

Ben Witkopp
Environmental Engineer
Air Quality Division

Dear Mr. Ben Witkoop

In response to the violation notice Bandit Industries North Winn Manufacturing Facility received on 7-12-22 we have asked Environmental Partners to review the pre-treatment process. Attached is their exemption evaluation.

Sincerely,

Jason Daws

Facilities Manager
Bandit Industries
989-621-7005

DEQ-AQD

JUL 28 2022

SAGINAW BAY



305 Hoover Blvd, Suite 200
Holland, Michigan 49423

July 18, 2022

Mr. Jason Daws
Bandit Industries
6750 W. Millbrook Road
Remus, Michigan 49340

Subject: Permit Exemption Evaluation
Pre-Treatment – North Winn Facility

Dear Mr. Daws:

As you requested, Environmental Partners, Inc. has performed a permitting exemption evaluation for the pre-treatment process at the North Winn manufacturing facility, located at 3372 West Walton Road, Winn, Michigan. The purpose of this evaluation was to determine if the pre-treatment operation in the North Winn plant requires an air use permit or whether it may be exempt from the requirement to obtain a Permit to Install (PTI) pursuant to Rule 336.1201 (Rule 201) of the Michigan Air Pollution Control Rules.

The coating and pre-treatment processes were installed about 2009. This evaluation also serves to satisfy the requirements of Michigan Rule 278a.

Description of the Proposed Processes

The North Winn manufacturing facility includes a metal coating operation which is exempt per Michigan Rule 287(2)(c). Before parts and machines are coated they undergo a pre-treatment process that applies a phosphatizing solution to the metal which provides protective layer of phosphate crystals to protect the metal against corrosion. The phosphatizing solution used at the North Winn plant is LincPhos 4465 which contains phosphoric acid.

The LincPhos 4465 is mixed with water and spray applied onto the metal parts and allowed to drip dry. Excess solution drains to a floor drain which leads to a collection tank. As the tank fills, solids sink to the bottom and liquid flows out via an exit pipe near the top of the collection tank. The liquid is then transported to a second container which supplies an evaporator that drives off water and solvent containing compounds.

For purposes of this evaluation, it is assumed that all solid materials either attach to the parts or are collected in the first waste collection tank. It is then assumed that all volatiles and phosphoric acid are released to atmosphere through the evaporation portion of the process. Since the acid is believed to provide one source of the phosphatizing protective barrier on the metal, an assumption of 100% emission of phosphoric acid is an overestimation.

In addition to LincPhos 4465, the company adds a cleaning solution LincClean 2705c at a ratio of 60:1 4465 to 2705c. A review of records for the past 24 months indicates that the highest volume of material use of LincPhos 4465 has been 22.75 gallons (0.38 gal LincClean 2705c), which equates to 212 lbs of material of which 171.5 lbs are assumed to have been released through evaporation (either evaporation of mist in the spray area or through the evaporator exhaust stack).

The following table identifies the constituents of each LincPhos material.

Material	Compounds	CAS	Concentration (%wt)	
LincPhos 4465	Ethylene Glycol Monobutyl Ether	111-76-2	1.29%	Solvent
	Sodium Xylene Sulfonate	1300-72-7	6%	Solid
	Sodium Dihydrogen Phosphate	7558-80-7	8.25%	Solid
	Phosphoric Acid	7664-38-2	7.4%	Liquid
	Water		72.06%	Liquid
	Hydroxylamine Sulfite	10039-54-0	2%	Solid
	Nonyl Phenol Ethoxylate	127087-87-0	3%	Liquid
LincClean 2705c	Maleic Acid	110-16-7	6%	Solid
	Sodium Hydroxide	1310-73-2	2.3%	Solid
	Water		84.2%	Liquid
	2-Buteneioic Acid – Homopolymer	26099-09-2	7.5%	Solid

Applicable Rules

Pursuant to Rule 201, a permit to install (PTI) must be obtained prior to the construction, installation or modification of any process or process equipment that emits or may emit any air pollutant regulated under Title I of the Clean Air Act, or any air contaminant as defined under the Michigan Air Pollution Control Rules. However, if the proposed process meets the criteria of one or more of the applicable exemptions under Rules 280 through 290, and the use of that exemption is not excluded pursuant to Rule 278, the requirement to obtain a PTI does not apply.

Since the pre-treatment process may emit one or more regulated pollutants, the Rule 201 requirement to obtain a PTI may apply. The following presents potentially applicable PTI exemption which has been reviewed to determine whether the processes are eligible for one or more exemptions from Rule 201, and to determine whether the processes are excluded under Rule 278 from the use of an otherwise applicable permitting exemption.

Applicable Exemptions

R 336.1290 Permit to install exemptions; emission units with limited emissions. (2003 rules)

Rule 290(2) The requirement of R 336.1201(1) to obtain a permit to install does not apply to any of the emission units listed in subdivision (a) of this subrule, if the conditions listed in subdivisions (b), (c), (d), and (e) are met. Notwithstanding the definition in R 336.1121(a), for the purpose of this rule, uncontrolled emissions are the emissions from an emission unit based on actual operation, not taking into account any emission control equipment. Controlled emissions are the emissions from an emission unit based on actual operation, taking into account the control equipment.

(a) An emission unit which meets any of the following criteria:

(i) Any emission unit that emits only noncarcinogenic volatile organic compounds or noncarcinogenic materials which are listed in R 336.1122(f) as not contributing appreciably to the formation of ozone, if the uncontrolled or controlled emissions of air contaminants are not more than 1,000 or 500 pounds per month, respectively.

