



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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217/785-1705

CONSTRUCTION PERMIT - NSPS and NESHAP SOURCE

PERMITTEE

Arnold Magnetic Technologies Corporation
Attn: Brian LeMaster, Director of EHS
1005 Courtaulds Drive
Woodstock, Illinois 60098

Application No.: 24070027

I. D. No.: 111095AIR

Applicant's Designation:

Date Received: July 24, 2024

Subject: Magnetic Alloy Production Facility

Date Issued: December 31, 2024

Expiration Date: See Condition 1.

Location: 1005 Courtaulds Drive, Woodstock, McHenry County

This permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of:

Precision Thin Metals Department

Five (5) Rolling Mills;
Two (2) Natural Gas-fired Annealing Furnaces;
One (1) Natural Gas-fired Burn-off Oven;
Two (2) Conveyorized Cold Degreasers; and
Product Assembly and Equipment Clean-up Operations,

Cast Alnico Department

Two (2) Induction Furnaces controlled by baghouse;
One (1) Natural Gas-Fired Die Casting Furnace;
Five (5) 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 controlled by baghouse;
Shakeout Operations Controlled by baghouse;
Shotblast/Grinding/Finishing Operations controlled by baghouse;
Two (2) Natural Gas-fired Heat-Treating Furnaces; and
Sand Handling Operations controlled by baghouse,

Arkomax Department

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

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

2125 S. First Street, Champaign, IL 61820 (217) 278-5800
115 S. LaSalle Street, Suite 2203, Chicago, IL 60603
1101 Eastport Plaza Dr., Suite 100, Collinsville, IL 62234 (618) 346-5120
9511 Harrison Street, Des Plaines, IL 60016 (847) 294-4000

595 S. State Street, Elgin, IL 60123 (847) 608-3131
2309 W. Main Street, Suite 116, Marion, IL 62959 (618) 993-7200
412 SW Washington Street, Suite D, Peoria, IL 61602 (309) 671-3022
4302 N. Main Street, Rockford, IL 61103 (815) 987-7760

- 1a. This permit is issued based on the emission of Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act from the Magnetic Alloy manufacturing process being less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs. As a result, this permit is issued based on the emissions of all HAPs from the above-listed equipment not triggering the requirements of Section 112(g) of the Clean Air Act.
 - b. This permit is issued based on the construction of the Magnetic Alloy Production facility not constituting a new major source or major modification pursuant to Title I of the Clean Air Act, specifically 35 Ill. Adm. Code Part 203, Major Stationary Source Construction and Modification. The source has requested that the Illinois EPA establish emission limitations and other appropriate terms and conditions in this permit that limit the emissions of Volatile Organic Material (VOM) from the above-listed equipment below the levels that would trigger the applicability of these rules.
 - c. Operation of the emission source(s) at the Magnetic Alloy Production facility is allowed under this construction permit for a period of twelve (12) months after initial startup.
 - d. Emission source(s) at the Magnetic Alloy Production Facility shall not begin operation until construction, including construction of any air pollution control equipment, is complete and reasonable measures short of actual operation have been taken to verify proper operation.
- 2a. The 47 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 the NSPS in Illinois on behalf of the United States Environmental Protection Agency (USEPA) under a delegation agreement. Pursuant to 40 CFR 60.4200(a), the provisions of 40 CFR 60 Subpart IIII are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons as specified in 40 CFR 60.4200(a)(1) through (4). For the purposes of 40 CFR 60 Subpart IIII, the date that construction commences is the date the engine is ordered by the owner or operator.
 - i. Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are:
 - A. Manufactured after April 1, 2006, and are not fire pump engines.
 - B. Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.
 - ii. Owners and operators of any stationary CI ICE that are modified or reconstructed after July 11, 2005 and any person that modifies or reconstructs any stationary CI ICE after July 11, 2005.

iii. The provisions of 40 CFR 60.4208 are applicable to all owners and operators of stationary CI ICE that commence construction after July 11, 2005.

- b. 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 a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in 40 CFR 60.4202(a)(1) through (2).

For engines with a rated power greater than or equal to 37 kW (50 HP), the Tier 2 or Tier 3 emission standards for new nonroad CI engines for the same rated power as described in 40 CFR Part 1039, Appendix I, for all pollutants and the smoke standards as specified in 40 CFR 1039.105 beginning in model year 2007.

- c. 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.

- 3a. The 47 hp Diesel-Powered Emergency Generator, is 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 USEPA under a delegation agreement. Pursuant to 40 CFR 63.6590(a), 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.

- i. Existing stationary RICE.

For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

- ii. New stationary RICE.

