

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT -- RENEWAL

PERMITTEE

Midwestern Rust Proof, Inc.
Attn: Heinz Titze
3636 North Kilbourn Avenue
Chicago, Illinois 60641

Application No: 73031889

I.D. No: 031600CVR

Applicant's Designation:

Date Received: July 6, 2006

Subject: Electroplating Facility

Date Issued: October 23, 2007

Expiration Date: October 23, 2012

Location: 3636 North Kilbourn Avenue, Chicago

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of an electroplating facility with the following equipment:

Department #1 (Bonderite):	Department #7 (Zinc Auto Rack):
Alkaline Cleaner Tank #1-1	Alkaline Cleaner Tank #7-1
Zinc Phosphate Tanks #1-4, 1-5	Electro-Cleaner Tanks #7-3, 7-13
Conditioner Tank #1-6	Acid Cleaning Tank #7-8*
Sealer Tank #1-8	Acid Conditioner Tank #7-17
	Zinc Electroplating Tank #7-18
Department #2 (Black Oxide):	Brightener Tank #7-22
Alkaline Cleaner Tanks #2-2	
Acid Cleaning Tank #2-4*	Department #9 (Parkerize Barrel):
Black Oxide Tank #2-7	Alkaline Cleaner Tank #9-1, 9-2
Oil Coating Containers #2-10, 2-11	Descaler Tank #9-4
	Acid Cleaning Tank #9-7*
Department #3 (Parkerize Barrel):	Zinc Phosphate Tank #9-11
Alkaline Cleaner Tanks #3-1, 3-3	Oil Coating Tank #9-14
Acid Cleaning Tank #3-6*	
Conditioner Tank #3-8	Department #10 (Passivation):
Zinc Phosphate Tank #3-10	Passivation Tank #10-1
Sealer Tank #3-13	
Oil Coating Tank #3-14, 3-17, 3-19	Department #11 (Zinc Auto Barrel):
Chromate Coating Tank #3-15	Alkaline Cleaner Tank #11-21
Carbon Black Coating Tank #3-16	Electro-Cleaner Tank #11-23
	Acid Cleaning Tank #11-26
Department #4 (Parkerize Still):	Zinc Electroplating Tank #11-31
Alkaline Cleaner Tank #4-2	Brightener Tanks #11-13, 11-33
Zinc Phosphate Tank #4-4	
Sealer Tank #4-6	
Oil Coating Tank #4-7	

Department #5 (Parco Lubrite):	Miscellaneous Processes:
Cleaner Tank #5-1 (Cold Degreaser)	Zinc Stripper Tank ZS-1295-297
Alkaline Tank #5-3	Acid Cleaning Tank ZS-3
Conditioner Tank #5-5	Ovens O1, O2 and O3
Manganese Phosphate Tank #5-6	Sludge Dryer SD1
Sealer Tanks #5-9, 5-18	Boilers #1 and #2
Oil Coating Tanks #5-10, 5-12, 5-13	Make-Up Air Units
Department #6 (Zinc Barrel):	
Alkaline Cleaner Tank #6-2	
Electro-Cleaner Tank #6-4	
Acid Cleaning Tank #6-6	
Zinc Electroplating Tanks #6-8, 6-9	
Brightener Tanks #6-12, 6-30	
Lacquer Tank #6-24	

* Controlled with a scrubber

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 VOM, 10 tons/year for a single HAP and 25 tons/year of any combination of such HAPs). As a result, the source is excluded from the requirements to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit are described in Attachment.
 - ii. To limit the potential emissions of VOM from the source to less than 25 tons/year. As a result, the source is excluded from the requirement of 35 Ill. Adm. Code Part 205, Emission Reduction Market System. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permit(s) for this location.
2. This permit is issued based on hydrochloric acid pickling operations not being subject to 40 CFR Part 63, Subpart CCC: National Emission Standards for Hazardous Air Pollutants from Steel Pickling due to pickling tanks temperature being less than 100°F specified in 40 CFR 63.1155(a)(1).
- 3a. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units

subject to the requirements of 35 Ill. Adm. Code 212.122, pursuant to 35 Ill. Adm. Code 212.123(a), except as allowed by 35 Ill. Adm. Code 212.123(b) and 212.124.

- b. No person shall cause or allow any visible emissions of fugitive particulate matter from any process, including any material handling or storage activity beyond the property line of the emission source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 Ill. Adm. Code 212.301 and 212.314.
- c. Pursuant to 35 Ill. Adm. Code 212.309(a), the emission units described in 35 Ill. Adm. Code 212.304 through 212.308 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.

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.

- d. 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 this Subpart, 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,
- e. 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 subsection (c) of 35 Ill. Adm. Code 212.321.
- 4. Pursuant to 35 Ill. Adm. Code 214.301, no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to excess 2000 ppm.
- 5a. Pursuant to 35 Ill. Adm. Code 218.204, 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 specified coating. The following emission limitations are expressed in units of VOM per volume of coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied at each coating applicator, except where noted. Compounds which are specifically exempted from the definition of VOM should be treated as water for the purpose of calculating the "less water" part of the coating composition. 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. The emission limitations are as follows:

	kg/l	lb/gal
Miscellaneous Metal Parts and Products Coating		
All other coatings		
Air Dried	0.40	(3.3)

- 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.
- c. Pursuant to 35 Ill. Adm. Code 218.301, no person shall cause or allow the discharge of more than 3.6 kg/hour (8 lbs/hour) of organic material into the atmosphere from any emission unit, except as provided in 35

Ill. Adm. Code 218.302, 218.303, or 218.304 and the following exception: If no odor nuisance exists the limitation of 35 Ill. Adm. Code 218 Subpart G shall only apply to photochemically reactive material.

