | Cold Mill No. 1 | Pre-1972 | None |
| | Cold Mill No. 7 | Pre-1972 | None |
| | 145" Plate Mill | 6/54 | None |
| Fuel Combustion Emission Units | Soaking Furnaces 1-6 | Pre-1972 | None |
| | Soaking Furnaces 7-8 | Pre-1972 | None |
| | Soaking Furnaces 9-11 | Pre-1972 | None |
| | Reheat Furnace No. 3 | Pre-1972 | None |
| | Homogenizing Furnaces 4-5 | Pre-1972 | None |
| | Soaking Furnaces 1-2 | Pre-1972 | None |
| | Annealing Furnaces 0-8 | Pre-1972 | None |
| | Annealing Furnaces 9-22 | Pre-1972 | None |
| | Annealing Furnaces 23-28 | Pre-1972 | None |
| | 72" Continuous Heat Treat Furnace | Pre-1972 | None |
| | 2 Package Boilers | 1/92 | None |
| Finishing Operations | Solvent Wipe Cleaning | Mid-1960s | None |
| | Stenciling | 1946 | None |

5.0 OVERALL SOURCE CONDITIONS

5.1 Source Description

5.1.1 This permit is issued based on the source requiring a CAAPP permit as a major source of nitrogen oxide, particulate matter, and volatile organic material emissions.

5.1.2 This permit is issued based on the source being a major source of HAPs.

5.2 Applicable Regulations

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

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

- a. No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally overhead at a point beyond the property line of the source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 IAC 212.301 and 212.314.
- b.
 - i. This source shall be operated under the provisions of an operating program prepared by the Permittee and submitted to the Illinois EPA for its review. Such operating program shall be designed to significantly reduce fugitive particulate matter emissions [35 IAC 212.309(a)].
 - ii. The operating program shall be amended from time to time by the Permittee so that the operating program is current. Such amendments shall be consistent with the requirements set forth by this Condition and shall be submitted to the Illinois EPA [35 IAC 212.312].
 - iii. All normal traffic pattern roads and parking facilities located at this source 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 [35 IAC 212.306].

- c. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 IAC 212.122, pursuant to 35 IAC 212.123(a), except as allowed by 35 IAC 212.123(b) and 212.124.
- d. No Person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission unit source to excess 2000 ppm.

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

- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

5.2.4 Risk Management Plan

- a. This stationary source, as defined in 40 CFR Section 68.3, is subject to 40 CFR Part 68, the Accidental Release Prevention regulations [40 CFR 68.215(a)(1)].
- b. The owner or operator of a stationary source shall revise and update the RMP submitted, as specified in 40 CFR 68.190.

5.2.5 a. Should this stationary source become subject to a regulation under 40 CFR Parts 60, 61, or 63, or 35 IAC after the date issued of this permit, then the owner or operator shall, in accordance with the applicable regulation(s), comply with the applicable

requirements by the date(s) specified and shall certify compliance with the applicable requirements of such regulation(s) as part of the annual compliance certification, as required by 40 CFR Part 70 or 71.

- b. No later than upon the submittal for renewal of this permit, the owner or operator shall submit, as part of an application, the necessary information to address either the non-applicability of, or demonstrate compliance with all applicable requirements of any potentially applicable regulation which was promulgated after the date issued of this permit.
- c. This stationary source will be subject to 40 CFR Part 63, Subpart RRR, "Secondary Aluminum Production," when such rule becomes final and effective. The Permittee shall comply with the applicable requirements of such regulation by the date(s) specified in such regulation and shall certify compliance with the applicable requirements of such regulation as part of the annual compliance certification required by 40 CFR Part 70 or 71 beginning in the year that compliance is required under a final and effective rule.

5.2.6 Episode Action Plan

- a. If the source is required to have an episode action plan pursuant to 35 IAC 244.142, the Permittee shall maintain at the source and have on file with the Illinois EPA a written episode action plan (plan) for reducing the levels of emissions during yellow alerts, red alerts, and emergencies, consistent with safe operating procedures. The plan shall contain the information specified in 35 IAC 244.144.
- b. The Permittee shall immediately implement the appropriate steps described in this plan should an air pollution alert or emergency be declared.
- c. If a change occurs at the source which requires a revision of the plan (e.g., operational change, change in the source contact person), a copy of the revised plan shall be submitted to the Illinois EPA for review within 30 days of the change. Such plans shall be further revised if disapproved by the Illinois EPA.

- d. For sources required to have a plan pursuant to 35 IAC 244.142, a copy of the original plan and any subsequent revisions shall be sent to:
 - i. Illinois EPA, Compliance Section; and
 - ii. For sources located in Cook County and outside of the city of Chicago: Cook County Department of Environmental Control; or
 - iii. For sources located within the city of Chicago: Chicago Department of Environmental Control.

5.2.7 PM₁₀ Contingency Measure Plan

This stationary source, as defined in 35 IAC 212.700, is required to prepare and submit a contingency measure plan reflecting the PM₁₀ emission reductions as set forth in 35 IAC 212.703. Such plan is incorporated by reference into this permit and shall be implemented in accordance with 35 IAC 212.704. The source shall comply with the applicable requirements of 35 IAC Part 212, Subpart U, incorporated herein by reference.

5.3 Non-Applicability of Regulations of Concern

None

5.4 Source-Wide Operational and Production Limits and Work Practices

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

None

5.5 Source-Wide Emission Limitations

5.5.1 Permitted Emissions for Fees

The annual emissions from the source, not considering insignificant activities as addressed by Section 3.0 of this permit, shall not exceed the following limitations. The overall source emissions shall be determined by adding emissions from all emission units. Compliance with these limits shall be determined on a calendar year basis. These limitations (Condition 5.5.1) are set for the purpose of establishing fees and are not federally enforceable.

Permitted Emissions of Regulated Pollutants

| Pollutant | Tons/Year |
|------------------------------------|-----------|
| Volatile Organic Material (VOM) | 734.13 |
| Sulfur Dioxide (SO ₂) | 3.78 |
| Particulate Matter (PM) | 1002.94 |
| Nitrogen Oxides (NO _x) | 833.64 |
| HAP, not included in VOM or PM | 30.24 |
| TOTAL | 2604.73 |

5.5.2 Emissions of Hazardous Air Pollutants

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

5.5.3 Other Source-Wide Emission Limitations

The 9 packaged boilers and 64 space heaters are subject to the following:

| <u>Equipment</u> | <u>Emissions</u> | | | | | |
|------------------|------------------------|------------------|-----------------------|----------------|---------------|----------------|
| | <u>Max. Fuel Usage</u> | | <u>NO_x</u> | | <u>CO</u> | |
| | <u>(mmcf/yr)</u> | <u>(mmcf/mo)</u> | <u>(T/yr)</u> | <u>(lb/mo)</u> | <u>(T/yr)</u> | <u>(lb/mo)</u> |
| Boilers | 300 | 40 | 21.0 | 5,600 | 5.25 | 1,400 |
| Space Heaters | 250 | 41.7 | 12.5 | 4,170 | 2.50 | 834 |

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].

The above limitations contain revisions to previously issued Permit 91070067. 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 35 IAC Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (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, separate monthly limits were combined, giving average annual limits [T1R].

5.6 General Recordkeeping Requirements

5.6.1 Emission Records

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

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

5.6.2 Records for Operating Scenarios

N/A

5.6.3 Retention and Availability of Records

- a. All records and logs required by this permit shall be retained for at least five years from the date of entry (unless a longer retention period is specified by the particular recordkeeping provision herein), shall be kept at a location at the source that is readily accessible to the Illinois EPA or USEPA, and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request.
- b. The Permittee shall retrieve and print, on paper during normal source office hours, any records retained in an electronic format (e.g., computer) in response to an Illinois EPA or USEPA request for records during the course of a source inspection.

5.7 General Reporting Requirements

5.7.1 General Source-Wide Reporting Requirements

N/A

5.7.2 Annual Emissions Report

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

5.8 General Operational Flexibility/Anticipated Operating Scenarios

N/A

5.9 General Compliance Procedures

5.9.1 General Procedures for Calculating Emissions

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

6.0 EMISSIONS REDUCTION MARKET SYSTEM (ERMS)

6.1 Description of ERMS

The ERMS is a "cap and trade" market system for major stationary sources located in the Chicago ozone nonattainment area. It is designed to reduce VOM emissions from stationary sources to contribute to reasonable further progress toward attainment, as required by Section 182(c) of the CAA.

The ERMS addresses VOM emissions during a seasonal allotment period from May 1 through September 30. Once the ERMS begins, participating sources must hold "allotment trading units" (ATUs) for their actual seasonal VOM emissions. Each year participating sources are issued ATUs based on allotments set during initial issuance of the sources' CAAPP permits. These allotments are established from historical VOM emissions or "baseline emissions" lowered to provide the emissions reductions from stationary sources required for reasonable further progress.

By December 31 of each year, the end of the reconciliation period following the seasonal allotment period, each source shall have sufficient ATUs in its transaction account to cover its actual VOM emissions during the preceding season. A transaction account's balance as of December 31 will include any valid ATU transfer agreements entered into as of December 31 of the given year, provided such agreements are promptly submitted to the Illinois EPA for entry into the transaction account database. The Illinois EPA will then retire ATUs in sources' transaction accounts in amounts equivalent to their seasonal emissions. When a source does not appear to have sufficient ATUs in its transaction account, the Illinois EPA will issue a notice to the source to begin the process for Emissions Excursion Compensation.

In addition to receiving ATUs pursuant to their allotments, participating sources may also obtain ATUs from the market, including ATUs bought from other participating sources and general participants in the ERMS that hold ATUs (35 IAC 205.630) and ATUs issued by the Illinois EPA as a consequence of VOM emissions reductions from an Emissions Reduction Generator or an Intersector Transaction (35 IAC 205.500 and 35 IAC 205.510). During the reconciliation period, sources may also buy ATUs from a secondary reserve of ATUs managed by the Illinois EPA, the "Alternative Compliance Market Account" (ACMA) (35 IAC 205.710). Sources may also transfer or sell the ATUs that they hold to other sources or participants (35 IAC 205.630).

6.2 Applicability

This source is considered a "participating source" for purposes of the ERMS, 35 IAC Part 205.

6.3 Obligation to Hold Allotment Trading Units (ATUs)

- a. Pursuant to 35 IAC 205.150(c)(1) and 35 IAC 205.720, and as further addressed by Condition 6.8, as of December 31 of each year, this source shall hold ATUs in its account in an amount not less than the ATU equivalent of its VOM emissions during the preceding seasonal allotment period (May 1 - September 30), not including VOM emissions from the following, or the source shall be subject to "emissions excursion compensation," as described in Condition 6.5.
 - i. VOM emissions from insignificant emission units and activities as identified in Section 3 of this permit, in accordance with 35 IAC 205.220;
 - ii. Excess VOM emissions associated with startup, malfunction, or breakdown of an emission unit as authorized in Section 7.0 of this permit, in accordance with 35 IAC 205.225;
 - iii. Excess VOM emissions to the extent allowed by a Variance, Consent Order, or Compliance Schedule, in accordance with 35 IAC 205.320(e)(3);
 - iv. Excess VOM emissions that are a consequence of an emergency as approved by the Illinois EPA, pursuant to 35 IAC 205.750; and
 - v. VOM emissions from certain new and modified emission units as addressed by Condition 6.8(b), if applicable, in accordance with 35 IAC 205.320(f).
- b. Notwithstanding the above condition, in accordance with 35 IAC 205.150(c)(2), if a source commences operation of a major modification, pursuant to 35 IAC Part 203, the source shall hold ATUs in an amount not less than 1.3 times its seasonal VOM emissions attributable to such major modification during the seasonal allotment period, determined in accordance with the construction permit for such major modification or applicable provisions in Section 7.0 of this permit.

6.4 Market Transactions

- a. The source shall apply to the Illinois EPA for and obtain authorization for a Transaction Account prior to conducting any market transactions, as specified at 35 IAC 205.610(a).