A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

- b. Pursuant to 40 CFR 63.6590(c)(1), an affected source that meets any of the criteria in 40 CFR 63.6590(c)(1) through (7) must meet the requirements of 40 CFR Part 63 by meeting the requirements of 40 CFR Part 60 Subpart IIIII, for compression ignition engines or 40 CFR Part 60 Subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under 40 CFR Part 63.

A new or reconstructed stationary RICE located at an area source;

4a. The 47 hp Diesel-Powered Emergency Generator is subject to 40 CFR Part 1039 per 40 CFR 60.4202(a) (2) and 40 CFR 60.4205(b). Pursuant to 40 CFR Part 1039 Appendix I, the following standards, which EPA originally adopted under 40 CFR Part 89, apply to nonroad compression-ignition engines produced before the model years specified in 40 CFR 1039.1:

i. Tier 2 standards apply as summarized in the following table:

Table 2 to Appendix I - Tier 2 Emission Standards [g/kW-hr]

Rated power (kW)	Starting model year	NO _x +NMHC	CO	PM
37 ≤ kW < 75	2004	6.6	5.0	0.30

ii. Tier 3 standards apply as summarized in the following table:

Table 3 to Appendix I - Tier 3 Emission Standards [g/kW-hr]

Rated power (kW)	Starting model year	NO _x +NMHC	CO	PM
37 ≤ kW ≤ 75	2008	4.7	5.0	0.30

iii. Tier 1 through Tier 3 standards applied only for discrete-mode steady-state testing. There were no not-to-exceed standards or transient testing.

b. Pursuant to 40 CFR 1039.105(b), measure smoke as specified in 40 CFR 1039.501(c). Smoke from your engines may not exceed the following standards:

i. 20 percent during the acceleration mode.

ii. 15 percent during the lugging mode.

iii. 50 percent during the peaks in either the acceleration or lugging modes.

5a. The Precision Thin Metals Department, Cast Alnico Department, and Arkomax Department are subject to 35 Ill. Adm. Code Part 212 Subpart B (Visible Emissions). 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

P	E	P	E
Mg/hr	kg/hr	T/hr	lbs/hr
0.05	0.25	0.05	0.55
0.1	0.29	0.10	0.77
0.2	0.42	0.20	1.10
0.3	0.64	0.30	1.35
0.4	0.74	0.40	1.58
0.5	0.84	0.50	1.75
0.7	1.00	0.75	2.40
0.9	1.15	1.00	2.60
1.8	1.66	2.00	3.70
2.7	2.1	3.00	4.60
3.6	2.4	4.00	5.35
4.5	2.7	5.00	6.00
9.	3.9	10.00	8.70
13.	4.8	15.00	10.80
18.	5.7	20.00	12.50
23.	6.5	25.00	14.00
27.	7.1	30.00	15.60
32.	7.7	35.00	17.00
36.	8.2	40.00	18.20
41.	8.8	45.00	19.20
45.	9.3	50.00	20.50
90.	13.4	100.00	29.50
140.	17.0	150.00	37.00
180.	19.4	200.00	43.00
230.	22.	250.00	48.50
270.	24.	300.00	53.00
320.	26.	350.00	58.00
360.	28.	400.00	62.00
408.	30.1	450.00	66.00
454.	30.4	500.00	67.00

where:

P = Process weight rate in metric or T/hr, and
 E = Allowable emission rate in kg/hr or lbs/hr.

- 6a. The 47 hp Diesel-Powered Emergency Generator is subject to 35 Ill. Adm. Code Part 214 Subpart K (Process Emission Sources). Pursuant to 35 Ill. Adm. Code 214.301, except as further provided by 35 Ill. Adm. Code Part 214, no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to exceed 2000 ppm.
- 7a. The ovens, furnaces, and heater are subject to 35 Ill. Adm. Code Part 214 Subpart K (Process Emission Sources). Pursuant to 35 Ill. Adm. Code 214.301, except as further provided by 35 Ill. Adm. Code Part 214, no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to exceed 2000 ppm.
- b. Pursuant to 35 Ill. Adm. Code 214.305(a) (2), except as provided in 35 Ill. Adm. Code 214.305(b), (c), and (d), on and after January 1, 2017, the owner or operator of a process emission source must comply with the following:

The sulfur content of all distillate fuel oil used by the process

emission source must not exceed 15 ppm;

