

217/785-1705

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT -- NSPS and NESHAP SOURCE --  
RENEWAL

PERMITTEE

Arnold Magnetic Technologies Corporation  
Attn: Jessica A. Wojick, CHHM  
770 Linden Avenue  
Rochester, New York 14625

Application No.: 73090130

I. D. No.: 111812AAB

Applicant's Designation:

Date Received: July 15, 2011

Subject: Magnetic Alloys Manufacturing

Date Issued:

Expiration Date:

Location: 300 North West Street, Marengo, McHenry County, 60152

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of the following equipment pursuant to the above-referenced application:

Rolled Product Department

Five (5) Rolling Mills;  
Strip Treatment Equipment comprised of:  
    Phosphoric Acid Bath;  
    Four (4) Natural Gas-fired Annealing Furnaces;  
Three (3) ConveyORIZED Cold Degreasers, and  
Product Assembly and Equipment Clean-up Operations

Sintered Alnico Department

Jaw Crusher, Ball Mill, Pulverizers, Powder Mixer, Scale, Separator, and  
    Screener all controlled by Dust Collector;  
Three (3) Electric Dewaxing Furnaces with Natural Gas-fired Curtains;  
One (1) Natural Gas-fired Sintering Furnace;  
Ten (10) Sintering Presses;

Cast Alnico Department

Four (4) Induction Furnaces;  
One (1) Natural Gas-fired Die Casting Furnace;  
Six (6) Isocure Sand Core Making Machines Controlled by an Amine Scrubber;  
Two (2) Oil Sand Core Making Machines with One (1) Natural Gas-fired Bake  
    Oven;  
One (1) Shell Core Machine;  
Pouring/Casting Operations;  
Shakeout Operations Controlled by Baghouse;  
One (1) Paint Booth;  
One (1) Natural Gas-fired Heat Treating Furnace;

Akromax Department

One (1) Induction Furnace;  
Two (2) Ceramic Core Mixers;  
Pouring/Casting;  
Shakeout Operations Controlled by Baghouse;  
One (1) Natural Gas-fired Heat Treating Furnace;

One (1) 100 hp Natural Gas-powered Emergency Generator;  
One (1) 220 hp Diesel-powered Fire Pump Engine; and  
One (1) 217 hp Diesel-powered Emergency Generator,

pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued:
  - i. To limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/year for Volatile Organic Material (VOM) and Particulate Matter less than 10 microns (PM<sub>10</sub>), 10 tons/year for any single HAP and 25 tons/year of any combination of such HAPs). As a result, the source is excluded from the requirements to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit are described in Attachment A.
  - ii. To limit emissions of VOM from the source during the seasonal allotment period from May 1 through September 30 of each year to less than 15 tons. This limitation is established at the request of the source to exempt it from the requirements of 35 Ill. Adm. Code Part 205, Emissions Reduction Market System (ERMS), pursuant to 35 Ill. Adm. Code 205.205, except reporting requirements of 35 Ill. Adm. Code 205.300 which are described in Attachment B.
  - iii. To establish federally enforceable production and operating limitations, which restrict the potential to emit for VOM to less than 25 tons per year so that the emission units not regulated by 35 Ill. Adm. Code 218 Subpart E at this source are not subject to the requirements of 35 Ill. Adm. Code Part 218 Subpart TT (Other Emission Units).
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permits issued for this location.
- 2a. The 217 hp diesel-powered emergency generator is subject to the New Source Performance Standards (NSPS) for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60 Subparts A and IIII. The Illinois EPA is administering these standards in Illinois on behalf of the United States EPA under a delegation agreement.

- b. Pursuant to 40 CFR 60.4205(b), owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in 40 CFR 60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.
  - c. Pursuant to 40 CFR 60.4202(a)(2), stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and greater than or equal to 37 KW (50 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines, to the emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.
- 3a. Pursuant to 40 CFR 89.112(a), exhaust emission from nonroad engines to which 40 CFR 89 Subpart B is applicable shall not exceed the applicable exhaust emission standards contained in Table 1, as follows:

Table 1 Emission Standards (g/kW-hour)

<u>Rated Power (kW)</u>	<u>Tier</u>	<u>Model Year<sup>1</sup></u>	<u>NO<sub>x</sub></u>	<u>HC</u>	<u>NMHC + NO<sub>x</sub></u>	<u>CO</u>	<u>PM</u>
130≤kW<225	Tier 1	1996	9.2	1.3	--	11.4	0.54
	Tier 2	2003	--	--	6.6	3.5	0.20
	Tier 3	2006	--	--	4.0	3.5	

<sup>1</sup> The model years listed indicate the model years for which the specified tier of standards take effect.

- b. Pursuant to 40 CFR 89.112(d), in lieu of the NO<sub>x</sub> standards, NMHC + NO<sub>x</sub> standards, and PM standards specified in 40 CFR 89.112(a), manufacturers may elect to include engine families in the averaging, banking, and trading program, the provisions of which are specified in 40 CFR 89 Subpart C. The manufacturer must set a family emission limit (FEL) not to exceed the levels contained in Table 2. The FEL established by the manufacturer serves as the standard for that engine family. Table 2 follows:

Table 2 – Upper Limit for Family Emission Limits (g/kW-hour)

<u>Rated Power (kW)</u>	<u>Tier</u>	<u>Model Year<sup>1</sup></u>	<u>NO<sub>x</sub> FEL</u>	<u>NMHC + NO<sub>x</sub> FEL</u>	<u>PM FEL</u>
130≤kW<225	Tier 1	1996	14.6	--	--
	Tier 2	2003	--	10.5	0.54
	Tier 3	2006		6.6	

<sup>1</sup> The model years listed indicate the model years for which the specified tier of standards take effect.

- c. Pursuant to 40 CFR 89.112(e), naturally aspirated nonroad engines to which 40 CFR 89 Subpart B is applicable shall not discharge crankcase emissions into the ambient atmosphere, unless such crankcase emissions are permanently routed into the exhaust and included in all exhaust emission measurements. This provision applies to all Tier 2 engines and later models. This provision does not apply to engines using turbochargers, pumps, blowers, or superchargers for air induction.
- d. Pursuant to 40 CFR 89.113(a), exhaust opacity from compression-ignition nonroad engines for which 40 CFR 89 Subpart B is applicable must not exceed:
  - i. 20 percent during the acceleration mode;
  - ii. 15 percent during the lugging mode; and
  - iii. 50 percent during the peaks in either the acceleration or lugging modes.
- 4a. The 100 hp natural gas-powered emergency generator and the 220 hp diesel-powered fire pump are subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63 Subparts A and ZZZZ. The Illinois EPA is administering the NESHAP in Illinois on behalf of the United States EPA under a delegation agreement. Pursuant to 40 CFR 63.6590(a)(1)(iii), 40 CFR 63 Subpart ZZZZ applies to each affected source. An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand. For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced constructed or reconstructed before June 12, 2006.
- b. Pursuant to 40 CFR 63.6595(a)(1), if you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than October 19, 2013.
- c. Pursuant to 40 CFR 63.6603(a), if you own or operate an existing stationary RICE located at an area source of HAP emissions, you must

comply with the requirements in Table 2d to 40 CFR 63 Subpart ZZZZ (see also Attachment C) and the operating limitations in Table 2b to 40 CFR 63 Subpart ZZZZ which apply to you.