- b. The Permittee shall promptly submit to the Illinois EPA any revisions to the information submitted for its Transaction Account, pursuant to 35 IAC 205.610(b).
- c. The source shall have at least one account officer designated for its Transaction Account, pursuant to 35 IAC 205.620(a).
- d. Any transfer of ATUs to or from the source from another source or general participant must be authorized by a qualified Account Officer designated by the source and approved by the Illinois EPA, in accordance with 35 IAC 205.620, and the transfer must be submitted to the Illinois EPA for entry into the Transaction Account database.

6.5 Emissions Excursion Compensation

Pursuant to 35 IAC 205.720, if the source fails to hold ATUs in accordance with Condition 6.3, it shall provide emissions excursion compensation in accordance with the following:

- a. Upon receipt of an Excursion Compensation Notice issued by the Illinois EPA, the source shall purchase ATUs from the ACMA in the amount specified by the notice, as follows:
 - i. The purchase of ATUs shall be in an amount equivalent to 1.2 times the emissions excursion; or
 - ii. If the source had an emissions excursion for the seasonal allotment period immediately before the period for the present emissions excursion, the source shall purchase ATUs in an amount equivalent to 1.5 times the emissions excursion.
- b. If requested in accordance with paragraph (c) below or in the event that the ACMA balance is not adequate to cover the total emissions excursion amount, the Illinois EPA will deduct ATUs equivalent to the specified amount or any remaining portion thereof from the ATUs to be issued to the source for the next seasonal allotment period.
- c. Pursuant to 35 IAC 205.720(c), within 15 days after receipt of an Excursion Compensation Notice, the owner or operator may request that ATUs equivalent to the amount specified be deducted from the source's next seasonal allotment by the Illinois EPA, rather than purchased from the ACMA.

6.6 Quantification of Seasonal VOM Emissions

- a. The methods and procedures specified in Sections 5 and 7 of this permit for determining VOM emissions and compliance with VOM emission limitations shall be used for determining seasonal VOM emissions for purposes of the ERMS, with the following exceptions [35 IAC 205.315(b)]:

No exceptions

- b. The Permittee shall report emergency conditions at the source to the Illinois EPA, in accordance with 35 IAC 205.750, if the Permittee intends to deduct VOM emissions in excess of the technology-based emission rates normally achieved that are attributable to the emergency from the source's seasonal VOM emissions for purposes of the ERMS. These reports shall include the information specified by 35 IAC 205.750(a), and shall be submitted in accordance with the following:

- i. An initial emergency conditions report within two days after the time when such excess emissions occurred due to the emergency; and
- ii. A final emergency conditions report, if needed to supplement the initial report, within 10 days after the conclusion of the emergency.

6.7 Annual Account Reporting

- a. For each year in which the source is operational, the Permittee shall submit, as a component of its Annual Emissions Report, seasonal VOM emissions information to the Illinois EPA for the seasonal allotment period. This report shall include the following information [35 IAC 205.300]:
 - i. Actual seasonal emissions of VOM from the source;
 - ii. A description of the methods and practices used to determine VOM emissions, as required by this permit, including any supporting documentation and calculations;
 - iii. A detailed description of any monitoring methods that differ from the methods specified in this permit, as provided in 35 IAC 205.337;
 - iv. If a source has experienced an emergency, as provided in 35 IAC 205.750, the report shall reference the associated emergency conditions report that has been approved by the Illinois EPA;

- v. If a source's baseline emissions have been adjusted due to a Variance, Consent Order, or CAAPP permit Compliance Schedule, as provided for in 35 IAC 205.320(e)(3), the report shall provide documentation quantifying the excess VOM emissions during the season that were allowed by the Variance, Consent Order, or Compliance Schedule, in accordance with 35 IAC 205.320(e)(3); and
- vi. If a source is operating a new or modified emission unit for which three years of operational data is not yet available, as specified in 35 IAC 205.320(f), the report shall specify seasonal VOM emissions attributable to the new emission unit or the modification of the emission unit.

- b. This report shall be submitted by November 30 of each year, for the preceding seasonal allotment period.

6.8 Allotment of ATUs to the Source

- a.
 - i. The allotment of ATUs to this source is 1,048 ATUs per seasonal allotment period.
 - ii. This allotment of ATUs reflects the Illinois EPA's determination that the source's baseline emissions were 118.72 tons per season.
 - iii. The source's allotment reflects 88% of the baseline emissions (12% reduction), except for the VOM emissions from specific emission units excluded from such reduction, pursuant to 35 IAC 205.405, including units complying with MACT or using BAT, as identified in Condition 6.11 of this permit.
 - iv. ATUs will be issued to the source's Transaction Account by the Illinois EPA annually. These ATUs will be valid for the seasonal allotment period following issuance and, if not retired in this season, the next seasonal allotment period.
 - v. Condition 6.3(a) becomes effective beginning in the seasonal allotment period following the initial issuance of ATUs by the Illinois EPA into the Transaction Account for the source.
- b. Contingent Allotments for New or Modified Emission Units
Not applicable.

- c. Notwithstanding the above, part or all of the above ATUs will not be issued to the source in circumstances as set forth in 35 IAC Part 205, including:
 - i. Transfer of ATUs by the source to another participant or the ACMA, in accordance with 35 IAC 205.630;
 - ii. Deduction of ATUs as a consequence of emissions excursion compensation, in accordance with 35 IAC 205.720; and
 - iii. Transfer of ATUs to the ACMA, as a consequence of shutdown of the source, in accordance with 35 IAC 205.410.

6.9 Recordkeeping for ERMS

The Permittee shall maintain copies of the following documents as its Compliance Master File for purposes of the ERMS [35 IAC 205.700(a)]:

- a. Seasonal component of the Annual Emissions Report;
- b. Information on actual VOM emissions, as specified in detail in Sections 5 and 7 of this permit and Condition 6.6(a); and
- c. Any transfer agreements for the purchase or sale of ATUs and other documentation associated with the transfer of ATUs.

6.10 Federal Enforceability

Section 6 becomes federally enforceable upon approval of the ERMS by USEPA as part of Illinois' State Implementation Plan.

6.11 Exclusions from Further Reductions

a. VOM emissions from the following emission units shall be excluded from the VOM emissions reductions requirements specified in 35 IAC 205.400(c) and (e) as long as such emission units continue to satisfy the following [35 IAC 205.405(a)]:

- i. Emission units that comply with any NESHAP or MACT standard promulgated pursuant to the CAA;
- ii. Direct combustion emission units designed and used for comfort heating purposes, fuel combustion emission units, and internal combustion engines; and
- iii. An emission unit for which a LAER demonstration has been approved by the Illinois EPA on or after November 15, 1990.

The source has demonstrated in its ERMS application and the Illinois EPA has determined that the following emission units qualify for exclusion from further reductions because they meet the criteria as indicated above [35 IAC 205.405(a) and (c)]:

Natural gas fired furnaces and boilers

b. VOM emissions from emission units using BAT for controlling VOM emissions shall not be subject to the VOM emissions reductions requirement specified in 35 IAC 205.400(c) or (e) as long as such emission unit continues to use such BAT [35 IAC 205.405(b)].

The source has demonstrated in its ERMS application and the Illinois EPA has determined that the following emission units qualify for exclusion from further reductions because these emission units use BAT for controlling VOM emissions as indicated above [35 IAC 205.405(b) and (c)]:

None

7.0 UNIT SPECIFIC CONDITIONS

7.1 Unit 1 - Casting Process

7.1.1 Description

Aluminum sheet and plate production begins with the casting operation. Solid aluminum and aluminum scrap are heated in melting furnaces and mixed with alloying elements such as copper, magnesium, and zinc to produce molten aluminum alloy. Melting furnaces operate in batch mode. Emissions from the melting furnace are natural gas combustion products and small quantities of hazardous air pollutants (HAPs) from the melting furnace. The molten aluminum is then transferred to an adjacent holding furnace.

In the holding furnaces, alloying agents and solid aluminum are added to the molten aluminum to adjust its composition. Fluxing gas is passed through the aluminum to scavenge hydrogen. The holding furnaces operate both fluxing and non-fluxing cycles. Emissions from the holding furnaces are natural gas combustion products. In addition, chlorine, hydrochloric acid, and small amount of HAPs are emitted during fluxing.

The molten aluminum is cast into an ingot using the "direct chill" casting process. The molten aluminum is passed through a filter box and poured into a mold, which is directly cooled by contact cooling water spray. As the metal solidifies, the bottom plate of the mold lowers until the desired ingot length is obtained.

The barrel melters and electric induction furnaces are utilized for aluminum-lithium casting. This casting process differs slightly from the traditional aluminum casting process in that the holding furnace is heated by electric induction, and a salt melter is used to "blanket" the molten metal to protect it from the atmosphere. Exhaust from the No.3 and No.1 electric induction furnaces are passed through the No. 3 baghouse.

A by-product of the casting process is aluminum dross. Hot dross is skimmed from the melting and holding furnaces and transferred to the dross pad where it is allowed to cool. During cooling, particulate matter is emitted and captured by overhead hoods which are vented to the dross pad baghouse. Once the dross is cooled, it is sent off-site for recycling.

To prepare the ingots for rolling, oxides must be removed from the ingot surface. To accomplish this, the ends of the ingot are sawed off, and a scalper removes up to $\frac{3}{4}$ inch from the outside of the ingot. The ingot is then transferred to the rolling process or to shipping.

7.1.2 List of Emission Units and Pollution Control Equipment

| Emission Unit | Description | Emission Control Equipment |
|---------------|----------------------------------|----------------------------|
| MF8 | Melting Furnace No. 8 | None |
| HF8 | Holding Furnace No. 8 | None |
| MF24-26 | Melting Furnaces 24-26 | None |
| HF24-26 | Holding Furnaces 24-26 | None |
| MF27-30 | Melting Furnaces 27-30 | None |
| HF27-30 | Holding Furnaces 27-30 | None |
| DP | Dross Pad handling | Dross Pad Baghouse |
| BMF1 | Barrel Melter Furnace No.1 | None |
| EIF1 | Electric Induction Furnace No. 1 | Baghouse No. 3 |
| BMF3 | Barrel Melter Furnace No.3 | None |
| EIF3 | Electric Induction Furnace No. 3 | Baghouse No. 3 |

7.1.3 Applicability Provisions and Applicable Regulations

- a. The "affected emission unit" for the purpose of these unit-specific conditions, is each emission unit listed in Condition 7.1.2.
- b. Emission units MF24-26, HF24-26, BMF1, EIF1, BMF3, and EIF3 are subject to 35 IAC 212.321, 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 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 by the following equation:

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

Where:

P = Process weight rate; and
 E = Allowable emission rate; and,
 Up to process weight rate of 408 Mg/hr (450 T/hr):

| | <u>Metric</u> | <u>English</u> |
|---|---------------|----------------|
| P | Mg/hr | T/hr |
| E | kg/hr | lbs/hr |

| | | |
|---|-------|-------|
| A | 1.214 | 2.54 |
| B | 0.534 | 0.534 |

- c. Emission units MF8, HF8, MF27-30, HF27-30, and DP are subject to 35 IAC 212.322, 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 at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.322 [35 IAC 212.322(a)].