- 8a. The Precision Thin Metals Department is subject to 35 Ill. Adm. Code Part 218 Subpart E (Solvent Cleaning). Pursuant to 35 Ill. Adm. Code 218.181, the requirements of 35 Ill. Adm. Code 218.182, 218.183, 218.184, and 218.186 shall apply to all cold cleaning, open top vapor degreasing, and conveyORIZED degreasing operations which use volatile organic materials.
- b. The Precision Thin Metals Department, Cast Alnico Department, and Arkomax Department are subject to 35 Ill. Adm. Code Part 218 Subpart G (Use of Organic Material). Pursuant to 35 Ill. Adm. Code 218.301, no person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission 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 Part 218 Subpart G shall apply only to photochemically reactive material.
- 9a. This permit is issued based on the Precision Thin Metals Department at this source not being subject to the NESHAP for Halogenated Solvent Cleaning, 40 CFR 63 Subpart T because the two conveyORIZED cold degreasers at this source do 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 associated with the Cast Alnico Department and Arkomax Department at this source not being subject to the 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 metal fabrication and finishing operations at this source 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 the source is not primarily engaged in the operations in one of the nine source categories listed in 40 CFR 63.11514(a) (1) through (9) and described in Table 1 to 40 CFR 63 Subpart XXXXXX.
- d. This permit is issued based on the Cast Alnico Department and Arkomax Department at this source not being subject to the 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).

10. Pursuant to 35 Ill. Adm. Code 212.314, 35 Ill. Adm. Code 212.301 shall not apply and spraying pursuant to 35 Ill. Adm. Code 212.304 through 212.310 and 35 Ill. Adm. Code 212.312 shall not be required when the wind speed is greater than 40.2 km/hr (25 mph). Determination of wind speed for the purposes of 35 Ill. Adm. Code 212.314 shall be by a one-hour average or hourly recorded value at the nearest official station of the U.S. Weather Bureau or by wind speed instruments operated on the site. In cases where the duration of operations subject to 35 Ill. Adm. Code 212.314 is less than one hour, wind speed may be averaged over the duration of the operations on the basis of on-site wind speed instrument measurements.

- 11a. This permit is issued based on the use of cleaning solvents associated with the Precision Thin Metals Department and Cast Alnico Department at this source not being subject to the material and control requirements under 35 Ill. Adm. Code 218.187 (Other Industrial Solvent Cleaning Operations). Pursuant to 35 Ill. Adm. Code 218.187(a), on and after January 1, 2012:
 - i. 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.

 - ii.. Notwithstanding 35 Ill. Adm. Code 218.187(a) (1):
 - A. The following cleaning operations shall be exempt from the requirements of 35 Ill. Adm. Code 218.187(b), (c), (d), (e), (f), and (g):
 - I. Cleaning operations subject to the limitations in 35 Ill. Adm. Code 218.182, 218.183, or 218.184;
 - II. Janitorial cleaning;

 - B. Cleaning operations for emission units within the following categories shall be exempt from the requirements of 35 Ill. Adm. Code 218.187(b), (c), (d), (e), (f), and (g):

Miscellaneous metal parts coating;

b. This permit is issued based on the Precision Thin Metals Department, Cast Alnico Department, and Arkomax Department at this source not being subject to the control requirements of 35 Ill. Adm. Code Part 218 Subpart TT (Other Emission Units). Pursuant to 35 Ill. Adm. Code 218.980(b) (1) (A), a source is subject to 35 Ill. Adm. Code Part 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 Part 218 Subparts B, E, F, H, Q, R, S, T, (excluding 35 Ill. Adm. Code 218.486), V, X, Y, Z, or BB. This is a result of the federally enforceable production and operating limitations, which restrict the potential to emit for VOM from the Precision Thin Metals (Rolling Mills), Cast Alnico Department (Mold/Core Making, Metal Casting/Cooling/Shakeout), and Arkomax Department (Ceramic Core Mixers and Metal Casting/Cooling and Shakeout) at this source to less than 25 tons per year.

12a. 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 1090.305 for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.

b. Pursuant to 40 CFR 60.4211(a), if you are an owner or operator and must comply with the emission standards specified in 40 CFR 60 Subpart IIII, you must do all of the following, except as permitted under 40 CFR 60.4211(g):

i. Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

ii. Change only those emission-related settings that are permitted by the manufacturer; and

iii. Meet the requirements of 40 CFR Part 1068, as they apply to you.

c. 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 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 emission-related specifications, except as permitted in 40 CFR 60.4211(g).

d. Pursuant to 40 CFR 60.4211(f), if you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in 40 CFR 60.4211(f) (1) through (3). In order for the engine to be considered an emergency stationary ICE under 40 CFR 60 Subpart IIII, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR 60.4211(f) (1) through (3), is prohibited. If you do not operate the engine according to the requirements in 40 CFR 60.4211(f) (1) through (3), the engine will not be considered an emergency engine under 40 CFR 60 Subpart IIII and must meet all requirements for non-emergency engines.

i. There is no time limit on the use of emergency stationary ICE in emergency situations.

ii. You may operate your emergency stationary ICE for any combination of the purposes specified in 40 CFR 60.4211(f) (2) (i) through (iii) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by 40 CFR 60.4211(f) (3) counts as part of the 100 hours per calendar year allowed by this 40 CFR 60.4211(f) (2).

Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. 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 ICE beyond 100 hours per calendar year.

iii. Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in 40 CFR 60.4211(f) (2). Except as provided in 40 CFR 60.4211(f) (3) (i), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

A. The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

- B. The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
 - C. The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
 - D. The power is provided only to the facility itself or to support the local transmission and distribution system.
 - E. The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.
- 13a. 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.

- 14a. 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 amine scrubber associated with the Cast Alnico Department and the baghouses associated with the Cast Alnico Department and Arkomax Department such that the 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 Amine Scrubber shall be operated at all times when the associated Isocure Sand Core Making Machines are in operation and emitting air contaminants.
- d. The baghouses shall be operated at all times when the associated Induction Furnaces, Pouring/Casting Operations, Shakeout Operations, Shotblast/grinding/Finishing Operations, and Sand Handling operations are in operation and emitting air contaminants.
- e. The furnaces, ovens, and heaters shall only be operated with natural gas as the fuel. The use of any other fuel in the furnaces, oven, and heaters may require that the Permittee first obtain a construction permit from the Illinois EPA and perform stack testing to verify compliance with all applicable requirements.
- f. The 47 hp Diesel- Powered Emergency Generator shall only be operated with distillate fuel oil (Grades No. 1 and 2) as the fuel. The use of any other fuel in the 47 hp Diesel-Powered emergency Generator may require that the Permittee first obtain a construction permit from the Illinois EPA and perform stack testing to verify compliance with all applicable requirements.
- g. 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.
- h. The Illinois EPA shall be allowed to sample all fuels stored at the above location.
- i. The two conveyORIZED cold degreasers shall only be operated with solvents that do not contain 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.

15a. operation of the Magnetic Alloy manufacturing operation shall not exceed the following limits:

Permit Description	Stack ID	Daily Operating Schedule	Hours
Arkomax Induction Furnace/Melt Deck	1	7am-3pm	8
Arkomax Pouring/Casting (aka Chill Boxes)	1	7am-5pm	10
Arkomax Core Curing Oven	2	7am-3pm	8
Alnico Melt Induction Furnace (300-lb) Arnokrome Melt Induction Furnace (200-lb)	CAST	7am-3pm	8
Cast Alnico Pouring/Casting (aka Smoke Tunnel)	CAST	7am-5pm	10
Cast Alnico Oven	4	7am-3pm	8
Shakeout/Shotblasting/Grinding/Machine Operations (Cast Alnico and Arkomax)	19	7am-3pm	8
	18	7am-3pm	8
Alnico Exogas Gen for Heat Treat	12	7am-7am	24
Alnico Heat Treat	13	7am-7am	24
Cast Alnico Dipping Furnace	14	7am-7am	24
Alnico Core Making Silos	SIL0	7am-3pm	8
PTM Coat Line Annealing Furnaces	5	7am-7am	24
PTM Cold Degreaser and Distiller	10	7am-12pm	5
	11	7am-3pm	8
PTM Sergeant & Wilbur	16	7am-3pm	8

b. Emissions from and operation of the Precision Thin Metals Department shall not exceed the following limits:

Process	VOM Usage		VOM emissions	
	(Tons/mo)	(tons/yr)	(tons/mo)	(tons/yr)
Precision Thin Metals Process	1.90	18.95	1.90	18.95

These limits are based on the maximum production rate, density of materials (lb/gal), VOM content (wt %).

c. Emissions from and operation of the Cast Alnico Department shall not exceed the following limits:

Process	VOM Usage		VOM Emission	
	(tons/mo)	(tons/yr)	(tons/mo)	(tons/yr)
Cast Alnico Process	1.95	19.51	0.45	4.47

These limits are based on the maximum process rate, VOM materials usage in Cast Alnico Department oil core, Isocure core making, shakeout, metal working, and pouring/casting, VOM content (% wt), material density (lb/gal), emission factor from

weight lost study conducted by manufacturer, HA International, emission factor from publication by Casting Emission Reduction Program (CERP), (www.cerp-us.org), Emissions from Shell Core Making and Storage (September, 2007), and (WebFire, SCC 30400320 & 30400331, Version 6.25, September 2004) for VOM, and 90% scrubber control efficiency for DMEA.