- 5a. Pursuant to 35 Ill. Adm. Code 212.123(a), no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 Ill. Adm. Code 212.122.
- b. Pursuant to 35 Ill. Adm. Code 212.123(b), the emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such opaque emissions permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1000 ft) radius from the center point of any other such emission unit owned or operated by such person, and provided further that such opaque emissions permitted from each such emission unit shall be limited to 3 times in any 24 hour period.
- c. Pursuant to 35 Ill. Adm. Code 212.321(a), no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in 35 Ill. Adm. Code 212.321(c).
- 6a. Pursuant to 35 Ill. Adm. Code 214.122(b)(2), no person shall cause or allow the emission of sulfur dioxide into the atmosphere in any one hour period from any new fuel combustion source with actual heat input smaller than, or equal to, 73.2 MW (250 mmBtu/hr), burning liquid fuel exclusively to exceed 0.46 kg of sulfur dioxide per MW-hour of actual heat input when distillate fuel oil is burned (0.3 lbs/mmBtu).
- b. Pursuant to 35 Ill. Adm. Code 214.301, no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to exceed 2000 ppm.
- c. Pursuant to 35 Ill. Adm. Code 214.304, the emissions from the burning of fuel at process emission sources located in the Chicago or St. Louis (Illinois) major metropolitan areas shall comply with applicable 35 Ill. Adm. Code 214 Subparts B through F (i.e., 35 Ill. Adm. Code 214.122(b)).
7. Pursuant to 35 Ill. Adm. Code 218.301, no person shall cause or allow the discharge of more than 3.6 kg/hour (8 lbs/hour) of organic material into the atmosphere from any emission unit, except as provided in 35 Ill. Adm. Code 218.302, 218.303, or 218.304 and the following exception: If no odor nuisance exists the limitation of 35 Ill. Adm. Code 218 Subpart G shall apply only to photochemically reactive material.

8. This permit is issued based on the 217 hp diesel-powered generator not being subject to the requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63 Subpart ZZZZ. Pursuant to 40 CFR 63.6590(c)(1), a new or reconstructed stationary RICE located at an area source must meet the requirements of 40 CFR Part 63 by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR 60 Subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under 40 CFR Part 63.
9. Pursuant to 40 CFR 89.113(c)(3), constant-speed engines are exempt from the requirements of 40 CFR 89.113.
- 10a. This permit is issued based on the three (3) conveyORIZED cold degreasers not being subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Halogenated Solvent Cleaning, 40 CFR 63 Subpart T because the three (3) conveyORIZED cold degreasers does not use any solvent containing methylene chloride (CAS No. 75-09-2), perchloroethylene (CAS No. 127-18-4), trichloroethylene (CAS No. 79-01-6), 1,1,1-trichloroethane (CAS No. 71-55-6), carbon tetrachloride (CAS No. 56-23-5) or chloroform (CAS No. 67-66-3), or any combination of these halogenated HAP solvents, in a total concentration greater than 5 percent by weight, as a cleaning and/or drying agent.
  - b. This permit is issued based on the metal melting operations performed at the source not being subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Area Source Standards for Iron and Steel Foundries Area Sources, 40 CFR 63 Subpart ZZZZZ. Pursuant to 40 CFR 63.10906, iron and steel foundry means a facility or portion of a facility that melts scrap, ingot, and/or other forms of iron and/or steel and pours the resulting molten metal into molds to produce final or near final shape products for introduction into commerce. Research and development facilities, operations that only produce non-commercial castings, and operations associated with nonferrous metal production are not included in this definition.
  - c. This permit is issued based on the paint booth not being subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Nine Metal Fabrication and Finishing Source Categories, 40 CFR 63 Subpart XXXXXX because paints which contain materials that contain cadmium, chromium, lead, or nickel in amounts greater than or equal to 0.1 percent by weight (of the metal), and materials that contain manganese in amounts greater than or equal to 1.0 percent by weight (of the metal), as shown in formulation data provided by the manufacturer or supplier, such as the Material Safety Data Sheet for the material are not used in the paint booth.
  - d. This permit is issued based on the aluminum, copper, and other nonferrous foundries not being subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP): Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries,

40 CFR 63 Subpart ZZZZZZ because this source does not meet the criteria specified in 40 CFR 63.11544(a)(1) through (4).

- 11a. This permit is issued based on the Equipment Clean-up Operations associated with the Product Assembly Operations at this source not being subject to 35 Ill. Adm. Code 218.187 (Other Industrial Solvent Cleaning Operations). Pursuant to 35 Ill. Adm. Code 218.187(a)(1), on and after January 1, 2012 except as provided in 35 Ill. Adm. Code 218.187(a)(2), the requirements of 35 Ill. Adm. Code 218.187 shall apply to all cleaning operations that use organic materials at sources that emit a total of 226.8 kg per calendar month (500 lbs per calendar month) or more of VOM, in the absence of air pollution control equipment, from cleaning operations at the source other than cleaning operations identified in 35 Ill. Adm. Code 218.187(a)(2). For purposes of 35 Ill. Adm. Code 218.187, "cleaning operation" means the process of cleaning products, product components, tools, equipment, or general work areas during production, repair, maintenance, or servicing, including but not limited to spray gun cleaning, spray booth cleaning, large and small manufactured components cleaning, parts cleaning, equipment cleaning, line cleaning, floor cleaning, and tank cleaning, at sources with emission units.
- b. Pursuant to 35 Ill. Adm. Code 218.187(a)(2)(A)(i), notwithstanding 35 Ill. Adm. Code 218.187(a)(1), cleaning operations subject to the limitations in 35 Ill. Adm. Code 218.182, 218.183, or 218.184 shall be exempt from the requirements of 35 Ill. Adm. Code 218.187(b), (c), (d), (e), (f), and (g).
- c. Pursuant to 35 Ill. Adm. Code 218.187(a)(2)(B)(x), notwithstanding 35 Ill. Adm. Code 218.187(a)(1), cleaning operations within the miscellaneous metal parts coating categories shall be exempt from the requirements of subsections (b), (c), (d), (e), (f), and (g) of 35 Ill. Adm. Code 218.187.
- d. Pursuant to 35 Ill. Adm. Code 218.208(a), the limitations of 35 Ill. Adm. Code 218 Subpart F shall not apply to coating lines within a source, that otherwise would be subject to the same subsection of 35 Ill. Adm. Code 218.204 (because they belong to the same coating category, e.g., can 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, can coating lines within a source would not be subject to the limitations of 35 Ill. Adm. Code 218.204(b) if the combined actual emissions of VOM from the can coating lines never exceed 6.8 kg/day (15 lbs/day) before the application of capture systems and control devices.) Prior to May 1, 2012, 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. On and after May 1, 2012, VOM emissions from heavy off-highway vehicle products coating lines shall be combined with VOM emissions from miscellaneous metal parts and products coating lines and plastic 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 Ill. Adm. Code 218.105(a) and the recordkeeping and reporting requirements specified in 35 Ill. Adm. Code 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 Ill. Adm. Code 218.204. Once a category of coating lines at a source is subject to the limitations in 35 Ill. Adm. Code 218.204 the coating lines are always subject to the limitations in 35 Ill. Adm. Code 218.204.

- e. This permit is issued based on emission units not regulated by 35 Ill. Adm. Code 218 Subpart E at this source not being subject to the control requirements of 35 Ill. Adm. Code 218 Subpart TT. Pursuant to 35 Ill. Adm. Code 218.980(b)(1)(A), a source is subject to 35 Ill. Adm. Code 218 Subpart TT if it has the potential to emit 22.7 Mg (25 tons) or more of VOM per year, in aggregate, from emission units, other than furnaces at glass container manufacturing sources and VOM leaks from components, that are not regulated by 35 Ill. Adm. Code Subparts B, E, F, H, Q, R, S, T, (excluding 35 Ill. Adm. Code 218.486), V, X, Y, Z, or BB.
12. Pursuant to 40 CFR 60.11(d), at all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Illinois EPA or USEPA which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
- 13a. Pursuant to 40 CFR 60.4207(a), beginning October 1, 2007, owners and operators of stationary CI ICE subject to 40 CFR 60 Subpart IIII that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).
- b. Pursuant to 40 CFR 60.4207(b), beginning October 1, 2010, owners and operators of stationary CI ICE subject to 40 CFR 60 Subpart IIII with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.
  - c. Pursuant to 40 CFR 60.4011(e), emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. Anyone may petition the Illinois EPA or USEPA for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not

required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. For owners and operators of emergency engines meeting standards under 40 CFR 60.4205 but not 40 CFR 60.4204, any operation other than emergency operation, and maintenance and testing as permitted in 40 CFR 60.4011, is prohibited.