The allowable particulate matter emission limits for the affected enameling lines may be calculated based upon the following emission factors and formulas:

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

Where:

E = Allowable particulate matter emission rate
P = Process weight rate

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

| | <u>Metric</u> | <u>English</u> |
|---|---------------|----------------|
| P | Mg/hr | T/hr |
| E | kg/hr | lbs/hr |
| A | 1.985 | 4.10 |
| B | 0.67 | 0.67 |
| C | 0 | 0 |

For process weight rate in excess of 27.2 Mg/hr (30 T/hr):

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

- d. No person shall cause or allow emissions of PM-10, other than that of fugitive particulate matter, into the atmosphere to exceed the following limits during any one hour period [35 IAC 212.458(b)]:
- i. 22.9 mg/scm (0.01 gr/scf) from dross pad, dross cooling, and dross mixing units at a secondary aluminum smelting and refining plant and/or aluminum finishing plant [35 IAC 212.458(b)(19)];
 - ii. 91.6 mg/scm (0.040 gr/scf) and 0.45 kg/hr (1 lb/hr) for melting furnaces Nos. 6, 7, and 8 at a metal finishing plant in the village of McCook, with operation limited to no more than two of these furnaces at one time [35 IAC 212.458(b)(27)];
 - iii. 183 mg/scm (0.080 gr/scf) and 0.91 kg/hr (2 lb/hr) for holding furnaces Nos. 6, 7, and 8 at a metal finishing plant in the village of McCook, with operation limited to no more than two of these furnaces at one time [35 IAC 212.458(b)(28)];
 - iv. 54.9 mg/scm (0.024 gr/scf) and 1.81 kg/hr (4 lb/hr) for melting furnaces Nos. 24, 25, and 26 at a metal finishing plant in the village of McCook [35 IAC 212.458(b)(29)];
 - v. 34.3 mg/scm (0.015 gr/scf) and 1.81 kg/hr (4 lb/hr) for melting furnaces Nos. 27, 28, 29, and 30 at a metal finishing plant in the village of McCook [35 IAC 212.458(b)(30)];
 - vi. 32.0 mg/scm (0.014 gr/scf) and 0.45 kg/hr (1 lb/hr) for holding furnaces Nos. 24, 25, and 26 at a metal finishing plant in the village of McCook, except that during fluxing operation those furnaces may emit 195 mg/scm (0.085 gr/scf) and 2.72 kg/hr (6 lb/hr) [35 IAC 212.458(b)(31)];
 - vii. 34.3 mg/scm (0.015 gr/scf) and 0.45 kg/hr (1 lb/hr) for holding furnaces Nos. 27, 28, 29, and 30 at a metal finishing plant in the village of McCook, except that during fluxing operation those furnaces may emit 217 mg/scm (0.095 gr/scf) and 2.72 kg/hr (6 lb/hr) [35 IAC 212.458(b)(32)];

- viii. Fluxing operations at holding furnaces Nos. 24, 25, 26, 27, 28, 29, and 30 at a metal finishing plant in the Village of McCook shall be limited to no more than three at any one time [35 IAC 212.458(b)(33)].
- e. The mass emission limits contained in 35 IAC 212.458(b) shall not apply to those emission units with no visible emissions other than that of fugitive particulate matter; however, if stack test is performed, this subsection is not a defense to a finding of a violation of the mass emission limits contained in 35 IAC 212.458(b). [35 IAC 212.458(c)]
- f. Malfunction and Breakdown Provisions
 - i. In the event of a malfunction or breakdown of the dross pad baghouse, the Permittee is authorized to continue operation of the dross pad in violation of the applicable requirement of 35 IAC 212.458(b)(19), as necessary to prevent risk of injury to personnel or severe damage to equipment. This authorization is subject to the following requirements:
 - A. The Permittee shall repair the damaged feature(s) of the baghouse or remove the dross pad from service as soon as practicable. Efforts shall be made to minimize indirect, fugitive emissions from the dross pad (e.g., by closing the dross loading bay doors) if a malfunction occurs during dross processing. No additional dross processing will be conducted until the dross pad baghouse is repaired.
 - B. The Permittee shall fulfill the applicable recordkeeping and reporting requirements of Conditions 7.1.9(a) and 7.1.10.
 - ii. In the event of a malfunction or breakdown of Baghouse No. 3, the Permittee is authorized to continue operation of EIF1 and EIF3 in violation of the hourly particulate matter emission limit of Condition 7.1.6, as necessary to prevent risk of injury to personnel or severe damage to equipment. This authorization is subject to the following requirements:

A. The Permittee shall repair the damaged feature(s) of Baghouse No. 3 or remove EIF1 and EIF3 from service as soon as practicable. This shall be accomplished within 72 hours or additional alloy batch processing may be postponed if possible and necessary to comply with any regulations or emission limits.

B. The Permittee shall fulfill the applicable recordkeeping and reporting requirements of Conditions 7.1.9(b) and 7.1.10.

g. No person shall cause or allow the emission into the atmosphere, of PM-10, from Barrel melter furnaces (BMF1 and BMF3) and Electric Induction furnaces (EIF1 and EIF3) to exceed 68.7 mg/scm (0.03 gr/scf) during any one hour period.[35 IAC 212.324(b)]

h. 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 any affected emission unit, except as provided in 35 IAC 218.302, 218.303, or 218.304 and the following exemption: If no odor nuisance exists the limitation of 35 IAC 218 Subpart G shall apply only to photochemically reactive material. [35 IAC 218.301]

i. Each affected emission unit is subject to the emission limits identified in Condition 5.2.2.

7.1.4 Non-Applicability of Regulations of Concern

a. The emissions limitations of 35 IAC 212.324(b) are not applicable to emission units (MF8, HF8, MF24-26, HF24-26, MF27-30, HF27-30, and DP), because these emission units are subject to a specific emissions standard or limitations contained in 35 IAC 212 Subpart R, Primary and Fabricated Metal Products and Machinery Manufacture. [35 IAC 212.324(a)(3)]

b. The emissions limitations of 35 IAC 212.458(b)(18) are not applicable to emission units (MF8, HF8, MF24-26, HF24-26, MF27-30, HF27-30, and DP), because these emission units are subject to a specific emissions standard or limitations contained in 35 IAC 212.458(b). [35 IAC 212.458(b)]

7.1.5 Operational and Production Limits and Work Practices

- a. Fluxing operations at holding furnaces 24, 25, 26, 27, 28, 29, and 30 is limited to no more than three furnaces at any one time. [35 IAC 212.458(b)(33)]
- b. The Permittee shall maintain and repair baghouse no.3 and dross pad baghouse in a manner that assures that the emission limits and standards of this Section shall be met at all times, except during malfunction or breakdown conditions, as described in Condition 7.1.3(f). Proper maintenance shall include the following minimum requirement: [35 IAC 212.324(f)]
 - i. Visual inspections of air pollution control equipment;
 - ii. Maintenance of an adequate inventory of spare parts; and
 - iii. Expeditious repairs, unless the emission unit is shut down.
- c. The Permittee shall operate, maintain, and replace the dust collector filters in a manner that assures compliance with the conditions of this section.

7.1.6 Emission Limitations

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

| <u>Emission Source</u> | <u>Annual Emissions (T/yr)</u> | | | |
|------------------------|--------------------------------|-----------------------|------------|-----------|
| | <u>PM</u> | <u>NO_x</u> | <u>VOM</u> | <u>CO</u> |
| MF26, Fluxing | 7.59 | | | |
| MF26, Other | 3.23 | | | |
| HF26, Fluxing | 17.37 | | | |
| HF26, Other | 2.08 | | | |
| MF26, NG | | 36.8 | 0.80 | 9.2 |
| HF26, NG | | 6.13 | 0.13 | 1.53 |

| <u>Emission Source</u> | <u>Annual Emissions (T/yr)</u> | | | | |
|------------------------|--------------------------------|-----------------------|-----------------------|------------|-----------|
| | <u>PM</u> | <u>SO₂</u> | <u>NO_x</u> | <u>VOM</u> | <u>CO</u> |
| MF24, Fluxing | 4.0 | | | | |
| MF24, Other | 2.3 | | | | |
| HF24, Fluxing | 16.2 | | | | |
| HF24, Other | 2.2 | | | | |
| MF24 & HF24, NG | | 0.2 | 36.7 | 0.8 | 9.2 |

| <u>Emission Source</u> | <u>Aluminum Throughput (T/yr)</u> | <u>Annual Emissions (T/yr)</u> | | |
|------------------------|-----------------------------------|--------------------------------|-----------------------|-----------|
| | | <u>PM</u> | <u>NO_x</u> | <u>CO</u> |
| MF25, Fluxing | 2,800 | 2.7 | 15.5 | 3.9 |
| MF25, Other | 32,200 | 4.0 | 1.3 | 0.3 |
| HF25, Fluxing | 17,500 | 17.0 | 1.2 | 0.3 |
| HF25, Other | 17,500 | 0.50 | 1.2 | 0.3 |

| <u>Emission Unit</u> | <u>PM Emissions</u> | | <u>NO_x Emissions</u> |
|----------------------|---------------------|---------------|---------------------------------|
| | <u>(Gr/scf)</u> | <u>(T/yr)</u> | <u>(T/yr)</u> |
| BMF1 | 0.03 | 1.72 | 3.36 |
| EIF1 | 0.03 | 0.44 | |

| <u>Emission Unit</u> | <u>PM Emissions</u> | | <u>NO_x Emissions</u> | |
|----------------------|---------------------|---------------|---------------------------------|---------------|
| | <u>(Gr/scf)</u> | <u>(T/yr)</u> | <u>(lb/mo)</u> | <u>(T/yr)</u> |
| BMF3 | 0.03 | 1.72 | 98.3 | 0.59 |
| EIF3 | 0.03 | 0.44 | | |

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1R].

The above limitations contain revisions to previously issued Permits 84120024, 87080078, 88080009, 95020036, and 95060069. 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 35 IAC Part 203, Major Stationary Sources Construction and

Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (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, hourly limits were eliminated [T1R].

7.1.7 Testing Requirements

- a. Pursuant to 35 IAC 212.108 and Section 39.5(7)(b) of the Act, testing for PM₁₀ emissions shall be performed as follows:
 - i. Pursuant to 35 IAC 212.108(a), emissions of PM₁₀ shall be measured by any of the following methods at the option of the owner or operator of an emission unit.
 - A. Method 201, 40 CFR part 51, Appendix M [35 IAC 212.108(a)(1)];
 - B. Method 201A, 40 CFR part 51, Appendix M [35 IAC 212.108(a)(2)]; or
 - C. Method 5, 40 CFR part 60, Appendix A, provided that all particulate matter measured by Method 5 shall be considered to be PM₁₀ [35 IAC 212.108(a)(3)].
 - ii. Emissions of condensable PM₁₀ shall be measured by Method 202, 40 CFR part 51, Appendix M [35 IAC 212.108(b)].
 - iii. The volumetric flow rate and gas velocity for stack test methods shall be determined in accordance with Methods 1, 1A, 2, 2A, 2C, 2D, 3, or 4, 40 CFR part 60, Appendix A [35 IAC 212.108(c)].
 - iv. Upon a written notification by the Illinois EPA, the owner or operator of a PM₁₀ emission unit shall conduct the applicable testing for PM₁₀ emissions, condensable PM₁₀ emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Illinois EPA within thirty (30) days after

conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA [35 IAC 212.108].

- b. Pursuant to 35 IAC 212.110 and Section 39.5(7)(b) of the Act, testing for PM emissions shall be performed as follows:
 - i. Measurement of particulate matter emissions from stationary emission units subject to 35 IAC Part 212 shall be conducted in accordance with 40 CFR part 60, Appendix A, Methods 5, 5A, 5D, or 5E [35 IAC 212.110(a)].
 - ii. The volumetric flow rate and gas velocity shall be determined in accordance with 40 CFR part 60, Appendix A, Methods 1, 1A, 2, 2A, 2C, 2D, 3, and 4 [35 IAC 212.110(b)].
 - iii. Upon a written notification by the Illinois EPA, the owner or operator of a particulate matter emission unit subject to 35 IAC Part 212 shall conduct the applicable testing for particulate matter emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Illinois EPA within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA [35 IAC 212.110(c)].
- c. Opacity testing shall be performed on each affected emission unit at least once per calendar quarter.