- d. Emissions from and operation of the Arkomax Department shall not exceed the following limits:

<u>Process/Department</u>	<u>VOM Usage</u>		<u>VOM Emissions</u>	
	<u>(tons/mo)</u>	<u>(tons/yr)</u>	<u>(tons/mo)</u>	<u>(tons/yr)</u>
Arkomax Process	0.15	1.45	0.13	1.34

These limits are based on the maximum process rate, VOM materials usage in ceramic core making, Akromax pouring cooling and shakeout, VOM content (% wt), material density (lb/gal), emission factor derived from USEPA's Webfire database (SCC 30400320 and 30400331), and 100% evaporation rate of VOM from raw materials.

- e. Emissions from and operation of the natural gas-fired equipment (oven, heaters, furnaces) at this source shall not exceed the following limits:
 - i. Natural Gas Usage: 4.87 mmscf/month, 48.7 mmscf/year
 - ii. Emissions from the combustion of natural gas:

<u>Pollutant</u>	<u>Emission</u>	<u>Emissions</u>	
	<u>Factor</u>	<u>(lbs/mmscf)</u>	<u>(Tons/Mo)</u>
Carbon Monoxide (CO)	84.0	0.21	2.05
Nitrogen Oxides (NO _x)	100.0	0.24	2.44
Particulate Matter (PM)	7.6	0.02	0.19
Sulfur Dioxide (SO ₂)	0.6	0.01	0.01
Volatile Organic Material (VOM)	5.5	0.01	0.13

These limits are based on the maximum heat input rating of the equipment and standard emission factors (Tables 1.4-1, 1.4-2, and 1.4-3, AP-42, Fifth Edition, Volume I, Supplement D, July 1998).

- f. This permit is issued based on negligible emissions of Particulate Matter (PM) from Cast Alnico department and Arkomax Department process equipment. For this purpose, PM emissions from Cast Alnico department and Arkomax Department shall not exceed nominal emission rates of 0.01 tons/month and 0.11 tons/year. These limits are based on maximum throughput, Induction furnaces' emission factor is based on May 1, 2024 stack sampling testing, pouring/cooling emission factor is based on ratio of factors for the same processes in US EPA (AP-42, Table 12.10-3), shakeout and Shotblasting/Grinding emission factor is based

on AP42, Table 12.10-7, sanders emission factor is based on USEPA's web FIRE data base (SCC 30400360), Core Making Sand Silos factor is based on AP 42 Table 12.10-7 and control efficiencies (90% for Arkomax and Cast Alnico induction furnaces, and Cast Alnico Pouring/Casting and 99.9% for core making Sand Silos, Shakeout, Shotblasting/Grinding, and sanders).

- g. This permit is issued based on negligible emissions of Particulate Matter (PM₁₀ and PM_{2.5}) from Cast Alnico department and Arkomax Department process equipment. For this purpose, each PM₁₀ and PM_{2.5} emissions from Cast Alnico department and Arkomax Department shall not exceed nominal emission rates of 0.01 tons/month and 0.08 tons/year. These limits are based on maximum throughput, Induction furnaces' emission factor is based on May 1, 2024 stack sampling testing, pouring/cooling emission factor is based on ratio of factors for the same processes in US EPA (AP-42, Table 12.10-3), shakeout and Shotblasting/Grinding emission factor is based on AP42, Tables 12.10-7, and 12.10-9 sanders emission factor is based on USEPA's web FIRE data base (SCC 30400360), core making sand silos factor is based on AP-42 Table 12.10-7 and USEPA's web Fire database (SCC30400350), and control efficiencies (90% for Arkomax and Cast Alnico induction furnaces, and Cast Alnico Pouring/Casting and 99.9% for Core Making Sand Silos, Shakeout, Shotblasting/Grinding, and sanders).
 - h. This permit is issued based on negligible emissions of combined Hazardous Air Pollutants (HAPs) from this source. For this purpose, emissions from combined HAPs at this source shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year.
 - i. 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).
16. This permit is issued based on the 47 hp Diesel-Powered Emergency Generator at this source having a displacement of less than 30 liters per cylinder and has been certified by the manufacturer to meet the standards of 40 CFR 60.4202. As a result, this permit is issued based on the 217 hp Diesel-Powered Emergency Generator not being subject to the testing requirements of 40 CFR 60.8.
- 17a. 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 18, 19, and 20 shall be performed upon a written request from the Illinois EPA by a qualified independent testing service.
18. 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.
- 19a. Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial operation, the overall efficiency of the scrubber associated with the Isocure sand Core Making Machines in Cast Alnico department and baghouses associated with induction furnaces, Pouring/Casting, Shakeout, Shotblast/Grinding, and sand Handling in Cast Alnico departments, and baghouses associated with induction furnace, Pouring/Casting, and Shakeout in Arkomax shall be measured by an approved testing service during conditions which are representative of maximum emissions to demonstrate compliance with 35 Ill. Adm. Code 212.462, opacity limits in Condition 2, 35 Ill. Adm. Code Part 218 Subpart G, and Condition 10 of this permit. Thereafter, this testing shall be conducted once every five (5) years from the preceding testing date.
- b. The following methods and procedures shall be used for testing of emissions, unless another method is approved by the Illinois EPA: (Refer to 40 CFR Part 60, Appendix A for USEPA test methods.)