- d. Pursuant to 40 CFR 4211(a), if you are an owner or operator and must comply with the emission standards specified in 40 CFR 60 Subpart IIII, you must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. You must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.
- e. Pursuant to 40 CFR 60.4211(c), if you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in 40 CFR 60.4204(b) or 40 CFR 60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to 40 CFR 60 Subpart IIII and must comply with the emission standards specified in 40 CFR 60.4205(c), you must comply by purchasing an engine certified to the emission standards in 40 CFR 60.4204(b), or 40 CFR 60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's specifications.
- f. Pursuant to 40 CFR 60.4211(c), if you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in 40 CFR 60.4204(b) or 40 CFR 60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to 40 CFR 60 Subpart IIII and must comply with the emission standards specified in 40 CFR 60.4205(c), you must comply by purchasing an engine certified to the emission standards in 40 CFR 60.4204(b), or 40 CFR 60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's specifications.
- 14a. Pursuant to 40 CFR 63.6605(a), you must be in compliance with the emission limitations and operating limitations in 40 CFR 63 Subpart ZZZZ that apply to you at all times.
- b. Pursuant to 40 CFR 63.6605(b), at all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing

emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Illinois EPA or USEPA which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

- c. Pursuant to 40 CFR 63.6625(e)(3), if you own or operate an existing emergency or black start stationary RICE located at an area source of HAP emissions you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
- d. Pursuant to 40 CFR 63.6625(h), if you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to 40 CFR 63 Subpart ZZZZ apply.
- e. Pursuant to 40 CFR 63.6640(a), you must demonstrate continuous compliance with each emission limitation and operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to 40 CFR 63 Subpart ZZZZ that apply to you according to methods specified in Table 6 to 40 CFR 63 Subpart ZZZZ (see also Attachment D).
- f. Pursuant to 40 CFR 63.6640(f)(1), if you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed on or after June 12, 2006, or an existing emergency stationary RICE located at an area source of HAP emissions, you must operate the emergency stationary RICE according to the requirements in 40 CFR 63.6640 (f)(1)(i) through (iii) . Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR 63.6640(f)(1)(i) through (iii), is prohibited. If you do not operate the engine according to the requirements in 40 CFR 63.6640(f)(1)(i) through (iii), the engine will not be considered an emergency engine under 40 CFR 63 Subpart ZZZZ and will need to meet all requirements for non-emergency engines.
  - i. There is no time limit on the use of emergency stationary RICE in emergency situations.

- ii. You may operate your emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the Illinois EPA or USEPA for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.
  - iii. You may operate your emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that owners and operators may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by 40 CFR 63.6640(f)(1)(iii), as long as the power provided by the financial arrangement is limited to emergency power.
- 15a. Pursuant to 40 CFR 80.510(a), beginning June 1, 2007, except as otherwise specifically provided in 40 CFR 80 Subpart I, all NRLM diesel fuel is subject to the following per-gallon standards:
- i. Sulfur content: 500 parts per million (ppm) maximum.
  - ii. Cetane index or aromatic content, as follows:
    - A. A minimum cetane index of 40; or
    - B. A maximum aromatic content of 35 volume percent.

- b. Pursuant to 40 CFR 80.510(b), beginning June 1, 2010, except as otherwise specifically provided in 40 CFR 80 Subpart I, all NR and LM diesel fuel is subject to the following per-gallon standards:
  - i. Sulfur content 15 ppm maximum for NR diesel fuel.
  - ii. Cetane index or aromatic content, as follows:
    - A. A minimum cetane index of 40; or
    - B. A maximum aromatic content of 35 volume percent.
- 16a. Pursuant to 35 Ill. Adm. Code 218.182(a), no person shall operate a cold cleaning degreaser unless:
  - i. Waste solvent is stored in covered containers only and not disposed of in such a manner that more than 20% of the waste solvent (by weight) is allowed to evaporate into the atmosphere;
  - ii. The cover of the degreaser is closed when parts are not being handled; and
  - iii. Parts are drained until dripping ceases.
- b. Pursuant to 35 Ill. Adm. Code 218.182(b), no person shall operate a cold cleaning degreaser unless:
  - i. The degreaser is equipped with a cover which is closed whenever parts are not being handled in the cleaner. The cover shall be designed to be easily operated with one hand or with the mechanical assistance of springs, counter-weights or a powered system if:
    - A. The solvent vapor pressure is greater than 2 kPa (15 mmHg or 0.3 psi) measured at 38°C (100°F);
    - B. The solvent is agitated; or
    - C. The solvent is heated above ambient room temperature.
  - ii. The degreaser is equipped with a device for draining cleaned parts. The drainage device shall be constructed so that parts are enclosed under the cover while draining unless:
    - A. The solvent vapor pressure is less than 4.3 kPa (32 mmHg or 0.6 psi) measured at 38°C (100°F); or
    - B. An internal drainage device cannot be fitted into the cleaning system, in which case the drainage device may be external.

- iii. The degreaser is equipped with one of the following control devices if the vapor pressure of the solvent is greater than 4.3 kPa (32 mmHg or 0.6 psi) measured at 38°C (100°F) or if the solvent is heated above 50°C (120°F) or its boiling point:
    - A. A freeboard height of 7/10 of the inside width of the tank or 91 cm (36 in), whichever is less; or
    - B. Any other equipment or system of equivalent emission control as approved by the Illinois EPA and further processed consistent with 35 Ill. Adm. Code 218.108. Such a system may include a water cover, refrigerated chiller or carbon adsorber.
  - iv. A permanent conspicuous label summarizing the operating procedure is affixed to the degreaser; and
  - v. If a solvent spray is used, the degreaser is equipped with a solid fluid stream spray, rather than a fine, atomized or shower spray.
- c. Pursuant to 35 Ill. Adm. Code 218.182(c) (3) (B), on and after May 30, 2007 no person shall operate a cold cleaning degreaser with a solvent vapor pressure which exceeds 1.0 mmHg (0.019 psi) measured at 20° C (68° F), unless the person is in compliance with the control requirements of 35 Ill. Adm. Code 218.182(c) (4) or is exempt under 35 Ill. Adm. Code 218.182(f) or (g).
- d. Pursuant to 35 Ill. Adm. Code 218.184(a), no person shall operate a conveyORIZED degreaser unless:
- i. Exhaust ventilation exceeding 20 cubic meters per minute per square meter (65 cubic feet per minute per square foot) of area of loading and unloading opening is not used, unless necessary to meet the requirements of the Occupational Safety and Health Act (29 U.S.C. Section 651 et seq.);
  - ii. Solvent carryout emissions are minimized by:
    - A. Racking parts for best drainage; and
    - B. Maintaining the vertical conveyor speed at less than 3.3 m/min (11 ft/min);
  - iii. Waste solvent is stored in covered containers only and not disposed of in such a manner that more than 20% of the waste solvent (by weight) is allowed to evaporate into the atmosphere;
  - iv. Solvent leaks are repaired immediately;
  - v. Water is not visually detectable in solvent exiting from the water separator; and