7.1.8 Monitoring Requirements

None

7.1.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected emission unit to demonstrate compliance with conditions 5.5.1 and 7.1.3, pursuant to Section 39.5(7)(b) of the Act:

a. Records for Malfunctions and Breakdowns

The Permittee shall maintain records, pursuant to 35 IAC 201.263, of continued operation of dross pad or EIF1 or EIF3 during malfunctions and breakdown of the control features of the dross pad baghouse or the No. 3 baghouse, which as a minimum, shall include:

- i. Date and duration of malfunction or breakdown;
 - ii. A detailed explanation of the malfunction or breakdown;
 - iii. An explanation why the damaged feature(s) could not be immediately repaired or the dross pad or EIF1 or EIF3 removed from service without risk of injury to personnel or severe damage to equipment;
 - iv. The measures used to reduce the quantity of emissions and the duration of the event;
 - v. The steps taken to prevent similar malfunctions or breakdowns or reduce their frequency and severity; and
 - vi. The estimated amount of release above typical emissions during malfunction/breakdown.
- b. Permittee shall keep records of any visible emissions observation for each affected emission unit.
 - c. Permittee shall keep result of any opacity monitoring and/or stack test performed for each affected emission unit.
 - d. Permittee shall keep daily records of the operating time for fluxing operation of each emission units HF8, HF24-26, and HF27-30.
 - e. Permittee shall keep following records of maintenance and repair for baghouse no.3 and dross pad baghouse:[35 IAC 212.324(g)]
 - i. Written records of inventory and documentation of inspections, maintenance, and repairs of all air pollution control equipment shall be kept in accordance with Condition 7.1.5(b).
 - ii. The owner or operator shall document any period during which any process emission unit was in operation when the air pollution control equipment was not in operation or was malfunctioning so as to cause an emissions level in excess of the emissions limitation. These records shall include documentation of causes for pollution control equipment not operating or such malfunction and shall state

what corrective actions were taken and what repairs were made.

- iii. A written record of the inventory of all spare parts not readily available from local suppliers shall be kept and updated.
 - iv. Copies of all records required by this Section shall be submitted to the Illinois EPA within ten (10) working days after a written request by the Illinois EPA.
 - v. The records required under this Section shall be kept and maintained for at least three (3) years and shall be available for inspection and copying by Illinois EPA representatives during working hours.
 - vi. Upon written request by the Illinois EPA, a report shall be submitted to the Illinois EPA for any period specified in the request stating the following: the dates during which any process emission unit was in operation when the air pollution control equipment was not in operation or was not operating properly, documentation of causes for pollution control equipment not operating or not operating properly, and a statement of what corrective actions were taken and what repairs were made.
- f. Pursuant to 35 IAC 212.108(f), 212.110(e) and Section 39.5(7)(e) of the Act, the owner or operator of an emission unit subject 35 IAC Part 212 shall retain records of all tests which are performed. These records shall be retained for at least five (5) years after the date a test is performed and shall include the following:
- i. The date, place, and time of sampling or measurements;
 - ii. The date(s) analyses were performed;
 - iii. The company or entity that performed the analyses;
 - iv. The analytical techniques or methods used;
 - v. The results of such analyses; and

- vi. The operating conditions as existing at the time of sampling or measurement.
- g. Records of hours of operation shall be maintained for each emission unit (both for fluxing and non-fluxing where appropriate).
- h. Records of monthly and annual aggregate NO_x, PM, SO₂, VOM, and HAP emissions from affected emission units shall be maintained, based on fuel usage and the applicable emission factors, with supporting calculations.

7.1.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of the affected emission unit 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:

Reporting of Malfunctions and Breakdowns for the dross pad baghouse and the No. 3 baghouse

The Permittee shall provide the following notification and reports to the Illinois EPA, Compliance Section and Regional Field Office, pursuant to 35 IAC 201.263, concerning continued operation of dross pad or EIF1 or EIF3 subject to Condition 7.1.3(f) during malfunction or breakdown of the control features of the dross pad baghouse or the No. 3 baghouse.

- i. The Permittee shall notify the Illinois EPA's regional office by telephone as soon as possible during normal working hours, but no later than three (3) days, upon the occurrence of noncompliance due to malfunction or breakdown.
- ii. Upon achievement of compliance, the Permittee shall give a written follow-up notice to the Illinois EPA, Compliance Section and Regional Field Office, providing a detailed explanation of the event, an explanation why continued operation of the dross pad or EIF1 or EIF3 was necessary, the length of time during which operation continued under such conditions, the measures taken by the Permittee to minimize and correct deficiencies with chronology, and

when the repairs were completed or when the dross pad or EIF1 or EIF3 was taken out of service.

- iii. If compliance is not achieved within 5 working days of the occurrence, the Permittee shall submit interim status reports to the Illinois EPA, Compliance Section and Regional Field Office, within 5 days of the occurrence and every 14 days thereafter, until compliance is achieved. These interim reports shall provide a brief explanation of the nature of the malfunction or breakdown, corrective actions accomplished to date, actions anticipated to occur with schedule, and the expected date on which repairs will be complete or the dross pad or EIF1 or EIF3 will be taken out of service.

7.1.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.1.12 Compliance Procedures

Compliance with the emission limits in this permit shall be based on the recordkeeping requirements in Condition 7.1.9 and the emission factors and formulas listed below:

- a. Emissions from the burning of natural gas shall be calculated based on the following emission factors:

| <u>Pollutant</u> | <u>Emission Factor (lb/10⁶ ft³)</u> |
|------------------|---|
| PM | 1.9 |
| SO ₂ | 0.6 |
| VOM | 5.5 |
| NO _x | 100 |
| CO | 84 |

These are the emission factors for uncontrolled natural gas combustion in small boilers (<100 mmBtu/hr), Tables 1.4-1 and 1.4-2, AP-42, Volume I, Fifth Edition, March 1998. Updated emission factors as printed in future editions of AP-42 can be substituted.

Natural Gas Emissions (ton) = natural gas consumed multiplied by the appropriate emission factor/2000.

- b. Emissions of particulate matter from the process equipment shall be calculated based on the following emission factors:

| <u>Unit</u> | <u>Emission Factor</u> <u>(lb/hr)</u> |
|----------------------|--|
| MF8 | 1.36 |
| HF8, Fluxing | 0.17 |
| HF8, Non-Fluxing | 0.35 |
| MF24-26 | 2.56 |
| HF24-26, Fluxing | 1.03 |
| HF24-26, Non-Fluxing | 0.07 |
| MF27-30 | 3.62 |
| HF27-30, Fluxing | 0.54 |
| HF27-30, Non-Fluxing | 1.12 |
| DP Baghouse | 0.35 |
| BMF1 | 0.28 |
| EIF1, Fluxing | 3.06 |
| EIF1, Non-Fluxing | 1.32 |
| BMF3 | 0.28 |
| EIF3, Fluxing | 3.06 |
| EIF3, Non-Fluxing | 1.32 |

These emission factors are based on actual stack test data or data from similar equipment. Updated emission factors from future testing can be substituted upon acceptance by the Illinois EPA.

PM Emissions (ton) = operating hours multiplied by the appropriate emission factor/2000.

7.2 Unit 1 - Rolling Process

7.2.1 Description

The rolling process produces two types of products, aluminum plate and aluminum sheet. Plate production occurs at the 145-inch plate mill. Before rolling, the ingots are reheated to a specific temperature. As the aluminum is rolled, an oil-in-water emulsion is sprayed onto the surface of the hot metal as it enters the mill. Rolling oil is emitted both as gas-phase VOM and liquid-phase VOM particulate matter. In addition, VOM (and HAPs) are also emitted during the intermittent application of "roll bite" solvent to the hot metal surface to increase the friction between the metal and mill rolls as the metal enters the mill. Following rolling, the plate is transferred to a finishing operation or sent to shipping.

Sheet production, like plate production, begins by heating the ingot to a desired temperature in one of eleven Hot Mill Soaking Furnaces. Following soaking, the aluminum ingot is sent to the Hot Line. The Hot Line consists of three rolling mills in series: the 120-inch mill, the 96-inch mill, and the 80-inch mill. The ingot thickness is reduced with each successive pass through the three mills. As the aluminum is rolled, an oil-in-water emulsion is sprayed onto the surface of the hot metal as it enters the mills. Rolling oil is emitted both as gas-phase VOM and liquid-phase VOM particulate matter. In addition, VOM (and HAPs) are also emitted from the intermittent application of roll bite solvent to the hot metal surface to increase the friction between the metal and mill rolls as the metal enters the 80-inch mill. The aluminum sheet is then coiled and sent to shipping, a finishing process, or the Cold Mills.

The Cold Mills take coiled sheet from the Hot Line, or sheet shipped in from off-site, and further reduces its thickness at one of the two rolling mills. Lubricant is emitted both as gas-phase VOM and liquid-phase VOM particulate matter. The No. 7 Cold mill is equipped with a Busch-Anderson mist eliminator to reclaim lubricant for reuse. Following rolling, the cold worked sheet may be sent to a heat treating furnace, shipping, or a finishing operation.

7.2.2 List of Emission Units and Pollution Control Equipment

| Emission Unit | Description | Emission Control Equipment |
|---------------|--|----------------------------|
| HL | Hot Line (120-inch mill, 96-inch mill, and | None |

| | | |
|-------|----------------------------------|------------------|
| | 80-inch mill) | |
| PM145 | Hot Rolling (145-inch plate mil) | None |
| CM1 | Cold Rolling (No. 1 cold mills) | None |
| CM7 | Cold Rolling (No. 7 cold mills) | Mist Eliminators |

7.2.3 Applicability Provisions and Applicable Regulations

- a. The "affected rolling process" for the purpose of these unit-specific conditions, is each emission unit listed in Condition 7.2.2.
- b. Each Affected rolling process at the source is subject to Board Order PCB AS 91-8, which provides that:
 - i. The adjusted standard pertains to VOM emissions from the operation of aluminum hot rolling mills: specifically, the aluminum sheet and plate mills and the 120 inch, 96 inch, 80 inch and 145 inch mills. This adjusted standard also pertains to the aluminum cold rolling mills: Numbers 1 and 7.
 - ii. The alternative control requirements proposed in the June 9, 1995 amended co-petition for adjusted standard, based upon the FIP revision by USEPA in the Federal Register (60 Fed. Reg. 13042), represent Reasonable Available Control Technology (RACT) and no additional controls are required to meet the requirements of 35 IAC 218.986.
 - iii. Permittee shall comply with the following requirements at each of its aluminum hot rolling mills:
 - A. Rolling lubricants shall consist of oil-in-water emulsions, with formulations of no more than 15 percent, by weight, of petroleum-based oils and additives. Records shall be maintained of such emulsion formulations, with identification of all oils and additives.
 - B. A grab sample of the as-applied rolling lubricant shall be taken on a monthly basis during any month that the mill is in operation and each such sample shall be

tested, using ASTM method D95-83, to determine the percent, by weight, of petroleum-based oils and additives.

- C. The inlet supply rolling lubricant temperature measured at or after the inlet sump but prior to the lubricant nozzles shall not exceed 200 degrees F and such temperature shall be monitored at all times that the mill is in operation by the use of thermocouples and measured values shall be automatically recorded at least every five (5) minutes by means of chart recorder or electronic data system.
- iv. Permittee shall comply with the following requirements at each of its aluminum cold rolling mills:
- A. Rolling lubricants shall consist of low vapor pressure lubricants composed of organic lubricant and additives. Records shall be maintained of rolling lubricant formulations, with identification of all oils and additives.
 - B.
 - 1. The initial and final boiling points of oil shall be between 460 and 635 degrees F.
 - 2. All incoming shipments of oils shall be sampled and distillation range test shall be performed, using ASTM Method D86-90, on each such sample to determine the initial and final boiling points.
 - 3. A grab sample of the as-applied rolling lubricant shall be taken on a monthly basis during any month that the mill is in operation and a distillation range test, using ASTM Method D86-90, shall be performed on each such sample to determine the initial and final boiling points.
 - C. The inlet supply rolling lubricant temperatures measured at or after the inlet sump but prior to the lubricant nozzles shall not exceed 150 degrees F and such temperatures shall be monitored at

all times that a mill is in operation by the use of thermocouples and measured values shall be automatically recorded at least every five (5) minutes by means of chart recorder or electronic data system.

- v. In the event that Reynolds ceases to own and operate this facility, the above requirements shall apply to any subsequent owners and operators of the facility.
- 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 any emission unit, except as provided in 35 IAC 218.302, 218.303, or 218.304 and the following exemption: If no odor nuisance exists the limitation of 35 IAC 218 Subpart G shall apply only to photochemically reactive material.[35 IAC 218.301]
- d. Affected rolling processes at the source are subject to 35 IAC 212.322, 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 at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.322 [35 IAC 212.322(a)].