Sample and Velocity Traverses for Stationary Sources	USEPA Method 1
Sample and Velocity Traverses for Stationary Sources with Small Stacks or Ducts	USEPA Method 1A
Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube)	USEPA Method 2
Direct Measurement of Gas Volume through Pipes and Small Ducts	USEPA Method 2A

Determination of Gas Velocity and Volumetric Flow Rate in Small Stacks or Ducts (Standard Pitot Tube)	USEPA Method 2C
Measurement of Gas Volume Flow Rates in Small Pipes and Ducts	USEPA Method 2D
Gas Analysis for the Determination of Dry Molecular Weight	USEPA Method 3
Gas Analysis for the Determination of Dry Molecular Weight-Instrumental Method	USEPA Method 3A
Determination of Moisture Content in Stack Gases	USEPA Method 4
Determination of Particulate Matter from Stationary Sources	USEPA Method 5
Visual Determination of the Opacity of Emissions from Stationary Sources	USEPA Method 9
Determination of Total Gaseous Nonmethane Organic Emissions as Carbon	USEPA Method 25
Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer	USEPA Method 25A*
Determination of PM10 and PM2.5 Emissions from Stationary Sources (Constant Sampling Rate Procedure)	USEPA Method 201A

* USEPA Method 25A may only be used if outlet VOM concentration is less than 50 ppm as carbon (non-methane).

- c. Within sixty (60) days prior to the actual date of testing, the Permittee shall submit a written test plan to the Illinois EPA, Bureau of Air, Compliance Section Manager. This plan shall include at a minimum:
- i. The name (or other identification) of the emission unit(s) to be tested and the name and address of the facility at which they are located;
 - ii. The name and address of the independent testing service(s) performing the tests, with the names of the individuals who may be performing sampling and analysis and their experience with similar tests;
 - iii. The specific determinations of emissions and/or performance which are intended to be made, including the site(s) in the ductwork or stack at which sampling will occur;
 - iv. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions, maximum operating rate, minimum control performance, the levels of operating parameters for the emission unit, including associated control equipment, at or within which compliance is intended to be shown, and the means by which the operating parameters will be determined;
 - v. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods. The specific sampling, analytical and quality control procedures which will be used, with an identification of the standard methods upon which they are based;

- vi. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justifications;
 - vii. Any proposed use of an alternative test method, with detailed justification; and
 - viii. The format and content of the Source Test Report.
- d. The Permittee shall provide the Illinois EPA with written notification of testing at least thirty (30) days prior to testing and again five (5) days prior to the testing to enable the Illinois EPA to have an observer present. This notification shall include the name of emission unit(s) to be tested, scheduled date and time, and contact person with telephone number.
- e. If testing is delayed, the Permittee shall promptly notify the Illinois EPA by e-mail or facsimile, at least five (5) days prior to the scheduled date of testing or immediately, if the delay occurs in the five (5) days prior to the scheduled date. This notification shall also include the new date and time for testing, if set, or a separate notification shall be sent with this information when it is set.
- f. The Permittee shall submit the Final Source Test Report(s) for these tests accompanied by a cover letter stating whether or not compliance was shown, to the Illinois EPA, Bureau of Air, Compliance Section Manager within thirty (30) days after the test results are compiled, but no later than sixty (60) days after the date of testing or sampling. The Final Source Test Report shall include at a minimum:
- i. General information describing the test, including the name and identification of the emission source which was tested, date of testing, names of personnel performing the tests, and Illinois EPA observers, if any;
 - ii. A summary of results;
 - iii. Description of test procedures and method(s), including description and map of emission units and of sampling points, sampling train, testing and analysis equipment, and test schedule;
 - iv. Detailed description of test conditions, including:
 - A. List and description of the equipment (including serial numbers or other equipment specific identifiers) tested and process information (i.e., mode(s) of operation, process rate or throughput, fuel or raw material consumption rate, and heat content of the fuels);
 - B. Control equipment information (i.e., equipment condition and operating parameters) during testing; and
 - C. A discussion of any preparatory actions taken (i.e.,

inspections, maintenance and repair).