- vi. Downtime covers are placed over entrances and exits of conveyORIZED degreasers immediately after the conveyors and exhausts are shut down and not removed until just before start-up.
- e. Pursuant to 35 Ill. Adm. Code 218.184(b), no person shall operate a conveyORIZED degreaser unless:
  - i. The degreaser is equipped with a drying tunnel, rotating (tumbling) basket or other equipment sufficient to prevent cleaned parts from carrying out solvent liquid or vapor;
  - ii. The degreaser is equipped with the following switches:
    - A. One which shuts off the sump heat source if the amount of condenser coolant is not sufficient to maintain the designed vapor level;
    - B. One which shuts off the spray pump or the conveyor if the vapor level drops more than 10 cm (4 in) below the bottom condenser coil; and
    - C. One which shuts off the sump heat source when the vapor level exceeds the design level.
  - iii. The degreaser is equipped with openings for entrances and exits that silhouette workloads so that the average clearance between the parts and the edge of the degreaser opening is less than 10 cm (4 in) or less than 10 percent of the width of the opening;
  - iv. The degreaser is equipped with downtime covers for closing off entrances and exits when the degreaser is shut down; and
  - v. The degreaser is equipped with one of the following control devices, if the air/vapor interface is larger than 2.0 square meters (21.6 square feet):
    - A. A carbon adsorption system with ventilation greater than or equal to 15 cubic meters per minute per square meter (50 cubic feet per minute per square foot) of air/vapor area when downtime covers are open, and exhausting less than 25 ppm of solvent by volume averaged over a complete adsorption cycle; or
    - B. Any other equipment or system of equivalent emission control as approved by the Illinois EPA, and further processed consistent with 35 Ill. Adm. Code 218.108. Such equipment or system may include a refrigerated chiller.
- 17a. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the odor nuisance.

- b. The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on the dust collectors, amine scrubber, and baghouses such that the dust collectors, amine scrubber, and baghouses are kept in proper working condition and not cause a violation of the Illinois Environmental Protection Act or regulations promulgated therein.
  - c. The annealing furnaces, the sintering furnace, the die casting furnace, the bake oven, the heat treating furnaces, and the 100 hp emergency generator shall only be operated with natural gas as the fuel. The use of any other fuel in the annealing furnaces, the sintering furnace, the die casting furnace, the bake oven, the heat treating furnaces, or the 100 hp emergency generator requires that the Permittee first obtain a construction permit from the Illinois EPA and then perform stack testing to verify compliance with all applicable requirements.
  - d. The 220 hp diesel-powered fire pump engine and 217 hp diesel-powered emergency generator shall only be operated with distillate fuel oil as the fuel. The use of any other fuel requires that the Permittee first obtain a construction permit from the Illinois EPA and then perform stack testing to verify compliance with all applicable requirements.
  - e. The Permittee shall not keep, store or use distillate fuel oil (Grades No. 1 and 2) at this source with a sulfur content greater than the larger of the following two values:
    - i. 0.28 weight percent, or
    - ii. The wt. percent given by the formula: Maximum wt. percent sulfur =  $(0.00015) \times (\text{Gross heating value of oil, Btu/lb})$ .
  - f. Organic liquid by-products or waste materials shall not be used in any emission unit at this source without written approval from the Illinois EPA.
  - g. The Illinois EPA shall be allowed to sample all fuels stored at the above location.
- 18a. Emissions of VOM from the source during the seasonal allotment period from May 1 through September 30 of each year shall not exceed 15 tons. This limitation is established at the request of the source to exempt it from the requirements of 35 Ill. Adm. Code Part 205, Emissions Reduction Market System (ERMS), pursuant to 35 Ill. Adm. Code 205.205.
- b. In the event that the source's VOM emissions during the seasonal allotment period exceed 15 tons, the source shall no longer be exempt from the ERMS and shall comply with 35 Ill. Adm. Code Part 205, by holding allotment trading units (ATUs) for its VOM emissions during each seasonal allotment period.
- 19a. Operations and emissions of the Rolled Product Department shall not exceed the following limits:

- i. Solvent usage and VOM emissions from the three conveyORIZED cold degreasers shall not exceed 1.65 tons/month; 16.50 tons/year. For this purpose solvent usage shall be determined as the amount of virgin solvent added to the degreasers minus the amount of waste solvent shipped off site for recycling or disposal.
- ii. Operations and emissions of the phosphoric acid bath shall not exceed the following limits:

Phosphoric Acid Usage		Emission Factor	PM emission	
<u>(tons/mo)</u>	<u>(tons/yr)</u>	<u>Wt. %</u>	<u>(tons/mo)</u>	<u>(tons/yr)</u>
120	1,125	5	6.00	56.30

These limits are based on the maximum production rate and the industry emission factor.

- iii. The VOM usage and emissions from adhesive application and solvent cleaning other than in degreasers shall not exceed 500 lbs/mo and 2.5 tons/yr.
  - iv. This permit is issued based on negligible emissions of volatile organic materials and particulate matter from five rolling mills. For this purpose, emissions of each pollutant shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year.
- b. Operations and emissions of the Sintered Alnico Department shall not exceed the following limits:
- i. This permit is issued based on negligible emissions of particulate matter from the jaw crusher, ball mill and pulverizers, powder mixer, scale, separator, and screener. For this purpose, emissions from each emission group of emission units shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year.
  - ii. This permit is issued based on negligible emissions of volatile organic materials and particulate matter from dewaxing and sintering furnaces and ten sintering presses. For this purpose, emissions of each pollutant from each emission unit shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year.
- c. Operations and emissions of the Cast Alnico Department shall not exceed the following limits:

i Four Induction Furnaces

Metal Melt Rate		Emission Factor	PM Emission	
<u>(tons/mo)</u>	<u>(tons/yr)</u>	<u>(lb/ton)</u>	<u>(lbs/mo)</u>	<u>(tons/yr)</u>
140	1,400	0.9	126	0.63

These limits are based on the maximum process rate and standard emission factor (WebFire, SCC 3-04-003-03, Version 6.25, September 2004).

ii. Mold/Core making operations

A. Sand Handling Operations

Sand Throughput		Emission Factor	Control Efficiency	PM Emission	
(tons/mo)	(tons/yr)	lb/ton	%	(tons/mo)	(tons/yr)
3,500	35,000	3.6	95	0.32	3.20

These limits are based on the maximum process rate and standard emission factor (WebFire, SCC 3-04-003-50, Version 6.25, September 2004).

B. Isocure Core Making Machine

Material	Material Usage		Emission Factor	Control Efficiency	VOM Emission	
	(tons/mo)	(tons/yr)	lb/ton	%	(tons/mo)	(tons/yr)
DMEA	3.0	30.0	2,000	90	0.30	3.00
Binder	34.0	342.0	0.63	--	0.01	0.10
					Total:	3.10

These limits are based on the maximum process rate, resin-coated sand manufacturer's emission factor and 100% of dimethylethylamine (DMEA) emission rate.

C. This permit is issued based on negligible emissions of volatile organic materials from two oil sand core making machines. For this purpose, emissions from both machines shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year combined. These limits are based on the production of 150 tons/yr of cores and 100% evaporation rate of VOM from raw materials.