(ii) Any emission unit, for which CO₂ equivalent emissions are not more than 6,250 tons per month, the total uncontrolled or controlled emissions of all other air contaminants are not more than 1,000 or 500 pounds per month, respectively, and all of the following criteria are met:

(A) For noncarcinogenic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in R 336.1122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 0.04 micrograms per cubic meter and less than 2.0 micrograms per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively.

(B) For toxics air contaminants, with initial risk screening levels greater than or equal to 0.04 micrograms per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively.

(C) The emission unit shall not emit any toxic air contaminants, excluding non-carcinogenic volatile organic compounds and non-carcinogenic material that are listed in R 336.1122(f) as not contributing appreciably to the formation of ozone, with an initial threshold screening level or initial risk screening level less than 0.04 micrograms per cubic meter.

(D) For total mercury, the uncontrolled or controlled emissions shall not exceed 0.01 pounds per month.

(E) For lead, the uncontrolled or controlled emissions shall not exceed 16.7 pounds per month.

(iii) Any emission unit that emits only particulate air contaminants without initial risk screening levels and other air contaminants that are exempted under paragraphs (i) or (ii) of this subdivision if all of the following provisions are met:

(A) The particulate emissions are controlled by an appropriately designed and operated fabric filter collector or an equivalent control system which is designed to control particulate matter to a concentration of less than or equal to 0.01 pounds of particulate per 1,000 pounds of exhaust gases and that do not have an exhaust gas flow rate more than 30,000 actual cubic feet per minute.

(B) The visible emissions from the emission unit are not more than 5% opacity in accordance with the methods contained in R 336.1303.

(C) The initial threshold screening level for each particulate toxic air contaminant, excluding nuisance particulate, is more than 2.0 micrograms per cubic meter.

(b) The following requirements apply to emission units utilizing control equipment:

(i) An air cleaning device for volatile organic compounds shall be installed, maintained and operated in accordance with manufacturer's specifications.

Examples include the following:

(A) Oxidizers and condensers equipped with a continuously displayed temperature indication device.

(B) Set scrubbers equipped with a liquid flow rate monitor.

(C) Dual stage carbon absorption where the first canister is monitored for breakthrough and replaced if breakthrough is detected.

(ii) An air cleaning device for particulate matter shall be installed, maintained, and operated in accordance with the manufacturer's specifications or the owner or operator shall develop a plan that provides to the extent practicable for the maintenance and operation of the equipment in the manner consistent with good air pollution control practices for minimizing emissions. It shall also be equipped to monitor appropriate indicators of performance, for example, static pressure drop, water pressure, and water flow rate.

(c) A description of the emission unit is maintained throughout the life of the unit.

(d) Records of material use and calculations identifying the quality, nature, and quantity of the air contaminant emissions are maintained in sufficient detail to demonstrate that the emissions meet the emission limits outlined in this rule. Volatile organic compound emissions shall be calculated using mass balance, generally accepted engineering calculations or another method acceptable to the department.

(d) The records are maintained on file for the most recent 2-year period and are made available to the air quality division upon request.

It is the opinion of Environmental Partners that the pre-treatment operation listed above has been installed under the above listed Michigan rule as exempted from the Rule 201 requirements.

Rule 278 – Exclusion from Exemption

To ensure that a process is eligible to use an exemption under Rules 280 through 290, it must be demonstrated that the process is not excluded from exemption under Rule 278. Exclusion from the use of one or more exemptions would occur under any of the following situations.

Rule 278 (1) (1994 reading): Notwithstanding the exemptions specified in R 336.1279 to R 336.1290 the permit system applies to any process or process equipment installation, construction, reconstruction relocation, alteration, or modification that satisfies any of the following conditions:

- (a) It is a major source or major modification as defined in the prevention of significant deterioration regulations, 40 CFR 52.21.*
- (b) It is a major offset source or major modification as defined in R 336.1113(c) and (b), respectively.*
- (c) It has actual emissions of carbon monoxide, nitrogen oxides, sulfur dioxide, particulate matter, volatile organic compounds, or lead above the significance levels as defined in R 336.1119(d)*

Emissions do occur, as reported above. It is the opinion of Environmental Partners, Inc. that the Pre-treatment process at the North Winn plant is not excluded from the use of the Rule 279 through 290 exemptions since:

- a. They are not subject to the Prevention of Significant Deterioration requirements under 40 CFR 52.21, nor are they subject to the non-attainment new source review requirements under Part 19 of Michigan Air Pollution Rules.
- b. Actual and potential emissions of regulated air pollutants for the operation are below the significance levels defined under Michigan Air Pollution Rule 119.
 - a. VOC 40 tpy
 - b. PM 25 tpy
 - c. PM₁₀ 15 tpy
 - d. CO 100 tpy
 - e. NOx 40 tpy
 - f. SOx 40 tpy

Conclusion

Based on the permitting exemption evaluation described above, it is the opinion of Environmental Partners, Inc. that the Pre-Treatment operation installed in 2009 is exempt from the requirements to obtain a Rule 201 Permit to Install since it meets the eligibility criteria of the exemption rules described above, and are not excluded from the use of these exemptions under Rule 278, as promulgated in at the time of installation.

Mr. Jason Daws, Bandit Industries
July 18, 2022
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The findings and conclusions presented herein represent the opinion of Environmental Partners, Inc. based upon the information made available to us. In order to ensure the best possible regulatory protection for the North Winn facility, Bandit Industries may elect to share these findings and conclusions with the Michigan Department of Environment, Great Lakes, and Energy - Air Quality Division (EGLE-AQD) for their confirmation and validation of the opinions expressed herein. At the very least, this document should be maintained on file as required under Michigan Rule 278a, which was promulgated in 2003. If there are any questions, please call me at (616) 928-9127.

Sincerely,
ENVIRONMENTAL PARTNERS, INC.

Bruce H. Connell
Principal

