

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT -- NESHAP SOURCE

PERMITTEE

C. E. Niehoff & Company  
Attn: John Silva  
2021 Lee Street  
Evanston, Illinois 60202

<u>Application No.:</u> 10020012	<u>I.D. No.:</u> 031081AFV
<u>Applicant's Designation:</u>	<u>Date Received:</u> February 5, 2010
<u>Subject:</u> Automotive Parts Manufacturing Plant	
<u>Date Issued:</u>	<u>Expiration Date:</u>
<u>Location:</u> 2021 Lee Street, Evanston, Cook County, 60202	

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

Five (5) Coating Spray Booths (Coating Spray Booths 1 Through 5);  
One (1) Solvent (Varnish) Impregnator;  
One (1) Rotor Laminator;  
Two (2) Vapor Degreasing Units (Degreasers 2 and 3);  
One (1) Solvent Still;  
Two (2) Parts Washers (Solvent Parts Washers 1 and 2);  
Two (2) Solvent Flux Removers;  
Solvent Wipe Cleaning;  
Eleven (11) Resin Potting Stations;  
One (1) Varnish Dip Coating Tank;  
Two (2) Powder Coater Stations with Natural Gas-Fired Drying Ovens;  
Two (2) Paint Gun Cleaners; and  
Natural Gas-Fired Comfort Heating Units;

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), 10 tons/year for any single hazardous air pollutant (HAP), and 25 tons/year for 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 establish federally enforceable production and operating limitations, which restrict a potential to emit to less than 10 tons/year for any individual Hazardous Air Pollutant (HAP), and 25 tons/year of any combination of such HAPs so that the source

is not being subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Surface Coating of Miscellaneous Metal Parts and Products, 40 CFR 63 Subpart MMMM.

- iii. To limit the emissions of VOM from the construction of new emission units and other modifications at the source, which occurred without first obtaining construction permit(s) between November 15, 1992 and June 15, 2005 (the period during which the Chicago area was classified as severe nonattainment for ozone), to less than 25 tons/year. As a result, the source is excluded from the requirements of 35 Ill. Adm. Code Part 203, Major Stationary Sources Construction and Modification.
  - iv. To establish federally enforceable production and operating limitations, which restrict the potential to emit for VOM from emission units not regulated by 35 Ill. Adm. Code 218 Subparts E, or F to less than 25 tons per year so that the source is not subject to the requirements of 35 Ill. Adm. Code Part 218 Subpart TT (Other Emission Units).
- c. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
  - d. This permit supersedes all operating permits for this location.
- 2a. 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 meter (1000 foot) 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 212.301, no person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source.
- d. 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).
3. 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 unit to excess 2000 ppm.

- 4a. 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).
- b. Pursuant to 35 Ill. Adm. Code 218.187(a)(1), on and after April 1, 2011 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 which use organic materials at sources that emit a total of 6.8 kg/day (15 lbs/day) or more of VOM from cleaning operations at the source, in the absence of air pollution control equipment. 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;
- c. Pursuant to 35 Ill. Adm. Code 218.187(b), no owner or operator of a source subject to 35 Ill. Adm. Code 218.187 shall perform any cleaning operation subject to 35 Ill. Adm. Code 218.187 unless the owner or operator meets the requirements in 35 Ill. Adm. Code 218.187(b)(1), (b)(2), or (b)(3):
- i. The VOM content of the as-used cleaning solutions does not exceed the following emissions limitations:

	kg/l	lb/gal
A. Product cleaning during manufacturing process or surface preparation for coating, adhesive, or ink application: Electrical apparatus components and electronic components	0.10	0.83
B. Renair and maintenance cleaning: Electrical apparatus components and electronic components	0.10	0.83
  - ii. The composite vapor pressure of each as-used cleaning solution used does not exceed 8.0 mmHg measured at 20° C (68° F): or
  - iii. An afterburner or carbon adsorber is installed and operated that reduces VOM emissions from the subject cleaning operation by at least 85 percent overall. The owner or operation may use an emissions control system other than an afterburner or carbon adsorber is such device reduces VOM emissions from the subject cleaning operations by at least 85 percent overall, the owner or operator submits a plan to the Agency detailing appropriate monitoring devices, test methods, recordkeeping requirements, and operating parameters for such control device, and such plan is approved by the Agency and USEPA within federally enforceable permit conditions.
- d. Pursuant to 35 Ill. Adm. Code 218.204(j)(2), except as provided in 35 Ill.