The allowable particulate matter emission limits for the affected rolling processes may be calculated based upon the following emission factors and formulas:

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

Where:

E = Allowable particulate matter emission rate
P = Process weight rate

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

| | <u>Metric</u> | <u>English</u> |
|---|---------------|----------------|
| P | Mg/hr | T/hr |

| | | |
|---|-------|--------|
| E | kg/hr | lbs/hr |
| A | 1.985 | 4.10 |
| B | 0.67 | 0.67 |
| C | 0 | 0 |

For process weight rate in excess of 27.2 Mg/hr (30 T/hr):

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

- e. No person shall cause or allow the emission into the atmosphere, of PM-10, from affected rolling processes to exceed 68.7 mg/scm (0.03 gr/scf) during any one hour period.[35 IAC 212.324(b)]
- f. The mass emission limits contained in 35 IAC 212.324(b) shall not apply to those emission units with no visible emissions other than fugitive particulate matter; however, if stack test is performed, this subsection is not a defense to a finding of a violation of the mass emission limits contained in 35 IAC 212.324(b).[35 IAC 212.324(d)]
- g. Each affected rolling process is subject to the emission limits identified in Condition 5.2.2.
- h. Startup Provisions

The Permittee is authorized to operate the 145" Plate Mill in violation of the applicable limit of 7.2.3(b)(iii)(C) during startup pursuant to 35 IAC 201.262, as the Permittee has affirmatively demonstrated that all reasonable efforts have been made to minimize startup emissions, duration of individual starts, and frequency of startups. This authorization is subject to the following:

- i. This authorization only extends for a period of up to 10 minutes following initial circulation of coolant during each startup event.
- ii. The Permittee shall take the following measures to minimize startup emissions, the

duration of startups, and minimize the frequency of startups:

Implementation of established startup procedures, including checking for temperature gauge failure and confirming of lubricant temperature.

- iii. The Permittee shall fulfill the applicable recordkeeping requirements of Condition 7.2.9(i).

7.2.4 Non-Applicability of Regulations of Concern

- a. Each affected rolling process is not subject to the control requirements of 35 IAC 218 Subpart TT, Other Emission Units, because the affected rolling processes are exempted by Board Order PCB AS-91-8, which exempted the affected rolling processes because it was determined that reducing the VOM emissions by 81 percent for these processes is not technically feasible or economically reasonable.

7.2.5 Control Requirements

None

7.2.6 Emission Limitations

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

7.2.7 Testing Requirements

- a. A grab sample of the as-applied rolling lubricant shall be taken on a monthly basis during any month that the mill (120 inch, 96 inch, 80 inch, or 145 inch mills) is in the operation and each such sample shall be tested, using ASTM D95-83, to determine the percent, by weight, of petroleum-based oils and additives.[PCB AS-91-8]
- b. All incoming shipments of oils, used on cold rolling mills 1 and 7, shall be sampled and a distillation range test shall be performed, using ASTM Method D86-90, on each such sample to determine the initial and final boiling points.
- c. A grab sample of the as-applied rolling lubricant shall be taken on a monthly basis during any month that the cold rolling mill 1 or 7 is in operation and a distillation range test, using ASTM Method D86-90, shall be performed on each such sample to determine the initial and final boiling points.
- d. Pursuant to 35 IAC 212.108 and Section 39.5(7)(b) of the Act, testing for PM₁₀ emissions shall be performed as follows:
 - i. Pursuant to 35 IAC 212.108(a), emissions of PM₁₀ shall be measured by any of the following methods at the option of the owner or operator of an emission unit.
 - A. Method 201, 40 CFR part 51, Appendix M [35 IAC 212.108(a)(1)];
 - B. Method 201A, 40 CFR part 51, Appendix M [35 IAC 212.108(a)(2)]; or
 - C. Method 5, 40 CFR part 60, Appendix A, provided that all particulate matter measured by Method 5 shall be considered to be PM₁₀ [35 IAC 212.108(a)(3)].
 - ii. Emissions of condensable PM₁₀ shall be measured by Method 202, 40 CFR part 51, Appendix M [35 IAC 212.108(b)].
 - iii. The volumetric flow rate and gas velocity for stack test methods shall be determined in accordance with Methods 1, 1A, 2, 2A, 2C, 2D,

3, or 4, 40 CFR part 60, Appendix A [35 IAC 212.108(c)].

- iv. Upon a written notification by the Illinois EPA, the owner or operator of a PM₁₀ emission unit shall conduct the applicable testing for PM₁₀ emissions, condensable PM₁₀ emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Illinois EPA within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA [35 IAC 212.108].
- e. Pursuant to 35 IAC 212.110 and Section 39.5(7)(b) of the Act, testing for PM emissions shall be performed as follows:
 - i. Measurement of particulate matter emissions from stationary emission units subject to 35 IAC Part 212 shall be conducted in accordance with 40 CFR part 60, Appendix A, Methods 5, 5A, 5D, or 5E [35 IAC 212.110(a)].
 - ii. The volumetric flow rate and gas velocity shall be determined in accordance with 40 CFR part 60, Appendix A, Methods 1, 1A, 2, 2A, 2C, 2D, 3, and 4 [35 IAC 212.110(b)].
 - iii. Upon a written notification by the Illinois EPA, the owner or operator of a particulate matter emission unit subject to 35 IAC Part 212 shall conduct the applicable testing for particulate matter emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Illinois EPA within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA [35 IAC 212.110(c)].

7.2.8 Inspection/Monitoring Requirements

- a. The inlet supply rolling lubricant temperature measured at or after the inlet sump but prior to the lubricant nozzles shall not exceed 200 degrees F and such temperature shall be monitored at all times that the hot mill (120 inch, 96 inch, 80 inch or 145 inch mill) is in operation by the use of thermocouples and

measured values shall be automatically recorded at least every five (5) minutes by means of chart recorder or electronic data system.

- b. The inlet supply rolling lubricant temperatures measured at or after the inlet sump but prior to the lubricant nozzles shall not exceed 150 degrees F and such temperatures shall be monitored at all times that a cold mill 1 or 7 is in operation by the use of thermocouples and measured values shall be automatically recorded at least every five (5) minutes by means of chart recorder or electronic data system.

7.2.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for each affected rolling process to demonstrate compliance with conditions 5.5.1 and 7.2.3, pursuant to Section 39.5(7)(b) of the Act:

- a. Permittee shall keep records of the visible emissions observation for each affected emission unit.
- b. Permittee shall keep result of any opacity monitoring and/or stack test performed for each affected emission unit.
- c. For the aluminum hot rolling mills, all records of emulsion formulations, percent oil tests, and rolling lubricant temperatures shall be retained at the facility and shall be available for inspection by the Illinois EPA upon request.
- d. For the aluminum cold rolling mills, all records of rolling lubricant formulations, distillation range tests for incoming shipments of oils, and as-applied rolling lubricants, and rolling lubricant temperatures shall be retained at the facility and be available for inspection by the Illinois EPA.
- e. Permittee shall keep result of all test conducted pursuant to Condition 7.2.7(a), (b), and (c).
- f. Pursuant to 35 IAC 212.108(f), 212.110(e) and Section 39.5(7)(e) of the Act, the owner or operator of an emission unit subject 35 IAC Part 212 shall retain records of all tests which are performed. These records shall be retained for at least five (5) years after the date a test is performed and shall include the following:
 - i. The date, place, and time of sampling or measurements;
 - ii. The date(s) analyses were performed;
 - iii. The company or entity that performed the analyses;
 - iv. The analytical techniques or methods used;
 - v. The results of such analyses; and

- vi. The operating conditions as existing at the time of stack sampling or opacity measurement.
- g. Records of hours of operation shall be maintained for each mill.
- h. Records of monthly and annual aggregate PM, VOM, and HAP emissions from affected rolling process shall be maintained, based on the applicable emission factors, with supporting calculations.
- i. Records for Startup

The Permittee shall maintain the following records, pursuant to Section 39.5(7)(b) of the Act, for the 145" Plate Mill subject to Condition 7.2.3(h), which at a minimum shall include:

- i. The following information for each startup of the 145" Plate Mill:
 - A. Date and duration of the startup, i.e., start time and time normal operation achieved, i.e., when temperature of the coolant is below 200°F;
 - B. If normal operation was not achieved within 10 minutes, an explanation why startup could not be achieved in 10 minutes;
 - C. A detailed description of the startup, including reason for operation and whether a check for temperature gauge failure and lubricant temperature was performed;
 - D. An explanation why a check for temperature gauge failure and lubricant temperature and other established startup procedures could not be performed, if not performed;
- ii. A maintenance and repair log for the 145" Plate Mill, listing each activity performed with date.

7.2.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of an affected rolling process 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. A written report shall be submitted to the Illinois EPA indicating any deviations from the requirements of Condition 7.2.3(b). The written report shall provide a description of the deviation, the date and time of deviation, the measured or monitored data, the cause of the deviation, if known, and any corrective action taken. Unless more frequent or detailed reporting is required under other provisions, including permit conditions, such written report shall be submitted, for each calendar year, by May 1th of the following year.[PCB AS-91-8]

7.2.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.2.12 Compliance Procedures

Compliance with the emission limits in this permit shall be based on the recordkeeping requirements in Condition 7.2.9 and the emission factors and formulas listed below:

Emission Factor

| <u>Unit</u> | <u>(lb/hr)</u> |
|-----------------|----------------|
| 120" Mill | 9.02 |
| 96" Mill | 18.04 |
| 80" Mill | 45.11 |
| Cold Mill #1 | 34.10 |
| Cold Mill #7 | 34.10 |
| 145" Plate Mill | 9.02 |

These emission factors are based on actual stack test data or data from similar equipment. The same emission factor shall be used for calculating either PM or VOM emissions. Updated emission factors from future testing can be substituted upon acceptance by the Illinois EPA.

PM or VOM Emissions (ton) = operating hours multiplied by the appropriate emission factor/2000.

7.3 Fuel Combustion Emission Units

7.3.1 Description

Indirect heat is applied to intermediate and final aluminum products in heat treating furnaces to obtain desired physical properties. Boilers are used for heating at the source.

7.3.2 List of Emission Units and Pollution Control Equipment

| Equipment | Description (Unit Max. mmBtu/hr | Emission Control Equipment |
|--|---|----------------------------------|
| Hot Mill Furnaces | Sunbeam Soaking Furnaces 1-6 (max. 45 mmBtu/hr each) Sunbeam Soaking Furnaces 7 & 8 (max. 36 mmBtu/hr each) Loftus Soaking Furnaces 9- 11 (max. 40 mmBtu/hr each) | None |
| Plate Mill Furnaces | Sunbeam Reheat Furnace No. 3 (max. 36 mmBtu/hr each) Sunbeam Homogenizing Furnaces 4 & 5 (max. 58 mmBtu/hr each) Despatch Soaking Furnaces 1 & 2 (max. 12 mmBtu/hr each) Annealing Furnaces 0-8 (max. 6.3 mmBtu/hr each) | None |
| Process Annealing Furnaces | Annealing Furnaces 9-22 (max. 6.3 mmBtu/hr each) Annealing Furnaces 23-28 (max. 16 mmBtu/hr each) | None |
| 72" Continuous Heat Treat Furnace | 72" Continuous Heat Treat Furnace (max. 34.0 mmBtu/hr) | None |
| South Boiler Room Package Boilers | 2 Package Boilers (max. 12.55 mmBtu/hr each) | None |

7.3.3 Applicable Provisions and Regulations

- a. An affected fuel combustion emission unit for the purpose of these unit specific conditions is a fuel combustion emission unit that is fired with natural gas, with a maximum heat input capacity of less than 100 mmBtu/hr.

As of the "date issued" as shown on page 1 of this permit, the affected boilers are identified in Condition 7.3.2.

- b. A new affected boiler for the purpose of these unit specific conditions is a boiler that is fired with natural gas, 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 affected boiler 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 rate of the affected boiler is less than 100 mmBtu/hr and greater than 10 mmBtu/hr.
- c. No person shall cause or allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission unit with actual heat input greater than 2.9 MW (10 mmBtu/hr) to exceed 200 ppm, corrected to 50 percent excess air [35 IAC 216.121].
- d. The affected fuel combustion emission unit is subject to the emission limits identified in condition 5.2.2.