- v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration. Identification of the applicable regulatory standards and permit conditions that the testing was performed to demonstrate compliance with, a comparison of the test results to the applicable regulatory standards and permit conditions, and a statement whether the test(s) demonstrated compliance with the applicable standards and permit conditions;
 - vi. An explanation of any discrepancies among individual tests, failed tests or anomalous data;
 - vii. The results and discussion of all quality control evaluation data, including a copy of all quality control data; and
 - viii. The applicable operating parameters of the pollution control device(s) during testing (temperature, pressure drop, scrubbant flow rate, etc.), if any.
20. Pursuant to 35 Ill. Adm. Code 218.186(a), the following test methods shall be used to demonstrate compliance with 35 Ill. Adm. Code Part 218 Subpart E:
- Vapor pressures shall be determined by using the procedure specified in 35 Ill. Adm. Code 218.110.
21. 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 that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine.
22. 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 I, 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.
23. 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.

24. 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.
25. Pursuant to 35 Ill. Adm. Code 214.305(a)(3), except as provided in 35 Ill. Adm. Code 214.305(b), (c), and (d), on and after January 1, 2017, the owner or operator of a process emission source must comply with the following:

The owner or operator must:

- i. Maintain records demonstrating that the fuel oil used by the process emission source complies with the requirements in 35 Ill. Adm. Code 214.305(a)(1) and (a)(2), such as records from the fuel supplier indicating the sulfur content of the fuel oil; and
 - ii. Retain the records for at least 5 years, and provide copies of the records to the Illinois EPA within 30 days after receipt of a request by the Illinois EPA;
- 26a. Pursuant to 35 Ill. Adm. Code 218.182(d)(2), on and after March 15, 1999:

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 comply with the following:

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 218.187(e) (10), all records required by 35 Ill. Adm. Code 218.187(e) shall be retained by the source for at least three years and shall be made available to the Illinois EPA upon request.
- 27a. 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 amine scrubber associated with the Cast Alnico Department and the baghouses associated with the Cast Alnico Department and Arkomax Department:

- A. Records for periodic inspection of the 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 and type of solvent used in the 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 adhesive application and solvent cleaning other than in degreasers (ton/month and ton/year);
 - vi. The VOM and HAP content of adhesive application and solvent cleaning other than in degreasers (% by weight);
 - vii. Sand usage (tons/mo, tons/yr);
 - viii. Metal melted in induction furnaces (tons/mo, tons/yr);
 - ix. VOM and HAP -containing materials used in the Arkomax department (ceramic core making) and Cast Alnico Department (oil core and Isocure core making, metalworking) (tons/month and tons/year);
 - x. VOM and HAP content of materials used in Arkomax department (ceramic core making) and Cast Alnico Department (oil core and Isocure core making, metal working) (% wt);
 - xi. Natural gas usage for the furnaces, oven, and heaters (mmscf/month, mmscf/year);
 - xii. Hours of operations for the emergency generator (hours/month, hours/year); and
 - xiii. Monthly and annual emissions of CO, NO_x, PM, PM₁₀, PM_{2.5}, SO₂, VOM and HAPs from the Arkomax Department, Cast Alnico Department, and Precision Thin Metal Department with supporting calculations (tons/month, tons/year).
- b. All records and logs required by Condition 27(a) of 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.

28. Pursuant to 40 CFR 60.7(a) (4), any owner or operator subject to the provisions of 40 CFR Part 60 shall furnish the Illinois EPA or USEPA written notification or, if acceptable to both the Illinois EPA and USEPA and the owner or operator of a source, electronic notification, as follows:

A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Illinois EPA or USEPA may request additional relevant information subsequent to this notice.

29. 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.

30. Pursuant to 35 Ill. Adm. Code 214.305(a) (3) (C), except as provided in 35 Ill. Adm. Code 214.305(b), (c), and (d), on and after January 1, 2017, the owner or operator of a process emission source must comply with the following:

The owner or operator must notify the Illinois EPA within 30 days after discovery of deviations from any of the requirements in 35 Ill. Adm. Code 214.305(a). At minimum, and in addition to any permitting obligations, such notification must include a description of the deviations, a discussion of the possible cause of the deviations, any corrective actions taken, and any preventative measures taken.