Adm. Code 218.205, 218.207, 218.208, 218.212, 218.215 and 218.216, no owner or operator of a coating line shall apply at any time any coating in which the VOM content exceeds the following emission limitations for the Miscellaneous Metal Parts and Products Extreme Performance Coating. The following emission limitations are expressed in units of VOM per volume of coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied at each coating applicator, except where noted. Compounds which are specifically exempted from the definition of VOM should be treated as water for the purpose of calculating the "less water" part of the coating composition. Compliance with 35 Ill. Adm. Code 218 Subpart F must be demonstrated through 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(c) except where noted. (Note: The equation presented in 35 Ill. Adm. Code 218.206 shall be used to calculate emission limitations for determining compliance by add-on controls, credits for transfer efficiency, emissions trades and cross-line averaging.) The emission limitations are as follows:

	kg/l	lb/gal
i. Air dried	0.42	(3.5)
ii. Baked	0.40	(3.3)

- e. 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 source, 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.
- 5a. This permit is issued based on the vapor degreasers and solvent parts washers not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Halogenated Solvent Cleaning, 40 CFR 63 Subpart T, because the solvent cleaning machines 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 source not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Surface Coating of Miscellaneous Metal Parts and Products, 40 CFR 63 Subpart MMMM. This is a result of the federally enforceable production and operating limitations established in this permit, which restrict the potential to emit to less than 10 tons/year for any individual Hazardous Air Pollutant (HAP), and 25 tons/year of any combination of such HAPs.
- c. This permit is issued based on the source not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, 40 CFR 63 Subpart HHHHHH because "spray application of coating" definition is not met.

- d. This permit is issued based on the source not being subject to the National Emission Standards for Hazardous Air Pollutants (NWSHAP) for Nine Metal Fabrication and Finishing Source Categories, 40 CFR Part 63 Subparts A and XXXXXX because source does not use materials that contain or have potential to emit metal fabrication or finishing metal HAP (MFHAP). Pursuant to 40 CFR 63.11514(b), the provisions of 40 CFR 63 Subpart XXXXXX apply to each new and existing affected source listed and defined in 40 CFR 63.11514(b)(1) through (5) if you use materials that contain or have the potential to emit metal fabrication or finishing metal HAP (MFHAP), defined to be the compounds of cadmium, chromium, lead, manganese, and nickel, or any of these metals in the elemental form with the exception of lead. Materials that contain MFHAP are defined to be materials that contain greater than 0.1 percent for carcinogens, as defined by OSHA at 29 CFR 1910.1200(d)(4), and greater than 1.0 percent for noncarcinogens. For the MFHAP, this corresponds to 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.
6. 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/hour (25 mph). Determination of wind speed for the purposes of this rule 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 this rule 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.
- 7a. Pursuant to 35 Ill. Adm. Code 218.187(a)(2)(B)(xii), notwithstanding 35 Ill. Adm. Code 218.187(a)(1) cleaning operations for emission units within the source category for miscellaneous metal parts coating shall be exempt from the requirements of 35 Ill. Adm. Code 218.187(b), (c), (d), (f), and (g).
- b. Pursuant to 35 Ill. Adm. Code 218.209, no owner or operator of a coating line subject to the limitations of 35 Ill. Adm. Code 218.204 is required to meet the limitations of 35 Ill. Adm. Code 218 Subpart G (35 Ill. Adm. Code 218.301 or 218.302), after the date by which the coating line is required to meet 35 Ill. Adm. Code 218.204.
- 8a. Pursuant to 35 Ill. Adm. Code 212.306, all normal traffic pattern access areas surrounding storage piles specified in 35 Ill. Adm. Code 212.304 and all normal traffic pattern roads and parking facilities which are located on mining or manufacturing property shall be paved or treated with water, oils or chemical dust suppressants. All paved areas shall be cleaned on a regular basis. All areas treated with water, oils or chemical dust suppressants shall have the treatment applied on a regular basis, as needed, in accordance with the operating program required by 35 Ill. Adm. Code 212.309, 212.310 and 212.312.
- b. Pursuant to 35 Ill. Adm. Code 212.309(a), the emission units described in 35 Ill. Adm. Code 212.304 through 212.308 and 35 Ill. Adm. Code 212.316 shall be operated under the provisions of an operating program, consistent with

