Facility ID: 0243000024 Issuance type: Title V Final Permit

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In addition to the terms and conditions, hyperlinks have been inserted into the document so you may more readily access the section of the document you wish to review.

Finally, the term language under "Part III" and before "I. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

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Part II - Specific Facility Terms and Conditions

a **State and Federally Enforceable Section**

1. Chemical Accident Prevention Provisions, 40 CFR Part 68: Risk Management Programs Under the Clean Air Act, Section 112(r)(7). Chemicals covered are those regulated substances present above the threshold quantity in a process, as listed under 40 CFR 68.130 and determined under 40 CFR 68.115.

   This facility developed and registered a risk management plan pursuant to section 112(r) of the Act and is required to comply with the requirements of section 112(r) and the regulations adopted thereunder.

2. Beginning no later than May 10, 2008, the emissions of hazardous air pollutants (HAPs), as defined in Section 112(b) of Title III of the Clean Air Act, from all the emissions units at this facility, shall not exceed 9.9 TPY for any individual HAP and 24.9 TPY for total combined HAPs, as rolling, 12-month summations.

   The company proposed these emission limits to avoid being classified as a major source for HAPs as defined in section 63.2 of 40 CFR Part 63 for any Maximum Achievable Control Technology (MACT) standards with an initial compliance date on or after November 10, 2006 (i.e., Miscellaneous Organic Chemical Manufacturing MACT, 40 CFR Part 63, Subpart FFFF; and the Organic Liquid Distribution (Non-Gasoline) MACT), 40 CFR Part 63, Subpart EEEE).

3. Compliance with the emission limitation for individual HAP and total combined HAP shall be based upon a rolling, 12-month summation of the monthly emissions beginning no later than November 10, 2006, utilizing data for the previous 12 months.

4. In order to determine compliance with the facility-wide emission limitations, the permittee shall maintain monthly records of the information designated in sections A.5 through A.11 below for the following emissions unit categories: Combustion Units (B001, B002, B003, B004, B009, and insignificant units B006, B008); Waste Incinerator (N001): Reactor Process Vents (P001, P005, P006, P007, P008, P011, P012, P013, P014, P015, P018, P019, P020, P022, P024, P025, P026, P027, P028, P029, P030, P033, P034, P035, P036, P050, P051, P052, P053, P054, P073 and P074); Loading Operations (P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048, P049, P055, P056, P057, P058, P059, P060, P061, P062, P063, P064, P065, P066, P067, P068, P069, P070, P071); Storage Tanks (T013, T022, T023, T034, T048, T073, T077, T122, T123, T136, T186;
   and insignificant units (T001, T002, T003, T005, T006, T007, T008, T009, T010, T011, T012, T014, T015, T016, T017, T018, T019, T020, T021, T024, T025, T026, T027, T028, T029, T030, T031, T032, T033, T035, T036, T037, T038, T039, T040, T041, T042, T043, T044, T045, T046, T047, T048, T049, T050, T051, T052, T053, T054, T055, T056, T058, T059, T060, T063, T064, T071, T072, T074, T075, T076, T078, T079, T080, T081, T082, T083, T084, T085, T086, T087, T088, T089, T090, T092, T093, T094, T095, T096, T097, T098, T099, T100, T101, T102, T103, T104, T105, T106, T107, T108, T109, T110, T111, T112, T113, T114, T115, T116, T117, T118, T119, T120, T121, T124, T125, T126, T127, T128, T129, T130, T131, T132, T133, T134, T135, T136, T137, T138, T139, T140, T141, T142, T143, T144, T145, T146, T147, T148, T149, T150, T151, T152, T153, T154, T155, T156, T157, T158, T159, T160, T161, T162, T163, T164, T165, T166, T167, T168, T169, T170, T171, T172, T173, T174, T175, T176, T177, T178, T179, T180,T181, T182, T183, T184, T185, T187, T188, T189, T190,T191, T192, T193, T194, T195, T196, T197, T198, T199, T200, T201, T202, T203, T204, T205, T206, T207, T208, T209, T210, T211, T212, T213, T214, T215, T217, T218, T219, T220, T221, T222, T223, T225, T226,T227, T228, T229,T230, T231, T232, T233, T234, T235, T236, T237, T238, T239,T240, T241, T242, T243, T244, T245, Z011, Z012, Z013, Z014, Z016, Z062, Z063, Z129); and fugitive emissions from leaking components in HAP service not otherwise included in the categories above.

   All other emissions units listed in the Title V permit either do not emit HAPs, or the emissions are so negligible that they cannot be reliably quantified. Total HAP emissions from these sources are presumed to be less than 0.1 tpy (the difference between the emission limitation in this permit and the major source threshold).