D. Shell Core Machine

Core Process Rate		Emission Factor	VOM Emission	
(tons/mo)	(tons/yr)	(lb/ton)	(tons/mo)	(tons/yr)
800	8,000	0.328	0.13	1.30

These limits are based on the production of 7,884 tons/yr of cores and emission factor from publication by Casting Emission Reduction Program (CERP), ([www.cerp-us.org](http://www.cerp-us.org)), Emissions from Shell Core Making and Storage (September, 2007).

iii. Casting pouring and cooling, and shakeout:

A. Casting Production: 140 tons/mo, 1,400 tons/yr:

B. Emissions from pouring and cooling, and shakeout

Process	Emission Factor (lbs/ton)		Control Efficiency (% for PM)	E M I S S I O N S			
	PM	VOM		PM (lbs/mo)	PM (tons/yr)	VOM (lbs/mo)	VOM (tons/yr)
Pouring	4.2	0.14	--	588	3.00	20	0.10
Shakeout	3.2	1.2	95	22	<u>0.11</u>	168	<u>0.84</u>
Totals:					3.11		0.94

These limits are based on the maximum process rate and standard emission factor (WebFire, SCC 3-04-003-20, -31, -40, Version 6.25, September 2004).

iv. VOM usage and emission from paint booth shall not exceed 15 lbs/day, 465 lbs/mo and 0.25 tons/yr.

d. Operations and emissions of the Akromax Department shall not exceed the following limits:

i. One Induction Furnace:

Metal Melt Rate (tons/mo)	Metal Melt Rate (tons/yr)	Emission Factor (lb/ton)	PM Emission (lbs/mo)	PM Emission (tons/yr)
20	156	0.9	18	0.07

These limits are based on the maximum process rate and standard emission factor (WebFire, SCC 3-04-003-03, Version 6.25, September 2004).

ii. Two Ceramic Core Mixers:

Material	Material Usage (tons/mo)	Material Usage (tons/yr)	VOM Content Wt. %	VOM Emission (tons/mo)	VOM Emission (tons/yr)
Silbond	1.5	15	72.4	1.10	10.90
Sairset	0.2	2	25	0.05	<u>0.50</u>
Total:				11.40	

These limits are based on the maximum process rate and 100% evaporation rate of VOM from raw materials.

iii. Casting pouring/cooling and shakeout:

A. Casting Production: 20 tons/mo, 156 tons/yr

B. Emissions from pouring/cooling and shakeout:

Process	Emission Factor (lbs/ton)		Control Efficiency (% for PM)	E M I S S I O N S			
	PM	VOM		(tons/mo)	PM (tons/yr)	VOM (tons/mo)	(tons/yr)
Pouring	4.2	0.14	--	84	0.33	3	0.01
Shakeout	3.2	1.2	95	3	0.01	168	0.09
				Totals:	0.34		0.10

These limits are based on the maximum process rate and standard emission factor (WebFire, SCC 3-04-003-20, -31, Version 6.25, September 2004).

- e. Operations and emissions from the natural gas combustion equipment shall not exceed the following limits:

- i. Natural Gas Usage: 20 mmscf/month, 177 mmscf/year
- ii. Emissions from the combustion of natural gas:

Pollutant	Emission Factor	Emissions	
	(lbs/10 <sup>6</sup> scf)	(Tons/Mo)	(Tons/Yr)
Carbon Monoxide (CO)	84	0.84	7.40
Nitrogen Oxides (NO <sub>x</sub> )	100	1.00	8.90
Particulate Matter (PM)	7.6	0.08	0.70
Sulfur Dioxide (SO <sub>2</sub> )	0.6	0.01	0.05
Volatile Organic Material (VOM)	5.5	0.06	0.50

These limits are based on the maximum production rate and standard emission factors (Tables 1.4-1, 1.4-2, AP-42, Fifth Edition, Volume I, Supplement D, July 1998).

- f. Operations and emissions from the natural gas-fired emergency generator shall not exceed the following limits:

- i. Hours of Operations: 500 hrs/yr
- ii. Natural gas usage: 0.37 mmscf/mo, 0.37 mmscf/yr
- iii. Emissions from the emergency generator:

Pollutant	Emission Factors	Emissions	
	(lbs/mmscf)	(lb/mo)	(lbs/yr)
Carbon Monoxide (CO)	399	148.00	148.00
Nitrogen Oxides (NO <sub>x</sub> )	2,840	1,051.00	1,051.00
Particulate Matter (PM)	201	74.00	74.00
Sulfur Dioxide (SO <sub>2</sub> )	0.6	0.22	0.22
Volatile Organic Material (VOM)	116	43.00	43.00

These limits are based on the standard emission factors (WebFire, SCC 20200204, Version 6.25, September 2004).

- g. Operations and emissions from the 220 hp diesel-fired fire pump engine shall not exceed the following limits:
  - i. Hours of Operations: 500 hrs/yr
  - ii. Diesel fuel usage: 3,750 gal/mo, 3,750 gal/yr
  - iii. Emissions from fire pump engine:

<u>Pollutant</u>	Emission Factors		Emissions	
	<u>(lbs/10<sup>3</sup> Gal)</u>	<u>(tons/mo)</u>	<u>(tons/mo)</u>	<u>(tons/yr)</u>
Carbon Monoxide (CO)	130	0.24		0.24
Nitrogen Oxides (NO <sub>x</sub> )	604	1.13		1.13
Particulate Matter (PM)	42.5	0.08		0.08
Sulfur Dioxide (SO <sub>2</sub> )	39.7	0.07		0.07
Volatile Organic Material (VOM)	49.3	0.09		0.09

These limits are based on maximum fuel usage, sulfur content of the fuel less than 0.28% by weight, 500 hrs/yr of operations and standard emission factors (WebFire, SCC 20100102, Version 6.25, September 2004).

- h. Operations and emissions from the 217 hp (162 kW) diesel-fired emergency generator shall not exceed the following limits:
  - i. Hours of Operations: 500 hrs/yr
  - ii. Diesel fuel usage: 5,350 gal/mo, 5,350 gal/yr
  - iii. Emissions from diesel-fired emergency generator:

<u>Pollutant</u>	Emission Factors		Emissions	
	<u>lb/kW-hr·10<sup>-3</sup></u>	<u>(lbs/10<sup>3</sup> gal)</u>	<u>(lbs/mo)</u>	<u>(lbs/yr)</u>
Carbon Monoxide (CO)	7.7		624	624
Nitrogen Oxides (NO <sub>x</sub> )	8.8		713	713
Particulate Matter (PM)	0.44		35.6	35.6
Sulfur Dioxide (SO <sub>2</sub> )	--	0.21	1.1	1.1
Volatile Organic Material (VOM)	8.8		713	713

These limits are based on the rated output of the diesel engine powering the generator, 500 hours/year of operation, the maximum fuel usage and emission factors derived from the Tier 1, 2, and 3 limits in 40 CFR 89.112. Sulfur dioxide emissions are based on the standard emission factor (Table 3.4-1, AP 42, Fifth Edition, Volume I, Supplement B, October 1996) and the allowable fuel sulfur content (0.05%).

- i. The emissions of Hazardous Air Pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act from the source shall not exceed 0.79 tons/month and 7.9 tons/year of any single HAP and 1.99 tons/month and 19.9 tons/year of any combination of such HAPs. As a result of this condition, this permit is issued based on the emissions of any HAP from this source not triggering the requirements to obtain a CAAPP permit from the Illinois EPA.
  - j. Compliance with the annual limits of this permit 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).
20. This permit is issued based on the diesel-powered generator set having a displacement of less than 30 liters per cylinder and has been certified by the manufacturer to meet the standards of 40 CFR 60.4201(a) through (c). As a result, this permit is issued based on these diesel-powered generator sets not being subject to the testing requirements of 40 CFR 60.8.
- 21a. Pursuant to 35 Ill. Adm. Code 201.282, every emission source or air pollution control equipment shall be subject to the following testing requirements for the purpose of determining the nature and quantities of specified air contaminant emissions and for the purpose of determining ground level and ambient air concentrations of such air contaminants:
- i. Testing by Owner or Operator. The Illinois EPA may require the owner or operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. The Illinois EPA may adopt procedures detailing methods of testing and formats for reporting results of testing. Such procedures and revisions thereto, shall not become effective until filed with the Secretary of State, as required by the APA Act. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests.
  - ii. Testing by the Illinois EPA. The Illinois EPA shall have the right to conduct such tests at any time at its own expense. Upon request of the Illinois EPA, the owner or operator of the emission source or air pollution control equipment shall provide, without charge to the Illinois EPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary.
- b. Testing required by Conditions 22 and 23 shall be performed upon a written request from the Illinois EPA by a qualified independent testing service.