the requirements set forth in 35 Ill. Adm. Code 212.310 and 212.312, and prepared by the owner or operator and submitted to the Illinois EPA for its review. Such operating program shall be designed to significantly reduce fugitive particulate matter emissions.

- c. Pursuant to 35 Ill. Adm. Code 212.310, as a minimum the operating program shall include the following:
  - i. The name and address of the source;
  - ii. The name and address of the owner or operator responsible for execution of the operating program;
  - iii. A map or diagram of the source showing approximate locations of storage piles, conveyor loading operations, normal traffic pattern access areas surrounding storage piles and all normal traffic patterns within the source;
  - iv. Location of unloading and transporting operations with pollution control equipment;
  - v. A detailed description of the best management practices utilized to achieve compliance with 35 Ill. Adm. Code 212 Subpart K, including an engineering specification of particulate collection equipment, application systems for water, oil, chemicals and dust suppressants utilized and equivalent methods utilized;
  - vi. Estimated frequency of application of dust suppressants by location of materials; and
  - vii. Such other information as may be necessary to facilitate the Illinois EPA's review of the operating program.
- d. Pursuant to 35 Ill. Adm. Code 212.312, the operating program shall be amended from time to time by the owner or operator so that the operating program is current. Such amendments shall be consistent with 35 Ill. Adm. Code 212 Subpart K and shall be submitted to the Illinois EPA for its review.
- 9a. 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 centimeters (36 inches), 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 218.183(a), no person shall operate an open top vapor degreaser unless:
- i. The cover of the degreaser is closed when workloads are not being processed through the degreaser;
  - ii. Solvent carry out emissions are minimized by:
    - A. Racking parts to allow complete drainage;
    - B. Moving parts in and out of the degreaser at less than 3.3 meters/minute (11 feet/minute);
    - C. Holding the parts in the vapor zone until condensation ceases;
    - D. Tipping out any pools of solvent on the cleaned parts before removal from the vapor zone; and

- E. Allowing parts to dry within the degreaser until visually dry.
  - iii. Porous or absorbent materials, such as cloth, leather, wood or rope, are not degreased;
  - iv. Less than half of the degreaser's open top area is occupied with a workload;
  - v. The degreaser is not loaded to the point where the vapor level would drop more than 10 centimeters (4 inches) when the workload is removed from the vapor zone;
  - vi. Spraying is done below the vapor level only;
  - vii. Solvent leaks are repaired immediately;
  - viii. 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;
  - ix. Water is not visually detectable in solvent exiting from the water separator; and
  - x. Exhaust ventilation exceeding 20 cubic meters per minute per square meter (65 cubic feet per minute per square foot) of degreaser open area is not used, unless necessary to meet the requirements of the Occupational Safety and Health Act (29 U.S.C. Section 651 et seq.).
- d. Pursuant to 35 Ill. Adm. Code 218.183(b), no person shall operate an open top vapor degreaser unless:
- i. The degreaser is equipped with a cover designed to open and close easily without disturbing the vapor zone;
  - ii. The degreaser is equipped with the following switches:
    - A. One which shuts off the sump heat if the amount of condenser coolant is not sufficient to maintain the designed vapor level; and
    - B. One which shuts off the spray pump if the vapor level drops more than 10 centimeters (4 inches) below the bottom condenser coil; and
    - C. One which shuts off the sump heat source when the vapor level exceeds the design level.
  - iii. A permanent conspicuous label summarizing the operating procedure is affixed to the degreaser;
  - iv. The degreaser is equipped with one of the following devices:
    - A. A freeboard height of 3/4 of the inside width of the degreaser tank or 91 centimeters (36 inches), whichever is less; and if