- 6a. 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)(2)(B), 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).
- 7. In the event that the operation of this emission unit 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.
- 8a. Operation and hydrochloric acid (HCl) emissions from all acid cleaning tanks shall not exceed the following limits:

<u>Tank Type</u>	<u>Metal Throughput</u>		<u>Emission Factor</u> (lb/ton)	<u>HCl Emission</u>	
	(ton/mo)	(ton/yr)		(lb/mo)	(ton/yr)
Controlled	1,000	10,000	0.3	300	1.5
Uncontrolled	25	215	4.7	118	0.5

These limits are based on the maximum production rate, the usage of 197 tons/yr of hydrochloric acid (concentration 31.5%) and the tanks operating at room temperature.

- b. VOM usage and emissions of the coating operations shall not exceed 1.5 tons/month and 11.6 tons/year.
- c. The VOM emissions from the use of VOM-containing additives in the process tanks shall not exceed 0.5 tons/month and 3.9 tons/year.
- d. The VOM emissions from the degreaser operations shall not exceed 0.4 tons/month and 3.2 tons/year.
- e. The VOM and HAP emissions shall be calculated using the following equation:

$$E = [\sum P_i \times C_i] / 2,000 \text{ where}$$

E - VOM/HAP emissions (tons);

P_i - material usage (gallons);

C_i - VOM/HAP content of materials used (lbs/gallon);

f. Emissions and operation of the all natural gas combustion sources shall not exceed the following limits:

i. Natural Gas Usage: 38 mmscf/month, 455 mmscf/year

ii. Emissions from the combustion of natural gas:

<u>Pollutant</u>	<u>Emission Factor (lb/mmscf)</u>	<u>Emissions (Ton/Mo) (Ton/Yr)</u>	
Nitrogen Oxides (NO _x)	100	1.9	22.8
Carbon Monoxide (CO)	84	1.6	19.1
Particulate Matter (PM)	7.6	0.1	1.7
Volatile Organic Materials (VOM)	5.5	0.1	1.3

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

g. This permit is issued based on negligible emissions of particulate matter from thirty-nine processing tanks. For this purpose, emission from each tank shall not exceed nominal emission rates of 0.05 lb/hour and 0.22 ton/year.

h. The emissions of Hazardous Air Pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act shall not exceed 0.9 tons/month and 9.0 tons/year of any single HAP and 2.25 tons/month and 22.5 tons/year of any combination of such HAPs. As a result of this condition, this permit is issued based on the emissions of any HAP from this source not triggering the requirement to obtain a CAAPP permit from the Illinois EPA.

9. 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).

10. 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.

11a. 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.

- b. Pursuant to 35 Ill. Adm. Code 218.182(d)(2), all persons subject to the requirements of 35 Ill. Adm. Code 218.182(c)(2)(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; and
 - iv. The vapor pressure of the solvent measured in mmHg at 20° C (68° F).

- c. Pursuant to 35 Ill. Adm. Code 218.211(c)(2), any owner or operator of a coating line subject to the 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;

- d. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:
 - i. Metal throughput in acid cleaning tanks (tons/month, tons/year) separately for controlled and uncontrolled tanks;
 - ii. Hydrochloric acid usage (tons/month and tons/year) and its concentration (%);
 - iii. Usage of VOM and HAP-containing materials (gals/month, gals/year) and their VOM and HAP content (lbs/gallon);
 - iv. Natural gas usage (mmscf/mo, mmscf/yr); and
 - v. Monthly and annual CO, NO_x, PM, VOM and HAP emissions with supporting calculations (tons/month and tons/year).
12. 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) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to the Illinois EPA or USEPA request for records during the course of a source inspection.
- 13a. 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.
- b. If there is an exceedance of or 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/deviation. The report shall include the emissions released in accordance with the record keeping requirements, a copy of the

relevant records, and a description of the exceedances or deviations and efforts to reduce emissions and future occurrences.

14. Two (2) copies of required reports and notifications shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance and Enforcement 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, please call Valeriy Brodsky at 217/782-2113.

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

Date Signed: _____

ECB:VJB:jws

cc: Illinois EPA, FOS Region 1
Lotus Notes

ATTACHMENT A

This attachment provides a summary of the maximum emission from the Metal Finishing Plant operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Agency used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emissions are well below the levels (e.g., 100 tons per year of VOM, 10 tons per year of any single HAP and 25 tons per year of a combination of 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 material is handled, and control measures are more effective than required in this permit.

<u>Emission Units</u>	<u>Emissions (tons/year)</u>					
	<u>VOM</u>	<u>NO_x</u>	<u>CO</u>	<u>PM</u>	<u>Single HAP</u>	<u>Total HAP</u>
Acid Cleaning Tanks					2.0	
Coating Operations	11.6					
Process Tanks Operations	3.9			8.6		
Degreaser	3.2					
Gas-fired equipment	1.3	22.8	19.1	1.7		
Total	20.0	22.8	19.1	10.3	9.0	22.5

VJB:jws