- 31a. Pursuant to 35 Ill. Adm. Code 218.182(d) (6), on and after March 15, 1999:

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) (C), 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:

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 218.990, 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 Part 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.
- 32. The Permittee shall submit a written notification to the Illinois EPA, Bureau of Air, Compliance Section Manager, of the initial startup of each emission unit and control equipment within thirty (30) calendar days of the initial start-up.
- 33a. If there is an exceedance of or a deviation from the requirements of this permit, as determined by the records required by this permit or otherwise, the Permittee shall submit a report to the Illinois EPA's Bureau of Air Compliance Section in Springfield, Illinois within thirty (30) days after the exceedance or deviation. The report shall identify the duration and the emissions impact of the exceedance or deviation, a copy of the relevant records and information to resolve the exceedance or deviation, and a description of the efforts to reduce emissions from, and the duration of exceedance or deviation, and to prevent future occurrences of any such exceedance or deviation.
- b. One (1) copy of required reports and notifications shall be sent to:
 - i. Via mail or overnight delivery:

Illinois Environmental Protection Agency
Bureau of Air
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276
 - ii. In addition to the paper copy of the test notifications, written test plan and final test report, an electronic copy of the test notifications, written test plan and final test report shall be sent to:

epa.boa.smu@illinois.gov

It should be noted that during the review of this application it was determined that your facility has the potential to emit more than 50 tons per year of a Volatile Organic Material and will be classified as a major source under the Clean Air Act Permit Program (CAAPP). To avoid the CAAPP permitting requirements, you may want to consider applying for a Federally Enforceable State Operating Permit (FESOP) if your actual VOM emissions are below the major threshold level. A FESOP is an operating permit which contains federally enforceable limits in the form of permit conditions which effectively restrict the potential emissions of a source to below major source threshold, thereby excluding the source from the CAAPP. Please contact the Permit Section at 217/785-1705 to request the necessary

application forms.

It should be noted that the natural gas fired HVAC equipment, 47 hp diesel-powered emergency generator, manual and hand operated sanding operations, and are exempt from state permit requirements pursuant to 35 Ill. Adm. Code 201.146(d), (n) and (aa) (2).

If you have any questions about this permit, please contact Mohamed Otry at 217/785-1705.

A handwritten signature in blue ink that reads "William D. Marr".

William D. Marr
Manager, Permit Section
Bureau of Air

WDM:MIO:tan



STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
P. O. BOX 19506
SPRINGFIELD, ILLINOIS 62794-9506

**STANDARD CONDITIONS FOR CONSTRUCTION/DEVELOPMENT PERMITS
ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY**

July 1, 1985

The Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111-1/2, Section 1039) authorizes the Environmental Protection Agency to impose conditions on permits which it issues.

The following conditions are applicable unless superseded by special condition(s).

1. Unless this permit has been extended or it has been voided by a newly issued permit, this permit will expire one year from the date of issuance, unless a continuous program of construction or development on this project has started by such time.
2. The construction or development covered by this permit shall be done in compliance with applicable provisions of the Illinois Environmental Protection Act, and Regulations adopted by the Illinois Pollution Control Board.
3. There shall be no deviations from the approved plans and specifications unless a written request for modification, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.
4. The Permittee shall allow any duly authorized agent of the Agency upon the presentation of credentials, at reasonable times:
 - a. to enter the Permittee's property where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit,
 - b. to have access to and copy any records required to be kept under the terms and conditions of this permit,
 - c. to inspect, including during any hours of operation of equipment constructed or operated under this permit, such equipment and any equipment required to be kept, used, operated, calibrated and maintained under this permit,
 - d. to obtain and remove samples of any discharge or emission of pollutants, and
 - e. to enter and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.
5. The issuance of this permit:
 - a. shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located,
 - b. does not release the Permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities,
 - c. does not release the Permittee from compliance with the other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations,
 - d. does not take into consideration or attest to the structural stability of any units or parts of the project, and

- e. in no manner implies or suggests that the Agency (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.
- 6.
- a. Unless a joint construction/operation permit has been issued, a permit for operation shall be obtained from the Agency before the equipment covered by this permit is placed into operation.
 - b. For purposes of shakedown and testing, unless otherwise specified by a special permit condition, the equipment covered under this permit may be operated for a period not to exceed thirty (30) days.
7. The Agency may file a complaint with the Board for modification, suspension or revocation of a permit:
- a. upon discovery that the permit application contained misrepresentations, misinformation or false statements or that all relevant facts were not disclosed, or
 - b. upon finding that any standard or special conditions have been violated, or
 - c. upon any violations of the Environmental Protection Act or any regulation effective thereunder as a result of the construction or development authorized by this permit.