the degreaser opening is greater than 1 square meter (10.8 square feet), a powered or mechanically assisted cover; 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, an enclosed design or a carbon adsorption system.
- e. Pursuant to 35 Ill. Adm. Code 218.187(c), the owner or operator of a subject source shall demonstrate compliance with 35 Ill. Adm. Code 218.187 by using the applicable test methods and procedures specified in 35 Ill. Adm. Code 218.187(g) and by complying with the recordkeeping and reporting requirements specified in 35 Ill. Adm. Code 218.187(e).
- f. Pursuant to 35 Ill. Adm. Code 218.187(d), the owner or operator of a source subject to the requirements of 35 Ill. Adm. Code 218.187 shall comply with the following for each subject cleaning operation:
  - i. Cover open containers and properly cover and store applicators used to apply cleaning solvents;
  - ii. Minimize air circulation around the cleaning operation;
  - iii. Dispose of all used cleaning solutions, cleaning towels, and applicators used to apply cleaning solvents in closed containers; or
  - iv. Utilize equipment practices that minimize emissions.
- 10a. 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 vapor degreasers and solvent parts washers shall only be operated with a cleaning solvent containing less than 5 percent by weight 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 as a cleaning and/or drying agent.
- 11a. This permit is issued based on this source not being a participating source in the Emissions Reduction Market System (ERMS), 35 Ill. Adm. Code Part 205, pursuant to 35 Ill. Adm. Code 205.200. This is based on the source's actual VOM emissions during the seasonal allotment period from May 1 through September 30 of each year being less than 10 tons and the source's baseline emissions also being less than 10 tons.
- b. In the event that the source's VOM emissions during the seasonal allotment period equal or exceed 10 tons, the source shall become a participating source in 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, unless the source obtains exemption from the ERMS by operating with seasonal VOM emissions of no more than 15 tons pursuant to

a limitation applied for and established in a Clean Air Act Permit Program (CAAPP) permit or a Federally Enforceable State Operating Permit (FESOP).

- c. Pursuant to 35 Ill. Adm. Code 205.316(a), any participating or new participating source shall not operate without a CAAPP permit or FESOP. Pursuant to 35 Ill. Adm. Code 205.316(a)(2), if a participating or new participating source does not have a CAAPP permit containing ERMS provisions and the source elects to obtain a permit other than a CAAPP permit, the source shall apply for and obtain a FESOP that contains, in addition to other necessary provisions, federally enforceable ERMS provisions, including baseline emissions, allotment for each seasonal allotment period, identification of any units deemed to be insignificant activities for purposes of the ERMS, emissions calculation methodologies, and provisions addressing all other applicable requirements of 35 Ill. Adm. Code Part 205.

12a. VOM emissions and operation of the five coating spray booths (Coating Spray Booths 1 through 5), and the solvent impregnator shall not exceed the following limits:

- i. Material Usage:

<u>Material</u>	Material Usage	
	<u>(Gals/Mo)</u>	<u>(Gals/Yr)</u>
Coatings, Adhesives, & Thinners	700	7,000

- ii. VOM Emissions:

<u>Material</u>	VOM	VOM Emissions	
	<u>Content</u>	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
Coatings, Adhesives, & Thinners	3.5	1.23	12.25

- iii. These limits define the potential emissions of VOM and are based on maximum material usages, maximum VOM content, and the equation for VOM usage in Condition 13(e). The above limitations are being established in this permit pursuant to Title I of the Clean Air Act, specifically 35 Ill. Adm. Code Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (PSD). The source has requested that the Illinois EPA establish emission limitations and other appropriate terms and conditions in this permit that limit the VOM emissions from the five coating spray booths below the levels that would trigger the applicability of these rules.