22. Pursuant to 35 Ill. Adm. Code 212.110(c), upon a written notification by the Illinois EPA, the owner or operator of a particulate matter emission unit subject to 35 Ill. Adm. Code 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.
- 23a. Pursuant to 35 Ill. Adm. Code 218.186, the following test methods shall be used to demonstrate compliance with 35 Ill. Adm. Code 218 Subpart E:
  - i. Vapor pressures shall be determined by using the procedure specified in 35 Ill. Adm. Code 218.110.
  - ii. Exhaust ventilation rates shall be determined by using the procedures specified in 35 Ill. Adm. Code 218.105(f)(3).
- b. Pursuant to 35 Ill. Adm. Code 218.211(a), the VOM content of each coating and the efficiency of each capture system and control device shall be determined by the applicable test methods and procedures specified in 35 Ill. Adm. Code 218.105 to establish the records required under 35 Ill. Adm. Code 218.211.
24. Pursuant to 40 CFR 60.4209(a), if you are an owner or operator, you must meet the monitoring requirements of 40 CFR 60.4209. In addition, you must also meet the monitoring requirements specified in 40 CFR 60.4211. If you are an owner or operator of an emergency stationary CI internal combustion engine, you must install a non-resettable hour meter prior to startup of the engine.
- 25a. Pursuant to 40 CFR 63.6625(i), if you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to 40 CFR 63 Subpart ZZZZ or in items 1 or 4 of Table 2d to 40 CFR 63 Subpart ZZZZ, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to 40 CFR 63 Subpart ZZZZ. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to 40 CFR 63 Subpart ZZZZ. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part

of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

- b. Pursuant to 40 CFR 63.6625(j), if you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to 40 CFR 63 Subpart ZZZZ or in items 5, 6, 7, 9, or 11 of Table 2d to 40 CFR 63 Subpart ZZZZ, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to 40 CFR 63 Subpart ZZZZ. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to 40 CFR 63 Subpart ZZZZ. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.
- 26a. Pursuant to 40 CFR 60.7(b), any owner or operator subject to the provisions of 40 CFR Part 60 shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.
- b. Pursuant to 40 CFR 60.7(f), any owner or operator subject to the provisions of 40 CFR Part 60 shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR Part 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.
- 27. Pursuant to 40 CFR 60.4214(b), if the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to 40 CFR 60 Subpart IIII, if

the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

28. Pursuant to 40 CFR 63.10(b)(3), if an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants regulated by any standard established pursuant to section 112(d) or (f) of the Clean Air Act, and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to the relevant standard (or other requirement established under 40 CFR Part 63) because of limitations on the source's potential to emit or an exclusion, the owner or operator must keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination must be signed by the person making the determination and include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) must be sufficiently detailed to allow the USEPA and/or Illinois EPA to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis must be performed in accordance with requirements established in relevant subparts of 40 CFR Part 63 for this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with USEPA guidance materials published to assist sources in making applicability determinations under Section 112 of the Clean Air Act, if any. The requirements to determine applicability of a standard under 40 CFR 63.1(b)(3) and to record the results of that determination under 40 CFR 63.10(b)(3) shall not by themselves create an obligation for the owner or operator to obtain a Title V permit.
- 29a. Pursuant to 40 CFR 63.6655(a), if you must comply with the emission and operating limitations, you must keep the records described in 40 CFR 63.6655(a)(1) through (a)(5), (b)(1) through (b)(3) and (c).
  - i. A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in 40 CFR 63.10(b)(2)(xiv).
  - ii. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.
  - iii. Records of performance tests and performance evaluations as required in 40 CFR 63.10(b)(2)(viii).

- iv. Records of all required maintenance performed on the air pollution control and monitoring equipment.
  - v. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.
- b. Pursuant to 40 CFR 63.6655(e)(2), you must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate an existing stationary emergency RICE.
  - c. Pursuant to 40 CFR 63.6655(f)(2), if you own or operate an existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.
  - d. Pursuant to 40 CFR 63.6660(a), your records must be in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1).
  - e. Pursuant to 40 CFR 63.6660(b), as specified in 40 CFR 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
  - f. Pursuant to 40 CFR 63.6660(c), you must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1).
- 30. Pursuant to 35 Ill. Adm. Code 212.110(e), the owner or operator of an emission unit subject to 35 Ill. Adm. Code Part 212 shall retain records of all tests which are performed. These records shall be retained for at least three (3) years after the date a test is performed.
- 31a. Pursuant to 35 Ill. Adm. Code 218.182(d)(2), all persons subject to the requirements of 35 Ill. Adm. Code 218.182(c)(1)(B), (c)(2)(B), and (c)(3)(B) must maintain records which include for each purchase:
    - i. The name and address of the solvent supplier;

- ii. The date of purchase;
  - iii. The type of solvent;
  - iv. The vapor pressure of the solvent measured in mmHg at 20° C (68° F); and
  - v. For any mixture of solvents, the vapor pressure of the mixture, as used, measured in mmHg at 20° C (68° F).
- b. Pursuant to 35 Ill. Adm. Code 218.182(e), all records required by 35 Ill. Adm. Code 218.182(d) shall be retained for three years and shall be made available to the Illinois EPA upon request.
- c. Pursuant to 35 Ill. Adm. Code 218.187(e) (1) (B), the owner or operator of a source exempt from the limitations of 35 Ill. Adm. Code 218.187 because of the criteria in 35 Ill. Adm. Code 218.187(a) (1) shall on and after January 1, 2012, collect and record the following information each month for each cleaning operation, other than cleaning operations identified in 35 Ill. Adm. Code 218.187(a) (2):
- i. The name and identification of each VOM-containing cleaning solution as applied in each cleaning operation;
  - ii. The VOM content of each cleaning solution as applied in each cleaning operation;
  - iii. The weight of VOM per volume and the volume of each as-used cleaning solution; and
  - iv. The total monthly VOM emissions from cleaning operations at the source;
- d. Pursuant to 35 Ill. Adm. Code 218.211(b) (3), any owner or operator of a coating line that is exempted from the limitations of 35 Ill. Adm. Code 218.204 because of 35 Ill. Adm. Code 218.208(a) or (b) shall comply with the following: For sources exempt under 35 Ill. Adm. Code 218.208(a), on and after a date consistent with 35 Ill. Adm. Code 218.106, the owner or operator of a coating line or group of coating lines referenced in 35 Ill. Adm. Code 218.211(b) 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:
- 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 that are specifically exempted from the definition of VOM) as applied each day on each coating line.
- 32a. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:

- i. Records addressing use of good operating practices for the dust collectors, amine scrubber, and baghouses:
    - A. Records for periodic inspection of the dust collectors, amine scrubber, and baghouses with date, individual performing the inspection, and nature of inspection; and
    - B. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.
  - ii. Solvent usage in degreasers (gallons/month, gallons/year);
  - iii. Certified amount of waste solvent shipped off (gallons/month, gallons/year);
  - iv. Certified VOM content of waste solvent shipped off (lbs/gallon);
  - v. Usage of other VOM and HAP-containing materials (ton/month and ton/year);
  - vi. The VOM and HAP content of other VOM and HAP-containing materials (% by weight);
  - vii. Phosphoric acid usage (tons/mo, tons/yr);
  - viii. Sand usage (tons/mo, tons/yr);
  - ix. Metal Throughput (tons/mo, tons/yr);
  - x. Natural gas usage for the annealing furnaces, the sintering furnace, the die casting furnace, the bake oven, and the heat treating furnaces (mmscf/month, mmscf/year);
  - xi. Natural gas usage for the 100 hp emergency generator (mmscf/month, mmscf/year)
  - xii. Distillate fuel oil usage for the 220 hp fire pump engine and 217 hp emergency generator (gal/month and gal/year);
  - xiii. The sulfur content of the distillate fuel oil used in the 220 hp fire pump engine and 217 hp emergency generator (% weight), this shall be recorded for each shipment of oil delivered to the source; and
  - xiv. Monthly and annual emissions of CO, NO<sub>x</sub>, PM, SO<sub>2</sub>, VOM and HAPs from the source with supporting calculations (tons/month, tons/year).
- b. The Permittee shall maintain the following records to determine compliance with the 15 tons VOM/ozone season limitation specified in Condition 18:

- i. Records of operating data and other information for each individual emission unit or group of related emission units at the source, as specified in this permit, as appropriate, to determine actual VOM emissions during the seasonal allotment period;
  - ii. Records of the VOM emissions, in tons, during the seasonal allotment period, with supporting calculations, for each individual emission unit or group of related emission units at the source, determined in accordance with the procedures specified in this permit; and
  - iii. Total VOM emissions from the source, in tons, during each seasonal allotment period.
- c. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five (5) years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer storage device) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.
- 33a. Pursuant to 40 CFR 63.6630(c), you must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in 40 CFR 63.6645.
- b. Pursuant to 40 CFR 63.6640(b), you must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to 40 CFR 63 Subpart ZZZZ that apply to you. These instances are deviations from the emission and operating limitations in 40 CFR 63 Subpart ZZZZ. These deviations must be reported according to the requirements in 40 CFR 63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.
- c. Pursuant to 40 CFR 63.6640(e), you must also report each instance in which you did not meet the requirements in Table 8 to 40 CFR 63 Subpart ZZZZ that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to 40 CFR 63 Subpart ZZZZ: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing

emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to 40 CFR 63 Subpart ZZZZ, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

- d. Pursuant to 40 CFR 63.6645(a)(3), you must submit all of the notifications in 40 CFR 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate an existing stationary CI RICE located at an area source of HAP emissions.
- e. Pursuant to 40 CFR 63.6645(a)(5), the notification requirements of 40 CFR 63.6645(a) do not apply to owner or operator of an existing stationary emergency RICE.
- f. Pursuant to 40 CFR 63.6650(a), you must submit each report in Table 7 of 40 CFR 63 Subpart ZZZZ (see Attachment E) that applies to you.
- g. Pursuant to 40 CFR 63.6650(b), unless the Illinois EPA or USEPA has approved a different schedule for submission of reports under 40 CFR 63.10(a), you must submit each report by the date in Table 7 of 40 CFR 63 Subpart ZZZZ and according to the requirements in 40 CFR 63.6650(b)(1) through (b)(9).
  - i. For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in 40 CFR 63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in 40 CFR 63.6595.
  - ii. For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in 40 CFR 63.6595.
  - iii. For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.
  - iv. For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

- v. For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in 40 CFR 63.6595 and ending on December 31.
  - vi. For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in 40 CFR 63.6595.
  - vii. For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.
  - viii. For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.
- h. Pursuant to 40 CFR 63.6650(c), the Compliance report must contain the information in 40 CFR 63.6650(c)(1) through (6).
- i. Company name and address.
  - ii. Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.
  - iii. Date of report and beginning and ending dates of the reporting period.
  - iv. If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 CFR 63.6605(b), including actions taken to correct a malfunction.
  - v. If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.
  - vi. If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in 40 CFR 63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.
- i. Pursuant to 40 CFR 63.6650(d), for each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in

this subpart, the Compliance report must contain the information in 40 CFR 63.6650(c)(1) through (4) and the information in 40 CFR 63.6650(d)(1) and (2).

- i. The total operating time of the stationary RICE at which the deviation occurred during the reporting period.
  - ii. Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.
34. Pursuant to 35 Ill. Adm. Code 212.110(d), a person planning to conduct testing for particulate matter emissions to demonstrate compliance shall give written notice to the Illinois EPA of that intent. Such notification shall be given at least thirty (30) days prior to the initiation of the test unless a shorter period is agreed to by the Illinois EPA. Such notification shall state the specific test methods from 35 Ill. Adm. Code 212.110 that will be used.
- 35a. Pursuant to 35 Ill. Adm. Code 218.182(d)(6), all persons subject to the requirements of 35 Ill. Adm. Code 218.182(b) or (c) shall notify the Illinois EPA of any violation of 35 Ill. Adm. Code 218.182(b) or (c) by sending a description of the violation and copies of records documenting such violations to the Illinois EPA within 30 days following the occurrence of the violation.
  - b. Pursuant to 35 Ill. Adm. Code 218.187(e)(1), the owner or operator of a source exempt from the limitations of 35 Ill. Adm. Code 218.187 because of the criteria in 35 Ill. Adm. Code 218.187(a)(1) shall comply with the following:
    - i. By January 1, 2012, or upon initial start-up of the source, whichever is later, submit a certification to the Illinois EPA that includes:
      - A. A declaration that the source is exempt from the requirements of this Section because of the criteria in 35 Ill. Adm. Code 218.187(a)(1);
      - B. Calculations that demonstrate that combined emissions of VOM from cleaning operations at the source, other than cleaning operations identified in 35 Ill. Adm. Code 218.187(a)(2), never equal or exceed 226.8 kg/month (500 lbs/month), in the absence of air pollution control equipment. An emission adjustment factor of 0.50 shall be used in calculating emissions from used shop towels if the VOM composite vapor pressure of each associated cleaning solution is demonstrated to be less than 10 mmHg at 20°C (68°F) and the used shop towels are kept in closed containers. For cleaning solutions with VOM composite vapor pressures of equal to or greater than 10 mmHG measured at 20°C (68°F) and for shop towels that are not

kept in closed containers, no emission adjustment factor shall be used;

- ii. Notify the Illinois EPA of any record that shows that the combined emissions of VOM from cleaning operations at the source, other than cleaning operations identified in 35 Ill. Adm. Code 218.187(a)(2), ever equal or exceed 226.8 kg/month (500 lbs/month), in the absence of air pollution control equipment, within 30 days after the event occurs.
  - c. Pursuant to 35 Ill. Adm. Code 218.211(b)(5), on and after a date consistent with 35 Ill. Adm. Code 218.106, the owner or operator of a coating line or group of coating lines exempted from the limitations of 35 Ill. Adm. Code 218.204 because of 35 Ill. Adm. Code 218.208(a) 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.
  - d. Pursuant to 35 Ill. Adm. Code 218.990, upon request by the Illinois EPA, the owner or operator of an emission unit which is exempt from the requirements of 35 Ill. Adm. Code 218 Subparts PP, QQ, RR, TT or 35 Ill. Adm. Code 218.208(b) shall submit records to the Illinois EPA within 30 calendar days from the date of the request that document that the emission unit is exempt from those requirements.
- 36a. If there is an exceedance of or a deviation from the requirements of this permit, as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance or deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or deviation, and efforts to reduce emissions and future occurrences.
- b. The Permittee shall submit the seasonal emissions component of the Annual Emissions Report by November 30 of each year, reporting actual emissions of VOM during the seasonal allotment period, in accordance with 35 Ill. Adm. Code 205.205(b) and 35 Ill. Adm. Code 205.300.
  - c. Two (2) copies of required reports and notifications shall be sent to:

Illinois Environmental Protection Illinois EPA  
Division of Air Pollution Control  
Compliance Section (#40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Illinois EPA  
Division of Air Pollution Control - Regional Office  
9511 West Harrison  
Des Plaines, Illinois 60016

It should be noted that shotblasting and grinding operations are exempt from state permit requirements pursuant to 35 Ill. Adm. Code 201.146(aa).