5. HAP emissions shall be calculated as follows:

   a. For storage tanks, loading operations, and reactor process vents, the permittee shall use the same calculation methodologies for determining HAP emissions as specified in this permit for determining VOC emissions, and then multiplying the VOC emissions by the weight percent HAPs present in the vapor and adjusting for the control efficiency of any emissions control system. Control efficiencies for organic HAPs shall be the same as the VOC control efficiencies determined in accordance with Title V requirements. Flares shall be assumed to have 98 percent control efficiency for organic HAPs and VOCs. See USEPA, Compilation of Air Pollutant Emission Factors (AP-42) section 13.5-4 (January 1995). Control efficiencies for

inorganic HAPs (i.e., Hydrogen chloride, and halides) shall be determined by an engineering assessment. Such an engineering assessment will be completed by November 10, 2006 and submitted to the agency for review and approval. The control efficiencies so determined will be used to compute emissions for the 12 month period from November 2005 to November 2006 and thereafter. The permittee may revise the control efficiencies by submitting new information sufficient to demonstrate to the Ohio EPA Northeast District Office that another control efficiency is more representative of actual control device operating conditions. A change in a control efficiency factor shall constitute a minor modification to this permit. (See further details below.)

b. For boilers, HAP emissions shall be computed using emission factors from U.S. EPA's FIRE database based on SCC codes, and the amount of fuel burned. The permittee shall keep records of the amount of fuel burned each month for each emissions unit or category. The permittee may propose and the Ohio EPA Northeast District Office shall approve new emission factors to replace these FIRE emssion factors upon demonstrating that the new factors are more accurate and better representative of actual emissions from the relevant emissions units. A change in these emission factors shall constitute a minor modification to this permit.

c. For the Waste Incinerator (N001), HAP emissions shall be determined based on site-specific emissions factors (expressed in pounds per hour) developed from source test and continuous monitoring data multiplied by actual hours of incinerator operation each month. The current emission factors for the incinerator are:

HAP Em. Factor Units

Lead 0.00087300 lbs/hr burning waste
Mercury 0.00013650 lbs/hr burning waste
Arsenic 0.00005480 lbs/hr burning waste
Berylium 0.00000170 lbs/hr burning waste
Cadmium 0.00001130 lbs/hr burning waste
Chromium 0.00008650 lbs/hr burning waste
Phenol 0.00000003 lbs/hr burning waste
Naphthalene 0.00000460 lbs/hr burning waste
Chlorine 0.00100000 lbs/hr burning waste
Hydrochloric acid 0.07000000 lbs/hr burning waste

The permittee may propose and the Ohio EPA Northeast District Office shall approve new emission factors to replace these emission factors upon demonstrating that the new factors are more accurate and better representative of actual emissions from the relevant emissions units. A change in these emission factors shall constitute a minor modification to this permit.

d. Fugitive emissions of HAPs from equipment leaks shall be computed using the emission factors from "Protocol for Equipment Leak Emission Estimates EPA-453/R-95/017 issued November 1995, or other approved alternate, and the number of pumps, valves, flanges, etc. to calculate the pounds per hour of fugitive VOC emissions, using SOCMI leak/no-leak, or ppmv screening value factors. The monthly fugitive HAP emissions (in pounds) shall be calculated by multiplying pounds per hour VOC emission rate by the percent HAPs in the fluid and multiplying the result by the monthly hours of operation of the equipment with HAPs present. If necessary, monitoring data to establish typical percent leaks or ppmv screening factors for sources in HAP service will be conducted prior to November 10, 2006, and will be used to determine emissions for the 12 month period from November 2005 to November 2006. Monitoring methods to establish leakage rates and maintenance methods are further described in section A.15 below.

e. HAP emissions from other fugitive and stack sources shall be computed monthly using other Ohio EPA-approved calculation methods. These shall include ball houses, drip trays, and painting. Emissions from spills, hold tanks, charge tanks, filter cake hoppers, filters, and filter tanks, shall be included as parts of reactor processes.

The specific methodology used to calculate the HAP emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office on or before November 10, 2006. The permittee may revise the calculation methodologies by submitting methodology revisions subject to the review and approval of the Ohio EPA Northeast District Office. A change in the calculation methodology shall constitute a minor modification to this permit. Calculations of all HAP emission factors shall be kept on site and available for Ohio EPA review.

6. For reactor vents, HAP emissions shall be determined based on product-specific emission factors (expressed in pounds per batch of each product) multiplied by the number of batches of that product made in a month, to determine the pounds of HAP emitted per product per month, and summed to reflect the total emissions from all products processed in the reactors in a month. The emission factors for the reactor vents shall be computed based on the engineering calculation methods for process vents contained in the Pharmaceutical NESHAP [40 CFR Part 63.1257(d)] or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the HAP emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Calculations of all HAP emission factors shall be kept on site and available for Ohio EPA review.

Similar products may be grouped together provided that the emission factor assigned to that group reflects the highest calculated emission factor for all products in the group. For new products that require a new emission factor, the permittee shall calculate the emission factor using the method described above and submit that calculation to the Ohio EPA's Northeast District Office. The new emission factor can be used immediately to determine monthly emissions but any adjustments to the emission factor required after Ohio EPA's review must be applied retroactively to the date the new product was introduced. A change in these emission factors shall constitute a minor modification to this permit. For reactor vents, the permittee shall submit HAP emission factors for all products produced in each process emissions unit.