- b. Emissions and operation of the existing flux remover (constructed in 1984), solvent wipe cleaning, paint gun cleaning, and the two solvent parts washers shall not exceed the following limits:

- i. Material Usage:

<u>Material</u>	VOM Material Usage	
	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
Solvent Flux Remover	0.20	2.03
Lubricants, Greases, Fillers, &	0.16	1.60

Resins		
Wipe Cleaning & Paint Gun Cleaning	0.54	5.35
Parts Washers	0.10	1.00

ii. VOM Emissions:

<u>Material</u>	VOM Emissions	
	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
Solvent Flux Remover	0.20	2.03
Lubricants, Greases, Fillers, & Resins	0.16	1.60
Wipe Cleaning & Paint Gun Cleaning	0.54	5.35
Parts Washers	0.10	<u>1.00</u>
	Total:	9.87

iii. These limits define the potential emissions of VOM and are based on maximum material usages, maximum VOM content, and the equation for VOM usage in Condition 13(e). The above limitations are being established in this permit pursuant to Title I of the Clean Air Act, specifically 35 Ill. Adm. Code Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (PSD).

c. HAP emissions and operation of the five coating spray booths (Coating Spray Booths 1 through 5), the solvent impregnator existing flux remover (constructed in 1984), solvent wipe cleaning, paint gun cleaning, and the two solvent parts washers shall not exceed the following limits:

<u>Material</u>	Highest Single HAP Emissions		Combined HAP Emissions	
	<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>	<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>
Coatings, Adhesives, & Thinners <sup>1, 2</sup>	0.11	1.05	0.39	3.85
Solvent Flux Remover <sup>3</sup>	0.92	9.23	0.92	9.23
Lubricants, Greases, Fillers, & Resins <sup>4</sup>	0.03	0.32	0.03	0.32
Wipe Cleaning & Paint Gun Cleaning <sup>4, 5</sup>	0.16	1.60	0.48	4.80
Parts Washers <sup>3</sup>	0.01	<u>0.01</u>	<u>0.01</u>	<u>0.01</u>
	Totals:	9.24 <sup>3</sup>		<u>18.21</u>

<sup>1</sup> MIBK

<sup>2</sup> Xylenes

<sup>3</sup> Perchloroethylene

<sup>4</sup> Toluene

<sup>5</sup> Methanol

These limits define the potential emissions of VOM and HAP are based on maximum material usages, maximum VOM content, and the equation for VOM usage

in Condition 13(e). The above limitations are being established in this permit pursuant to Title I of the Clean Air Act, specifically 35 Ill. Adm. Code Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (PSD).

- d. This permit is issued based on negligible emissions of particulate matter from the two powder coater stations. For this purpose emissions from each emission source shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year.
- e. Emission and operation of all natural gas combustion units shall not exceed the following limits:

Natural Gas Usage		Pollutant	Emission	Emissions	
(mmscf/Mo)	(mmscf/Yr)		Factor	(Tons/Mo)	(Tons/Yr)
5.00	50.0	CO	84.0	0.21	2.10
		NO <sub>x</sub>	100.0	0.25	2.50
		PM	7.6	0.02	0.19
		SO <sub>2</sub>	0.6	0.01	0.02
		VOM	5.5	0.01	0.14

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

- f. Solvent usage and VOM emissions from rotor laminator; degreasers #2 and #3; new solder flux remover (constructed in 2010); and varnish dip tank combined shall not exceed the following limits:

Emission Unit	VOM Usage		VOM Emissions	
	(Tons/Mo)	(Tons/Yr)	(Tons/Mo)	(Tons/Yr)
Rotor Laminator	0.10	1.00	0.10	1.00
Varnish dip tank	0.10	1.00	0.10	1.00
Degreasers #2 & #3	1.80	18.02	1.80	18.02
Solder Flux Remover	1.20	12.00	1.20	12.00
			Total:	32.02