If you have any questions on this permit, please call Valeriy Brodsky at 217/785-1705.

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

Date Signed: \_\_\_\_\_

ECB:VJB:

cc: Illinois EPA, FOS Region 1  
Lotus Notes

Attachment A - Emissions Summary

This attachment provides a summary of the maximum emissions from the Magnetic Alloys Manufacturing plant operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emissions are below the levels (e.g., 100 tons/year for VOM, 10 tons/year for any single HAP, and 25 tons/year for any combination of such HAP) at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled and control measures are more effective than required in this permit.

<u>Emission Units</u>	E M I S S I O N S (Tons/Year)							Single Total	
	<u>CO</u>	<u>NO<sub>x</sub></u>	<u>PM</u>	<u>SO<sub>2</sub></u>	<u>VOM</u>	<u>HAP</u>	<u>HAPs</u>		
<u>Rolled Product Department</u>									
Three Degreasers					16.50				
Phosphoric Acid Bath			56.30						
Product Assembly/Cleaning					2.50				
Rolling Mills			0.44		0.44				
<u>Sintered Alnico Department</u>									
Metal Processing Equipment			3.80						
Dewaxing and Sintering Presses			0.44		0.44				
<u>Cast Alnico Department</u>									
Induction Furnaces			0.63						
Mold/Core Making			3.20		4.84				
Metal Casting/Cooling/Shakeout			3.11		0.94				
<u>Paint Booth</u>					0.25				
<u>Akromax Department</u>									
Induction Furnace			0.07						
Ceramic Core Mixers					11.40				
Metal Casting/Cooling and Shakeout			0.34		0.10				
Natural Gas Combustion Equipment	7.40	8.90	0.70	0.05	0.50				
Natural Gas Emergency Generator	0.07	0.53	0.04	0.01	0.02				
Diesel Fire Pump Engine	0.24	1.13	0.18	0.07	0.09				
Diesel Emergency Generator	<u>0.31</u>	<u>0.36</u>	<u>0.02</u>	<u>0.01</u>	<u>0.36</u>	--	--		
Total	8.02	10.92	69.27	0.14	38.38	7.9	19.9		

VJB:

Attachment B - Emissions Reduction Market System (ERMS)

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 Clean Air Act.

The ERMS addresses VOM emissions during a seasonal allotment period from May 1 through September 30. 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 in the sources' FESOP or 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 should 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 Ill. Adm. Code 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 Ill. Adm. Code 205.500 and 35 Ill. Adm. Code 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 Ill. Adm. Code 205.710). Sources may also transfer or sell the ATUs that they hold to other sources or participants (35 Ill. Adm. Code 205.630).

2. Applicability

Emissions of VOM from the source during the seasonal allotment period from May 1 through September 30 of each year shall not exceed 15 tons, not including VOM emissions from insignificant emission units and activities. This limitation is established at the request of the source to exempt it from the requirements of 35 Ill. Adm. Code Part 205, Emissions Reduction Market System (ERMS), pursuant to 35 Ill. Adm. Code 205.205.

3. Recordkeeping and Reporting

- a. The Permittee shall maintain the following records to determine compliance with the above limitation:
  - i. Records of operating data and other information for each individual emission unit or group of related emission units at the source, as specified in this permit, as appropriate, to determine actual VOM emissions during the seasonal allotment period;
  - ii. Records of the VOM emissions, in tons, during the seasonal allotment period, with supporting calculations, for each individual emission unit or group of related emission units at the source, determined in accordance with the procedures, which may be specified in this permit; and
  - iii. Total VOM emissions from the source, in tons, during each seasonal allotment period.
- b. The Permittee shall submit the seasonal emissions component of the Annual Emissions Report by November 30 of each year, reporting actual emissions of VOM during the seasonal allotment period, in accordance with 35 Ill. Adm. Code 205.205(b) and 35 Ill. Adm. Code 205.300.
- c. In the event that the source's VOM emissions during the seasonal allotment period exceed 15 tons, the source shall no longer be exempt from the ERMS and shall immediately comply with 35 Ill. Adm. Code Part 205, including holding allotment trading units (ATUs) for its VOM emissions during the first seasonal allotment period it exceeds 15 tons and each seasonal allotment period, thereafter, pursuant to 35 Ill. Adm. Code 205.150(c).

VJB:

Attachment C - Table 2d to Subpart ZZZZ of Part 63 – Requirements for Existing Compression Ignition Stationary RICE Located at Area Sources of HAP Emissions

As stated in 40 CFR 63.6600 and 63.6640, you must comply with the following emission and operating limitations for existing compression ignition stationary RICE:

For each...	You must meet the following requirement, except during periods of startup...	During periods of startup you must
4. Emergency stationary CI RICE and black start stationary CI RICE. <sup>2</sup>	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; <sup>1</sup> ;	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year. <sup>2</sup>	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; <sup>1</sup>	
	b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	

<sup>1</sup>Sources have the option to utilize an oil analysis program as described in 40 CFR 63.6625(i) in order to extend the specified oil change requirement in Table 2d of 40 CFR 63 Subpart ZZZZ.

<sup>2</sup>If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of 40 CFR 63 Subpart ZZZZ, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

Attachment D - Table 6 to Subpart ZZZZ of Part 63 - Continuous Compliance  
With Emission Limitations and Operating Limitations

As stated in 40 CFR 63.6640, you must continuously comply with the emissions and operating limitations as required by the following:

For each...	Complying with the requirement to:	You must demonstrate continuous compliance by...
9. Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP, existing non-emergency stationary RICE <100 HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency landfill or digester gas stationary SI RICE located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate 24 hours or less per calendar year	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

Attachment E - Table 7 to Subpart ZZZZ of Part 63 - Requirements for Reports

As stated in 40 CFR 63.6650, you must comply with the following requirements for reports:

For each ...	You must submit a...	The report must contain:	You must submit the report...
<p>1. Existing non-emergency, non-black start stationary RICE <math>100 \leq \text{HP} \leq 500</math> located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE <math>&gt;500</math> HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE <math>&gt;500</math> HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE <math>&gt;300</math> HP located at an area source of HAP; existing non-emergency, non-black start 4SLB and 4SRB stationary RICE <math>&gt;500</math> HP located at an area source of HAP and operated more than 24 hours per calendar year; new or reconstructed non-emergency stationary RICE <math>&gt;500</math> HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE <math>250 \leq \text{HP} \leq 500</math> located at a major source of HAP</p>	<p>Compliance report</p>	<p>a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in 40 CFR 63.8 (c) (7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or</p> <p>b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in 40 CFR 63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in 40 CFR 63.8 (c) (7), the information in 40 CFR 63.6650(e); or</p>	<p>i. Semiannually according to the requirements in 40 CFR 63.6650(b) (1)-(5) for engines that are not limited use stationary RICE subject to numerical emission limitations; and</p> <p>ii. Annually according to the requirements in 40 CFR 63.6650(b) (6)-(9) for engines that are limited use stationary RICE subject to numerical emission limitations.</p> <p>i. Semiannually according to the requirements in 40 CFR 63.6650(b).</p>

For each ...	You must submit a...	The report must contain:	You must submit the report...
		c. If you had a malfunction during the reporting period, the information in 40 CFR 63.6650 (c) (4).	i. Semiannually according to the requirements in 40 CFR 63.6650 (b).