7.3.4 Non-Applicability of Regulations of Concern

- a. Each affected fuel combustion emission unit is not subject to 35 IAC 217.141, because the actual heat input of each affected fuel combustion emission unit is less than 73.2 MW (250 mmBtu/hr).
- b. Pursuant to 35 IAC 215.303, each affected fuel combustion emission unit is not subject to 35 IAC 218.301, Use of Organic Material.

7.3.5 Operational and Production Limits and Work Practices

Each affected fuel combustion emission unit shall only be fired with natural gas.

7.3.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide limitations in Condition 5.5.1, the affected fuel combustion emission units are subject to the following:

| <u>Unit</u> | <u>Emissions</u> | |
|-----------------|--|----------------------------|
| | <u>NO_x</u> <u>(T/yr)</u> | <u>CO</u> <u>(T/yr)</u> |
| Soak Furnace #1 | 12.23 | 3.06 |
| Soak Furnace #2 | 12.23 | 3.06 |

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].

The above limitations contain revisions to previously issued Permit 90010058. 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 35 IAC Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (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, hourly limits were eliminated [T1R].

7.3.7 Testing Requirements

None

7.3.8 Monitoring Requirements

None

7.3.9 Recordkeeping Requirements

The Permittee shall maintain records of the following items to demonstrate compliance with Conditions 5.5.1, 5.5.3 and 7.3.6 pursuant to Section 39.5(7)(b) of the Act:

- a. Total natural gas usage for the fuel combustion emission units (10^6 ft³/mo and 10^6 ft³/yr)
- b. Total hours of operation of each fuel combustion emission unit (hr/mo and hr/yr)
- c. Annual aggregate NO_x, PM, and VOM emissions from the affected fuel combustion emission units, based on fuel consumption and the applicable emission factors, with supporting calculations.

7.3.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with applicable control and operating requirements as follows pursuant to Section 39.5(7)(f)(ii) of the Act:

- a. Emissions of CO from an affected fuel combustion emission unit in excess of the limits specified in Condition 7.3.3(c) within 30 days of such an occurrence.
- b. Emissions of NO_x, PM, or VOM from the affected fuel combustion emission units in excess of the limits specified in Condition 5.5.1 based on the current month's records plus the preceding 11 months within 30 days of such an occurrence.

7.3.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.3.12 Compliance Procedures

- a. Compliance with Condition 7.3.3(c) is demonstrated under inherent operating conditions of an affected fuel combustion emission unit, so that no compliance procedures are set in this permit addressing this requirement.
- b. Compliance with the emission limits in Conditions 5.5.1, 5.5.3, and 7.3.6 shall be based on the recordkeeping requirements in Condition 7.3.9 and the emission factors and formulas listed below:

| <u>Pollutant</u> | <u>Emission Factor</u> (lb/10 ⁶ ft ³) |
|------------------|---|
| PM | 1.9 |
| SO ₂ | 0.6 |

| | |
|-----------------|-----|
| VOM | 5.5 |
| NO _x | 100 |
| CO | 84 |

These are the emission factors for uncontrolled natural gas combustion in small boilers (<100 mmBtu/hr), Tables 1.4-1 and 1.4-2, AP-42, Volume I, Fifth Edition, March 1998. Updated emission factors as printed in future editions of AP-42 can be substituted.

Boiler Emissions (ton) = natural gas consumed multiplied by the appropriate emission factor/2000.

7.4 Finishing Operations

7.4.1 Finishing Operations

Solvent wipe cleaning is performed on various plate products. Many products are sent to a stenciling station where they are marked with ink.

7.4.2 List of Emission Units and Air Pollution Control Equipment

| Emission Unit | Description | Emission Control Equipment |
|-----------------------|--------------------------------|----------------------------|
| Solvent Wipe Cleaning | Wipe Cleaning of Plate Product | None |
| Stenciling | Stenciling Finished Product | None |

7.4.3 Applicability Provisions and Applicable Regulations

- a. The "affected emission unit" for the purpose of these unit-specific conditions, is each emission unit listed in Condition 7.4.2.
- b. The "affected coating line" for the purpose of these unit-specific conditions, is the stenciling listed in Condition 7.4.2.
- c. The "affected cleaning operation" for the purpose of these unit-specific conditions, is the solvent wipe cleaning listed in Condition 7.4.2. The affected cleaning operation is subject to 40 CFR 63 Subpart GG, "National Emission Standards for Aerospace Manufacturing and Rework Facilities" for all hand-wipe cleaning operations in the manufacture or rework of aerospace vehicles or components.
- 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 any emission unit, except as provided in 35 IAC 218.302, 218.303, or 218.304 and the following exemption: If no odor nuisance exists the limitation of 35 IAC 218 Subpart G shall apply only to photochemically reactive material.[35 IAC 218.301]
- e. Each affected emission unit is subject to the emission limits identified in Condition 5.2.2.

7.4.4 Non-Applicability of Regulations of Concern

This permit is issued based on the stenciling not being subject to 35 IAC 218.204, because the limitations of that

Subpart shall not apply to coating lines within a source, that otherwise would be subject to the same subsection of 35 IAC 218.204 (because they belong to the same coating category, e.g., coil coating, miscellaneous metal parts and products coating), provided that combined actual emissions of VOM from all lines at the source subject to that subsection never exceed 6.8 kg/day [15 lbs/day] before the application of capture systems and control devices. (For example, coil coating lines within a source would not be subject to the limitations of 35 IAC 218.204(d) if the combined actual emissions of VOM from the coil coating lines never exceed 6.8 kg/day [15 lbs/day] before the application of capture systems and control devices.) volatile organic material emissions from heavy off-highway vehicle products coating lines must be combined with VOM emissions from miscellaneous metal parts and products coating lines to determine applicability. Any owner or operator of a coating source shall comply with the applicable coating analysis test methods and procedures specified in 35 IAC 218.105(a) and the recordkeeping and reporting requirements specified in 35 IAC 218.211(a) if total VOM emissions from the subject coating lines are always less than or equal to 6.8 kg/day [15 lbs/day] before the application of capture systems and control devices and, therefore, are not subject to the limitations of 35 IAC 218.204. Once a category of coating lines at a source is subject to the limitations in 35 IAC 218.204 the coating lines are always subject to the limitations in 35 IAC 218.204. [35 IAC 218.208]

7.4.5 Operational and Production Limits and Work Practices

- a. Housekeeping measures. Each owner or operator of a new or existing cleaning operation subject to 40 CFR 63 Subpart GG shall comply with the requirements in these paragraphs unless the cleaning solvent used is identified in Condition 7.4.5(d) or contains HAP and VOC below the de minimis levels specified in 40 CFR 63.741(f). [40 CFR 63.744(a)]
 - i. Place cleaning solvent-laden cloth, paper, or any other absorbent applicators used for cleaning in bags or other closed containers upon completing their use. Ensure that these bags and containers are kept closed at all times except when depositing or removing these materials from the container. Use bags and containers of such design so as to contain the vapors of the cleaning solvent. Cotton-tipped swabs used for very small cleaning operations are exempt from this requirement.

- ii. Store fresh and spent cleaning solvents, except semi-aqueous solvent cleaners, used in aerospace cleaning operations in closed containers.
- b. Hand-wipe cleaning. Each owner or operator of a new or existing hand-wipe cleaning operation (excluding cleaning of spray gun equipment performed in accordance with 40 CFR 63.744(c)) subject to 40 CFR 63 Subpart GG shall use cleaning solvents that meet one of the requirements specified in Conditions 7.4.5(b)(i), (b)(ii), and (b)(iii). Cleaning solvent solutions that contain HAP and VOC below the de minimis levels specified in 40 CFR 63.741(f) are exempt from the requirements in Conditions 7.4.5(b)(i), (b)(ii), and (b)(iii). [40 CFR 63.744(b)]
- i. Meet one of the composition requirements in Condition 7.4.5(d);
 - ii. Have a composite vapor pressure of 45 mm Hg (24.1 in. H₂O) or less at 20°C (68°F); or
 - iii. Demonstrate that the volume of hand-wipe solvents used in cleaning operations has been reduced by at least 60% from a baseline adjusted for production. The baseline shall be established as part of an approved alternative plan administered by the State. Demonstrate that the volume of hand-wipe cleaning solvents used in cleaning operations has been reduced by at least 60 percent from a baseline adjusted for production. The baseline shall be calculated using data from 1996 and 1997, or as otherwise agreed upon by the Administrator or delegated State Authority. The baseline shall be approved by the Administrator or delegated State Authority and shall be included as part of the facility's title V or part 70 permit.
- c. Except as provided in 40 CFR 63.741(e), the owner or operator of each facility subject to 40 CFR 63 Subpart GG that produces a waste that contains HAP shall conduct the handling and transfer of the waste to or from containers, tanks, vats, vessels, and piping systems in such a manner that minimizes spills.

- d. Composition Requirements for Approved Cleaning Solvents
 - i. Aqueous Cleaning Solvents. Cleaning solvents in which water is the primary ingredient (80 percent of cleaning solvent solution as applied must be water). Detergents, surfactants, and bioenzyme mixtures and nutrients may be combined with the water along with a variety of additives, such as organic solvents (e.g., high boiling point alcohols), builders, saponifiers, inhibitors, emulsifiers, pH buffers, and antifoaming agents. Aqueous solutions must have a flash point greater than 93° C (200° F) (as reported by the manufacturer) and the solution must be miscible with water.
 - ii. Hydrocarbon-based Cleaning Solvents. Cleaners that are composed of photochemically reactive hydrocarbons and oxygenated hydrocarbons and have a maximum vapor pressure of 7 mm Hg at 20°C (3.75 in. H₂O and 68°F). These cleaners also contain no HAP.

7.4.6 Emission Limitations

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

7.4.7 Testing Requirements

- a. Composition determination. Compliance with the hand-wipe cleaning solvent approved composition list specified in Condition 7.4.5(b)(i) for hand-wipe cleaning solvents shall be demonstrated using data supplied by the manufacturer of the cleaning solvent. The data shall identify all components of the cleaning solvent and shall demonstrate that one of the approved composition definitions is met. [40 CFR 63.750(a)]
- b. Vapor pressure determination. The composite vapor pressure of hand-wipe cleaning solvents used in a cleaning operation subject to this subpart shall be determined as follows: [40 CFR 63.750(b)]
 - i. For single-component hand-wipe cleaning solvents, the vapor pressure shall be determined using MSDS or other manufacturer's

data, standard engineering reference texts, or other equivalent methods.

- ii. The composite vapor pressure of a blended hand-wipe solvent shall be determined by quantifying the amount of each organic compound in the blend using manufacturer's supplied data or a gas chromatographic analysis in accordance with ASTM E 260-91 (incorporated by reference as specified in 40 CFR 63.14) and by calculating the composite vapor pressure of the solvent by summing the partial pressures of each component. The vapor pressure of each component shall be determined using manufacturer's data, standard engineering reference texts, or other equivalent methods. The following equation shall be used to determine the composite vapor pressure:

$$PP_c = \frac{\sum\{[(W_i)(VP_i)/MW_i]/[(W_w/MW_w) + \sum(W_e/MW_e) + \sum(W_i/MW_i)]\}}$$

Where:

W_i = Weight of the "i"th VOC compound, grams.

W_w = Weight of water, grams.

W_e = Weight of non-HAP, nonVOC compound, grams.

MW_i = Molecular weight of the "i"th VOC compound, g/g-mole.

MW_w = Molecular weight of water, g/g-mole.

MW_e = Molecular weight of exempt compound, g/g-mole.

PP_c = VOC composite partial pressure at 20 °C, mm Hg.

VP_i = Vapor pressure of the "i"th VOC compound at 20°C, mm Hg.