- iii. These limits define the potential emissions of VOM and are based on maximum material usages, maximum VOM content, and the equation for VOM usage in Condition 13(e). The above limitations are being established in this permit pursuant to Title I of the Clean Air Act, specifically 35 Ill. Adm. Code Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (PSD).
- g. VOM and HAP for the five coating spray booths (Coating Spray Booths 1 through 5), the solvent impregnator existing flux remover (constructed in 1984), solvent wipe cleaning, paint gun cleaning, and the two solvent parts washers. The following equations shall be used to calculate VOM usage:

$$T_e = \sum_i^n A_i B_i d_i$$

Where:

$T_e$  = VOM and HAP Usage in units of lb/month;

$n$  = Number of different VOM and HAP containing materials used each month;

$i$  = Subscript denoting an individual VOM and HAP containing materials;

$A_i$  = Weight of VOM and HAP per volume of each individual VOM and HAP containing materials used each month in units of lbs VOM/gallon or weight percent of VOM of each coating used each month (% weight); and

$B_i$  = Amount of each individual VOM and HAP containing materials used each month in units of gallons/month or lbs/month; and

$D_i$  = Density of VOM and HAP containing materials (lbs/gallon).

- h. This permit is issued based on negligible emissions of volatile organic material from the solvent still. For this purpose emissions 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).
- 13a. 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 15 and 16 shall be performed upon a written request from the Illinois EPA by a qualified independent testing service.

14. 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.
- 15a. Pursuant to 35 Ill. Adm. Code 218.187(g)(1), testing to demonstrate compliance with the requirements of 35 Ill. Adm. Code 218.187 shall be conducted by the owner or operator within 90 days after a request by the Illinois EPA. Such testing shall be conducted at the expense of the owner or operator and the owner or operator shall notify the Illinois EPA in writing 30 days in advance of conducting such testing to allow the Illinois EPA to be present during such testing;
- b. Pursuant to 35 Ill. Adm. Code 218.187(g)(2), testing to demonstrate compliance with the VOM content limitations in 35 Ill. Adm. Code 218.187(b)(1), and to determine the VOM content of cleaning solvents and cleaning solutions, shall be conducted upon request of the Illinois EPA, as follows:
  - i. The applicable test methods and procedures specified in 35 Ill. Adm. Code 218.105(a) shall be used, provided, however, Method 24 shall be used to demonstrate compliance; or
  - ii. The manufacturer's specifications for VOM content for cleaning solvents may be used if such manufacturer's specifications are based on results of tests of the VOM content conducted in accordance with methods specified in 35 Ill. Adm. Code 218.105(a), provided, however, Method 24 shall be used to determine compliance.
- c. Pursuant to 35 Ill. Adm. Code 218.187(g)(3), testing to determine the VOM composite partial vapor pressure of cleaning solvents, cleaning solvent concentrates, and as-used cleaning solutions shall be conducted in accordance with the applicable methods and procedures specified in 35 Ill. Adm. Code 218.110;
- d. 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.
- 16a. Pursuant to 40 CFR 63.10(b)(1), the owner or operator of an affected source subject to the provisions of 40 CFR Part 63 shall maintain files of all information (including all reports and notifications) required by 40 CFR Part 63 recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

- b. 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.
17. 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.
- 18a. 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)(3), all sources complying with 35 Ill. Adm. Code 218.187 pursuant to the requirements of 35 Ill. Adm. Code 218.187(b)(1) shall collect and record the following information for each

cleaning solution used:

- i. For each cleaning solution which is prepared at the source with automatic equipment:
    - A. The name and identification of each cleaning solution;
    - B. The VOM content of each cleaning solvent in the cleaning solution;
    - C. Each change to the setting of the automatic equipment, with date, time, description of changes in the cleaning solution constituents (e.g., cleaning solvents), and a description of changes to the proportion of cleaning solvent and water (or other non-VOM);
    - D. The proportion of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution;
    - E. The VOM content of the as-used cleaning solution with supporting calculations; and
    - F. A calibration log for the automatic equipment, detailing periodic checks;
  - ii. For each batch of cleaning solution which is not prepared at the source with automatic equipment:
    - A. The name and identification of each cleaning solution;
    - B. Date, time of preparation, and each subsequent modification of the batch;
    - C. The VOM content of each cleaning solvent in the cleaning solution;
    - D. The total amount of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution; and
    - E. The VOM content of the as-used cleaning solution, with supporting calculations. For cleaning solutions that are not prepared at the site but are used as purchased, the manufacturer's specifications for VOM content may be used if such manufacturer's specifications are based on results of tests of the VOM content conducted in accordance with methods specified in 35 Ill. Adm. Code 218.105(a);
- d. Pursuant to 35 Ill. Adm. Code 218.187(e)(4), all sources complying with 35 Ill. Adm. Code 218.187 pursuant to the requirements of 35 Ill. Adm. Code 218.187(b)(2) shall collect and record the following information for each cleaning solution used:
- i. The name and identification of each cleaning solution;
  - ii. Date, time of preparation, and each subsequent modification of the batch;

- iii. The molecular weight, density, and VOM composite partial vapor pressure of each cleaning solvent, as determined in accordance with the applicable methods and procedures specified in 35 Ill. Adm. Code 218.110;
  - iv. The total amount of each cleaning solvent used to prepare the as-used cleaning solution; and
  - v. The VOM composite partial vapor pressure of each as-used cleaning solution, as determined in accordance with the applicable methods and procedures specified in 35 Ill. Adm. Code 218.110.
- e. Pursuant to 35 Ill. Adm. Code 218.187(e)(7) 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.
- f. Pursuant to 35 Ill. Adm. Code 218.211(c)(2), any owner or operator of a coating line subject to the limitations of 35 Ill. Adm. Code 218.204 and complying by means of 35 Ill. Adm. Code 218.204 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.
  - ii. The weight of VOM per volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each day on each coating line.
- 19a. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:
- i. Name and identification number of each coating as applied or cleanup solvent each coating line;
  - ii. Volume of each coating as applied or cleanup solvent used for the day (gallons/month and gallons/year);
  - iii. The VOM and HAP content of each coating as applied or cleanup solvent used (% by weight);
  - iv. Volume of solvent used for solvent flux remover (gallons/month and gallons/year):
  - v. The VOM and HAP content of each solvent used for flux remover(% by weight);
  - vi. Natural gas usage (mmscf/month and mmscf/year); and
  - vii. 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 and tons/year).
- b. The Permittee shall maintain the following records to allow the confirmation of actual VOM emissions during the seasonal allotment period:

- i. Records of operating data and other information for each individual emission unit or group of related emission units at the source, 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 that may be specified in this permit; and
    - iii. Total VOM emissions from the source, in tons, during each seasonal allotment period, which shall be compiled by November 30 of each year.
  - 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.
20. Pursuant to 40 CFR 63.10(d)(1), notwithstanding the requirements in this paragraph or 40 CFR 63.10(e), and except as provided in 40 CFR 63.16, the owner or operator of an affected source subject to reporting requirements under 40 CFR Part 63 shall submit reports to the Illinois EPA or USEPA in accordance with the reporting requirements in the relevant standard(s).
21. 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.
- 22a. 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)(2), all sources subject to the requirements of 35 Ill. Adm. Code 218.187 shall:
    - i. By April 1, 2011, or upon initial start-up of the source, whichever is later, submit a certification to the Illinois EPA that includes:
      - A. A declaration that all subject cleaning operations are in compliance with the requirements of 35 Ill. Adm. Code 218.187;
      - B. Identification of each subject cleaning operation and each VOM-containing cleaning solution used as of the date of certification in such operation;

- C. The limitation with which each subject cleaning operation will comply (i.e., the emissions control system requirement, VOM content limitation, or vapor pressure limitation), and if complying with the emissions control system requirement, what type of emissions control system will be used;
  - D. Initial documentation that each subject cleaning operation will comply with the applicable limitation, including copies of manufacture's specifications, test results (if any), formulation data, and calculations;
  - E. Identification of the method(s) that will be used to demonstrate continuing compliance with the applicable limitations;
  - F. A description of the practices and procedures that the source will follow to ensure compliance with the limitations in 35 Ill. Adm. Code 218.187(d); and
  - G. A description of each cleaning operation exempt pursuant to 35 Ill. Adm. Code 218.187(a)(2), if any, and a listing of the emission unit(s) on which the exempt cleaning operation is performed;
- ii. At least 30 calendar days before changing the method of compliance between 35 Ill. Adm. Code 218.187(b)(1), (b)(2), and (b)(3), notify the Illinois EPA in writing of such change. Such notification shall include a demonstration of compliance with the newly applicable subsection;
- c. Pursuant to 35 Ill. Adm. Code 218.211(c)(3), any owner or operator of a coating line subject to the limitations of 35 Ill. Adm. Code 218.204 and complying by means of 35 Ill. Adm. Code 218.204 shall notify the Illinois EPA in the following instances:
    - i. Any record showing violation of 35 Ill. Adm. Code 218.204 shall be reported by sending a copy of such record to the Illinois EPA within 30 days following the occurrence of the violation.
    - ii. At least 30 calendar days before changing the method of compliance from 35 Ill. Adm. Code 218.204 to 35 Ill. Adm. Code 218.205 or 35 Ill. Adm. Code 218.207, the owner or operator shall comply with all requirements of 35 Ill. Adm. Code 218.211(d)(1) or (e)(1), respectively. Upon changing the method of compliance from 35 Ill. Adm. Code 218.204 to 35 Ill. Adm. Code 218.205 or 35 Ill. Adm. Code 218.207, the owner or operator shall comply with all requirements of 35 Ill. Adm. Code 218.211(d) or (e), respectively.
  - 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.
- 23a. 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. Two (2) copies of required reports and notifications shall be sent to:

Illinois Environmental Protection Agency  
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 Agency  
Division of Air Pollution Control  
9511 West Harrison  
Des Plaines, Illinois 60016

If you have any questions on this permit, please call George Kennedy at 217/782-2113.

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

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

ECB:GMK:jws

cc: Illinois EPA, FOS Region 1  
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emission of the coating 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 the plant. The resulting maximum emissions are below the threshold levels (e.g., 100 tons per year of VOM, 10 tons/year for a single HAP, and 25 tons/year for all HAPs) 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 VOM, HAP and natural gas usage is less than that allowed in this permit.

<u>Emission Unit</u>	E M I S S I O N S (Tons/Year)						<u>Total HAPs</u>
	<u>CO</u>	<u>NO<sub>x</sub></u>	<u>PM</u>	<u>SO<sub>2</sub></u>	<u>VOM</u>	<u>Single HAP</u>	
Coating Spray Booths and Impregnator					12.25	1.05 <sup>1, 2</sup>	3.85
Solvent Flux Remover (constructed in 1984)					2.03	8.90 <sup>3</sup>	8.90
Resin Potting Stations					1.60	0.32 <sup>4</sup>	0.32
Wipe Cleaning & Paint Gun Cleaning					5.35	1.60 <sup>4, 5</sup>	4.80
Parts Washers					1.00	0.01 <sup>3</sup>	0.01
Two Powder Coaters			0.88				
Natural Gas Combustion	2.10	2.50	0.19	0.02	0.14		
Rotor Laminator					1.00		
Varnish Dip Tank					1.00	----	----
Vapor Degreasers #2 & #3					18.02	----	----
Solder Flux Remover (constructed in 2010)					12.00	----	----
Solvent Still					0.44	----	----
Totals	<u>2.10</u>	<u>2.50</u>	<u>1.07</u>	<u>0.02</u>	<u>54.83</u>	<u>8.91</u>	<u>17.88</u>

- <sup>1</sup> MIBK
- <sup>2</sup> Xylenes
- <sup>3</sup> Perchloroethylene
- <sup>4</sup> Toluene
- <sup>5</sup> Methanol