7.4.8 Inspection Requirements

None

7.4.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for each affected unit to demonstrate compliance with Conditions 5.5.1, 7.4.3, and 7.4.4, pursuant to Section 39.5(7)(b) of the Act:

- a. The owner or operator of a coating line or group of coating lines shall collect and record all of the following information each day for each coating line and maintain the information at the source for a period of three years: [35 IAC 218.211(b)(3)]
 - i. The name and identification number of each coating as applied on each coating line; and
 - ii. The weight of VOM per volume and the volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each day on each coating line.
- b. The amount (gal/mo and gal/yr) used and recovered and VOM content (lb/gal) of each cleanup solvent used on the stenciling.
- c. Cleaning operation. Each owner or operator of a new or existing cleaning operation subject to this subpart shall record the information specified in Conditions 7.4.9(c)(i) through (c)(iii), as appropriate. [40 CFR 63.752(b)]
 - i. The name, vapor pressure, and documentation showing the organic HAP constituents of each cleaning solvent used for affected cleaning operations at the facility.
 - ii. For each cleaning solvent used in hand-wipe cleaning operations that complies with the composition requirements specified in Condition 7.4.5(b)(i) or for semi-aqueous cleaning solvents used for flush cleaning operations:
 - A. The name of each cleaning solvent used;
 - B. All data and calculations that demonstrate that the cleaning solvent complies with one of the composition requirements; and
 - C. Annual records of the volume of each solvent used, as determined from facility purchase records or usage records.
 - iii. For each cleaning solvent used in hand-wipe cleaning operations that does not comply with the composition requirements in Condition 7.4.5(b)(i), but does comply with the vapor

pressure requirement in Condition

7.4.5(b)(ii):

- A. The name of each cleaning solvent used;
 - B. The composite vapor pressure of each cleaning solvent used;
 - C. All vapor pressure test results, if appropriate, data, and calculations used to determine the composite vapor pressure of each cleaning solvent; and
 - D. The amount (in gallons) of each cleaning solvent used each month at each operation.
- d. The amount (gal/mo and gal/yr) used and VOM content (lb/gal) of each solvent used for solvent wipe cleaning.
 - e. Records of monthly and annual aggregate VOM and HAP emissions from affected emission units shall be maintained, based on the applicable emission factors, with supporting calculations.

7.4.10 Reporting Requirements

- a. The Permittee shall promptly notify the Illinois EPA, Compliance Section, of noncompliance of the affected emission units with the permit requirements, 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.
- b. The owner or operator of a coating line or group of coating lines shall notify the Illinois EPA of any record showing that total VOM emissions from the coating line or group of coating lines exceed 6.8 kg (15 lbs) in any day before the application of capture systems and control devices by sending a copy of such record to the Illinois EPA within 30 days after the exceedance occurs.
- c. Cleaning operation. Each owner or operator of a cleaning operation subject to 40 CFR 63 Subpart GG shall submit the following information: [40 CFR 63.753(b)]

Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:

- i. Any instance where a noncompliant cleaning solvent is used for a non-exempt hand-wipe cleaning operation;
- ii. A list of any new cleaning solvents used for hand-wipe cleaning in the previous 6 months and, as appropriate, their composite vapor pressure or notification that they comply with the composition requirements specified in Condition 7.4.5(b)(i);
- iii. If the operations have been in compliance for the semiannual period, a statement that the cleaning operations have been in compliance with the applicable standards. Sources shall also submit a statement of compliance signed by a responsible company official certifying that the facility is in compliance with all applicable requirements.

7.4.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.4.12 Compliance Procedures

Compliance with the emission limits in Condition 5.5.1 shall be based on the recordkeeping requirements in Condition 7.4.9 and the formulas listed below:

$$\text{VOM Emissions (ton)} = \frac{\sum(\text{usage} \times \text{VOM Content})}{2000} - \frac{\sum(\text{recovered} \times \text{VOM Content})}{2000}.$$

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 March 25, 2000 (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 without applying for or obtaining an amendment to this permit, provided that the changes do not constitute a modification under Title I of the CAA,

emissions will not exceed the emissions allowed under this permit following implementation of the physical or operational change, and 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 [Section 39.5(12)(a) of the Act]. This notice shall:

- a. Describe the physical or operational change;
- b. Identify the schedule for implementing the physical or operational change;
- c. 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;
- d. Provide emission calculations which demonstrate that the physical or operational change will not result in a modification; and
- e. Provide a certification that the physical or operational change will not result in emissions greater than authorized under the Conditions of this permit.

8.5 Testing Procedures

Tests conducted to measure composition of materials, efficiency of pollution control devices, emissions from process or control equipment, or other parameters shall be conducted using standard test methods. Documentation of the test date, conditions, methodologies, calculations, and test results shall be retained pursuant to the recordkeeping procedures of this permit. Reports of any tests conducted as required by this permit or as the result of a request by the Illinois EPA shall be submitted as specified in Condition 8.6.

8.6 Reporting Requirements

8.6.1 Monitoring Reports

A report summarizing required monitoring as specified in the conditions of this permit shall be submitted to the Air Compliance Section of the Illinois EPA every six months as follows [Section 39.5(7)(f) of the Act]:

| <u>Monitoring Period</u> | <u>Report Due Date</u> |
|--------------------------|------------------------|
| January - June | September 1 |

July - December

March 1

All instances of deviations from permit requirements must be clearly identified in such reports. All such reports shall be certified in accordance with Condition 9.9.

8.6.2 Test Notifications

Unless otherwise specified elsewhere in this permit, a written test plan for any test required by this permit shall be submitted to the Illinois EPA for review at least 60 days prior to the testing pursuant to Section 39.5(7)(a) of the Act. The notification shall include at a minimum:

- a. The name and identification of the affected unit(s);
- b. The person(s) who will be performing sampling and analysis and their experience with similar tests;
- c. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating parameters for the source and any control equipment will be determined;
- d. The specific determination of emissions and operation which are intended to be made, including sampling and monitoring locations;
- e. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods;
- f. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification; and
- g. Any proposed use of an alternative test method, with detailed justification.

8.6.3 Test Reports

Unless otherwise specified elsewhere in this permit, the results of any test required by this permit shall be submitted to the Illinois EPA within 60 days of completion of the testing. The test report shall include at a minimum [Section 39.5(7)(e)(i) of the Act]:

- a. The name and identification of the affected unit(s);
- b. The date and time of the sampling or measurements;
- c. The date any analyses were performed;
- d. The name of the company that performed the tests and/or analyses;
- e. The test and analytical methodologies used;
- f. The results of the tests including raw data, and/or analyses including sample calculations;
- g. The operating conditions at the time of the sampling or measurements; and
- h. The name of any relevant observers present including the testing company's representatives, any Illinois EPA or USEPA representatives, and the representatives of the source.

8.6.4 Reporting Addresses

- a. The following addresses should be utilized for the submittal of reports, notifications, and renewals:
 - i. Illinois EPA - Air Compliance Section

Illinois Environmental Protection Agency
Bureau of Air
Compliance Section (MC 40)
P.O. Box 19276
Springfield, Illinois 62794-9276
 - ii. Illinois EPA - Air Regional Field Office

Illinois Environmental Protection Agency
Division of Air Pollution Control
Eisenhower Tower
1701 South First Avenue
Maywood, Illinois 60153
 - iii. Illinois EPA - Air Permit Section (MC 11)

Illinois Environmental Protection Agency
Division of Air Pollution Control
Permit Section
P.O. Box 19506
Springfield, Illinois 62794-9506

iv. USEPA Region 5 - Air Branch

USEPA (AR - 17J)
Air & Radiation Division
77 West Jackson Boulevard
Chicago, Illinois 60604

- b. Unless otherwise specified in the particular provision of this permit, reports shall be sent to the Illinois EPA - Air Compliance Section with a copy sent to the Illinois EPA - Air Regional Field Office.

8.7 Obligation to Comply with Title I Requirements

Any term, condition, or requirement identified in this permit by T1, T1R, or T1N is established or revised pursuant to 35 IAC Part 203 or 40 CFR 52.21 ("Title I provisions") and incorporated into this permit pursuant to both Section 39.5 and Title I provisions. Notwithstanding the expiration date on the first page of this permit, the Title I conditions remain in effect pursuant to Title I provisions until the Illinois EPA deletes or revises them in accordance with Title I procedures.

9.0 STANDARD PERMIT CONDITIONS

9.1 Effect of Permit

9.1.1 The issuance of this permit does not release the Permittee from compliance with State and Federal regulations which are part of the Illinois State Implementation Plan, as well as with other applicable statutes and regulations of the United States or the State of Illinois or applicable ordinances, except as specifically stated in this permit and as allowed by law and rule [Section 39.5(7)(j)(iv) of the Act].

9.1.2 In particular, this permit does not alter or affect the following:

- a. The provisions of Section 303 (emergency powers) of the CAA, including USEPA's authority under that Section;
- b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
- c. The applicable requirements of the acid rain program consistent with Section 408(a) of the CAA; and
- d. The ability of USEPA to obtain information from a source pursuant to Section 114 (inspections, monitoring, and entry) of the CAA.

9.1.3 Notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

9.2 General Obligations of Permittee

9.2.1 Duty to Comply

The Permittee must comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the CAA and the Act, and is grounds for any or all of the following: enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application [Section 39.5(7)(o)(i) of the Act].

The Permittee shall meet applicable requirements that become effective during the permit term in a timely manner

unless an alternate schedule for compliance with the applicable requirement is established.

9.2.2 Duty to Maintain Equipment

The Permittee shall maintain all equipment covered under this permit in such a manner that the performance or operation of such equipment shall not cause a violation of applicable requirements.

9.2.3 Duty to Cease Operation

No person shall cause, threaten or allow the continued operation of any emission unit during malfunction or breakdown of the emission unit or related air pollution control equipment if such operation would cause a violation of an applicable emission standard, regulatory requirement, ambient air quality standard or permit limitation unless such malfunction or breakdown is allowed by a permit condition [Section 39.5(6)(c) of the Act].

9.2.4 Disposal Operations

The source shall be operated in such a manner that the disposal of air contaminants collected by the equipment operations, or activities shall not cause a violation of the Act or regulations promulgated thereunder.

9.2.5 Duty to Pay Fees

The Permittee must pay fees to the Illinois EPA consistent with the fee schedule approved pursuant to Section 39.5(18) of the Act, and submit any information relevant thereto [Section 39.5(7)(o)(vi) of the Act]. The check should be payable to "Treasurer, State of Illinois" and sent to: Fiscal Services Section, Illinois Environmental Protection Agency, P.O. Box 19276, Springfield, Illinois 62794-9276.

9.3 Obligation to Allow Illinois EPA Surveillance

Upon presentation of proper credentials and other documents, the Permittee shall allow the Illinois EPA, or an authorized representative to perform the following [Section 39.5(7)(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
 - ii. As otherwise authorized by the CAA, or the Act.
- e. Obtain and remove samples of any discharge or emission of pollutants; and
- f. Enter and utilize any photographic, recording, testing, monitoring, or other equipment for the purposes of preserving, testing, monitoring, or recording any activity, discharge or emission at the source.

9.4 Obligation to Comply With Other Requirements

The issuance of this permit does not release the Permittee from applicable State and Federal laws and regulations, and applicable local ordinances addressing subjects other than air pollution control.

9.5 Liability

9.5.1 Title

This permit shall not be considered as in any manner affecting the title of the premises upon which the permitted source is located.

9.5.2 Liability of Permittee

This permit does not release the Permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the sources.

9.5.3 Structural Stability

This permit does not take into consideration or attest to the structural stability of any unit or part of the source.

9.5.4 Illinois EPA Liability

This permit in no manner implies or suggests that the Illinois EPA (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the source.

9.5.5 Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege [Section 39.5(7)(o)(iv) of the Act].

9.6 Recordkeeping

9.6.1 Control Equipment Maintenance Records

A maintenance record shall be kept on the premises for each item of air pollution control equipment. As a minimum, this record shall show the dates of performance and nature of preventative maintenance activities.

9.6.2 Records of Changes in Operation

A record shall be kept describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under this permit, and the emissions resulting from those changes [Section 39.5(12)(b)(iv) of the Act].

9.6.3 Retention of Records

- a. Records of all monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit [Section 39.5(7)(e)(ii) of the Act].
- b. Other records required by this permit shall be retained for a period of at least 5 years from the date of entry unless a longer period is specified by a particular permit provision.

9.7 Annual Emissions Report

The Permittee shall submit an annual emissions report to the Illinois EPA, Compliance Section no later than May 1 of the following year, as required by 35 IAC Part 254.

9.8 Requirements for Compliance Certification

Pursuant to Section 39.5(7)(p)(v) of the Act, the Permittee shall submit annual compliance certifications. The compliance certifications shall be submitted no later than May 1 or more frequently as specified in the applicable requirements or by permit condition. The compliance certifications shall be submitted to the Air Compliance Section, Air Regional Field Office, and USEPA Region 5 - Air Branch. The addresses for the submittal of the compliance certifications are provided in Condition 8.6.4 of this permit.

- a. The certification shall include the identification of each term or condition of this permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, both currently and over the reporting period consistent with the conditions of this permit.
- b. All compliance certifications shall be submitted to USEPA Region 5 in Chicago as well as to the Illinois EPA.
- c. All compliance reports required to be submitted shall include a certification in accordance with Condition 9.9.

9.9 Certification

Any document (including reports) required to be submitted by this permit shall contain a certification by a responsible official of the Permittee that meets the requirements of Section 39.5(5) of the Act [Section 39.5(7)(p)(i) of the Act]. An example Certification by a Responsible Official is included as an attachment to this permit.

9.10 Defense to Enforcement Actions

9.10.1 Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit [Section 39.5(7)(o)(ii) of the Act].

9.10.2 Emergency Provision

- a. An emergency shall be an affirmative defense to an action brought for noncompliance with the technology-based emission limitations under this permit if the following conditions are met through properly signed, contemporaneous operating logs, or other relevant evidence:
 - i. An emergency occurred as provided in Section 39.5(7)(k) of the Act and the Permittee can identify the cause(s) of the emergency. Normally, an act of God such as lightning or flood is considered an emergency;
 - ii. The permitted source was at the time being properly operated;
 - iii. The Permittee submitted notice of the emergency to the Illinois EPA within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken; and
 - iv. During the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission limitations, standards, or regulations in this permit.
- b. This provision is in addition to any emergency or upset provision contained in any applicable requirement. This provision does not relieve a Permittee of any reporting obligations under existing federal or state laws or regulations.

9.11 Permanent Shutdown

This permit only covers emission units and control equipment while physically present at the indicated source location(s). Unless this permit specifically provides for equipment relocation, this permit is void for the operation or activity of any item of equipment on the date it is removed from the permitted location(s) or permanently shut down. This permit expires if all equipment is removed from the permitted location(s), notwithstanding the expiration date specified on this permit.

9.12 Reopening and Reissuing Permit for Cause

9.12.1 Permit Actions

This permit may be modified, reopened, and reissued, for cause pursuant to Section 39.5(15) of the Act. The filing of a request by the Permittee for a permit modification, revocation, and reissuance, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition [Section 39.5(7)(o)(iii) of the Act].

9.12.2 Reopening and Revision

This permit must be reopened and revised if any of the following occur [Section 39.5(15)(a) of the Act]:

- a. Additional requirements become applicable to the equipment covered by this permit and three or more years remain before expiration of this permit;
- b. Additional requirements become applicable to an affected source for acid deposition under the acid rain program;
- c. The Illinois EPA or USEPA determines that this permit contains a material mistake or inaccurate statement when establishing the emission standards or limitations, or other terms or conditions of this permit; and
- d. The Illinois EPA or USEPA determines that this permit must be revised to ensure compliance with the applicable requirements of the Act.

9.12.3 Inaccurate Application

The Illinois EPA has issued this permit based upon the information submitted by the Permittee in the permit application. Any misinformation, false statement or misrepresentation in the application shall be grounds for revocation under Section 39.5(15)(b) of the Act.

9.12.4 Duty to Provide Information

The Permittee shall furnish to the Illinois EPA, within a reasonable time specified by the Illinois EPA any information that the Illinois EPA may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to the Illinois EPA copies of records required to be kept by this permit, or for information

claimed to be confidential, the Permittee may furnish such records directly to USEPA along with a claim of confidentiality [Section 39.5(7)(o)(v) of the Act].

9.13 Severability Clause

The provisions of this permit are severable, and should any one or more be determined to be illegal or unenforceable, the validity of the other provisions shall not be affected. The rights and obligations of the Permittee shall be construed and enforced as if this permit did not contain the particular provisions held to be invalid and the applicable requirements underlying these provisions shall remain in force [Section 39.5(7)(i) of the Act].

9.14 Permit Expiration and Renewal

The right to operate terminates on the expiration date unless the Permittee has submitted a timely and complete renewal application. For a renewal to be timely it must be submitted no later than 9 and no sooner than 12 months prior to expiration. The equipment may continue to operate during the renewal period until final action is taken by the Illinois EPA, in accordance with the original permit conditions [Section 39.5(5)(l), (n), and (o) of the Act].

10.0 ATTACHMENTS

10.1 Attachment 1 Example Certification by a Responsible Official

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____

Name: _____

Official Title: _____

Telephone No.: _____

Date Signed: _____

YY:psj

I. INTRODUCTION

This source has applied for a Clean Air Act Permit Program (CAAPP) operating permit for its existing operation. The CAAPP is the program established in Illinois for the operating permits for significant stationary sources required by the federal Clean Air Act, as amended in 1990. The conditions in a CAAPP permit are enforceable by both the Illinois Environmental Protection Agency (Illinois EPA) and the USEPA.

McCook Metals L.L.C. is located at 4900 First Avenue, McCook, Cook County. Primary operations at the plant consist of casting aluminum alloy ingot, rolling the ingot into aluminum sheet or plate, heat treating the product to achieve desired physical properties, and various finishing operation.

II. EMISSION UNITS

Significant emission units at this source are as follows:

| Emission Unit | Description | Date Constructed | Emission Control Equipment |
|--------------------------------|---------------------------|------------------|----------------------------|
| Casting Process | MF8 | pre-1972 | None |
| | HF8 | pre-1972 | None |
| | MF24-26 | 11/87,1/89,4/85 | None |
| | HF24-26 | 11/87,1/89,4/85 | None |
| | MF27-30 | pre-1972 | None |
| | HF27-30 | pre-1972 | None |
| | BMF1 | 4/95 | None |
| | EIF1 | 3/88 | No. 3 baghouse |
| | BMF3 | 9/95 | None |
| | EIF3 | 9/95 | No. 3 baghouse |
| | dross pad | pre-1972 | dross pad baghouse |
| Rolling Process | 120" Hot Mill | pre-1972 | None |
| | 96" Hot Mill | pre-1972 | None |
| | 80" Hot Mill | pre-1972 | None |
| | Cold Mill No. 1 | pre-1972 | None |
| | Cold Mill No. 7 | pre-1972 | None |
| | 145" Plate Mill | 6/54 | None |
| Fuel Combustion Emission Units | Soaking Furnaces 1-6 | pre-1972 | None |
| | Soaking Furnaces 7-8 | pre-1972 | None |
| | Soaking Furnaces 9-11 | pre-1972 | None |
| | Reheat Furnace No. 3 | pre-1972 | None |
| | Homogenizing Furnaces 4-5 | pre-1972 | None |
| | Soaking Furnaces 1-2 | pre-1972 | None |
| | Annealing Furnaces 0-8 | pre-1972 | None |
| | Annealing Furnaces 9-22 | pre-1972 | None |
| | Annealing Furnaces 23-28 | pre-1972 | None |

| | | | |
|-------------------------|--------------------------------------|-------------------|--------------|
| | 72" Continuous Heat Treat Furnace | pre-1972 | None |
| | 2 Package Boilers | 1/92 | None |
| Finishing Operations | Solvent Wipe Cleaning Stenciling | mid-1960s 1946 | None None |

III. EMISSIONS

This source is required to have a CAAPP permit since it is a major source of emissions.

For purposes of fees, the source is allowed the following emissions:

| Pollutant | Tons/Year |
|------------------------------------|-----------|
| Volatile Organic Material (VOM) | 734.13 |
| Sulfur Dioxide (SO ₂) | 3.78 |
| Particulate Matter (PM) | 1002.94 |
| Nitrogen Oxides (NO _x) | 833.64 |
| HAP, not included in VOM or PM | 30.24 |
| TOTAL | 2604.73 |

This permit is a combined Title I/CAAPP permit that may contain terms and conditions which address the applicability, and compliance if determined applicable, of Title I of the Clean Air Act and regulations promulgated thereunder, including 40 CFR 52.21 - federal Prevention of Significant Deterioration (PSD) and 35 IAC Part 203 - Major Stationary Sources Construction and Modification. Any such terms and conditions are identified within the permit by T1, T1R, or T1N. The source has requested that the Illinois EPA establish or revise such conditions in a Title I permit, consistent with the information provided in the CAAPP application. Any conditions established in a construction permit pursuant to Title I and not revised or deleted in this permit, remain in effect pursuant to Title I provisions until such time that the Illinois EPA revises or deletes them.

IV. APPLICABLE EMISSION STANDARDS

All emission sources in Illinois must comply with the Illinois Pollution Control Board's emission standards. The Board's emission standards represent the basic requirements for sources in Illinois.

All emission sources in Illinois must comply with the federal New Source Performance Standards (NSPS). The Illinois EPA is administering NSPS in Illinois on behalf of the United States EPA under a delegation agreement.

All emission sources in Illinois must comply with the federal National Emission Standards for Hazardous Air Pollutants (NESHAP). The Illinois EPA is administering NESHAP in Illinois on behalf of the United States EPA under a delegation agreement.

V. PROPOSED PERMIT

CAAPP

A CAAPP permit contains all conditions that apply to a source and a listing of the applicable state and federal air pollution control regulations that are the origin of the conditions. The permit also contains emission limits and appropriate compliance procedures. The appropriate compliance procedures may include inspections, work

practices, monitoring, record keeping, and reporting to show compliance with these requirements. The Permittee must carry out these procedures on an on-going basis.

Title I

A combined Title I/CAAPP permit contains terms and conditions established by the Illinois EPA pursuant to authority found in Title I provisions, e.g., 40 CFR 52.21 - federal Prevention of Significant Deterioration (PSD) and 35 IAC Part 203 - Major Stationary Sources Construction and Modification. Notwithstanding the expiration date on the first page of the permit, the Title I conditions remain in effect pursuant to Title I provisions until the Illinois EPA deletes or revises them in accordance with Title I procedures.

Because this source is located in the Chicago ozone non-attainment area and emits volatile organic material (VOM), the permit includes conditions to implement the Emissions Reduction Market System (ERMS). The ERMS is a market-based program designed to reduce VOM emissions from stationary sources to contribute to reasonable further progress toward attainment, as further described in Section 6.0 of the permit. The permit contains the Illinois EPA's determination of the source's baseline emissions and allotment of trading units under the ERMS, and identifies units not subject to further reductions. The permit also provides that the source must begin to operate under the ERMS following the initial issuance of allotment trading units to the source. This will occur for the 2000 seasonal allotment period (rather than the 1999 season as originally intended by the ERMS) due in part to delays in the initial issuance of CAAPP Permits. These delays, which have occurred nationally, are attributable to a variety of causes including the unforeseen complexity of processing these permits and gaps in national guidance. Even though operation under the ERMS will not officially start until the 2000 seasonal allotment period, detailed recordkeeping and reporting of seasonal emissions was required beginning in 1998, which will document emissions reductions achieved by sources in 1999 in preparation for the ERMS.

VI. REQUEST FOR COMMENTS

It is the Illinois EPA's preliminary determination that this source's permit application meets the standards for issuance of a CAAPP permit. The Illinois EPA is therefore proposing to issue a CAAPP permit, subject to the conditions proposed in the draft permit.

Comments are requested on this proposed action by the Illinois EPA and the proposed conditions on the draft permit. If substantial public interest is shown in this matter, the Illinois EPA will consider holding a public hearing in accordance with 35 Ill. Adm. Code Part 164.

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