7. For reactor process vents, the permittee shall collect and record the following information for each month:

a. the name of each hazardous air pollutant (HAP) used in or produced by the emissions unit;

b. the HAP emission rate for each HAP, before control, in pounds per month for each emissions unit, using the following equation:

E (Uncontrolled) = (amount of each HAP emitted, in pounds/month);

c. the HAP emissions for each HAP, after control, in pounds per month for each emissions unit, using the following equation:

E (Controlled) = (uncontrolled HAP emission rate, in lbs/month) x (1 - (CE/100))

where:

CE = the overall control efficiency of the emissions control system. For organic HAPs this shall be the same as the VOC control efficiency. For inorganic HAPs the control efficiency shall be determined by an engineering assessment pursuant to A.5.a (above).

d. the total individual HAP emission rate, after control (in lbs of HAP/month, determined by adding the values for each emissions unit);

e. the rolling, twelve-month summation of the monthly HAP emissions for each individual HAP (in pounds, calculated by summing the monthly HAP emissions for the preceding 11 months plus the HAP emissions for the current month for all emissions units); and

f. the total combined HAP emissions, in tons per month and tons per rolling, 12-month period (the sum of each HAP emitted in pounds divided by 2000 lbs/ton for all emissions units).

A listing of the Hazardous Air Pollutants (HAPs) can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA District Office or local air agency contact.

8. For loading operations, the permittee shall collect and record each month the following information:

a. the throughput of each liquid containing HAPs, in gallons;
b. the loading method for each type of liquid loaded;
c. the method of HAP destruction used for each type of liquid loaded and the estimated overall HAP control efficiency (if applicable), in percent;
d. the true vapor pressure of the liquid, in psia;
e. the molecular weight of vapors, in lb/lb-mol;
f. the bulk temperature of liquid loaded, in degrees Rankin; and
g. the weight percent of each individual HAP in the vapors.

9. For loading operations, the permittee shall record every month the sum of HAP emissions (MHAP) for each individual HAP from each liquid loaded according to the following equation:

MHAP = the sum, from i=1 to i=n, of (%HAP)(LL)(MTL / 1000)(1-C)(ton/2000 lbs)

where:

%HAP = the weight% HAP in the vapors;
i = each individual liquid loaded;
n = the total number of liquids loaded;
MTL = throughput of each liquid, in gal/month; and
C = overall control efficiency of the emissions control system (for organic HAPs this shall be the same as the VOC control efficiency).

For inorganic HAPs the control efficiency shall be determined by an engineering assessment pursuant to section A.5.a (above).

LL = the loading loss, in lb/1000 gal of liquid loaded, and is calculated according to the following equation from AP-42 at 5.2-4:

LL= (12.46 SPM / T)

where:

S = saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P = true vapor pressure of the liquid, in psia;
M = molecular weight of vapors, in lb/lb-mol; and
T = bulk temperature of liquid loaded, in degrees Rankin.

10. For storage tanks containing HAPs, the permittee shall maintain monthly records documenting the following information:

a. the type of liquid stored;
b. the weight percent of each individual HAP in the vapors; and
c. the monthly throughput of liquid, in gallons.

11. For storage tanks containing HAPs, HAP emissions shall be computed using the throughput data, the storage tank dimensions, and U.S. EPA emission factors and equations found in AP-42, Section 7.1.3, "Emission Factors for Organic Liquid Storage Tanks" (September 1997), accounting for the weight percent HAPs in the vapors and adjusting for the control efficiency of any emissions control system.

12. The permittee shall maintain records for the entire facility each month of the following information:

a. the total facility-wide emissions (and associated calculations) for each individual HAP, in pounds or tons per year (calculated by summing the individual HAP emission rates from all the emissions units at the facility);

b. the total facility-wide emissions (and associated calculations) for total combined HAPs, in pounds or tons per year (calculated by summing total combined HAPs emission rates from all the emissions units at the facility);

c. the rolling, 12-month summation of the total individual HAP emissions rates for each HAP from all the emissions units at the facility, in tons; and

d. the rolling, 12-month summation of the total combined HAP emissions rates from all the emissions units at the facility, in tons.

13. The permittee shall submit quarterly deviation (excursion) reports, in accordance with Part I of the General Terms and Conditions, section A.1.c of this permit, including the following information:

a. an identification of each month during which the rolling, 12-month individual HAP emissions rate (from the facility) exceeded 9.9 tons, and the actual rolling, 12-month summation of each individual HAP emissions rate (from the facility) for each such month; and

b. an identification of each month during which the rolling, 12-month combination of all HAP emissions rates (from the facility) exceeded 24.9 tons, and the actual rolling, 12-month summation of the combination of all HAP emissions rates (from the facility) for each such month.

14. The permittee shall submit annual reports that summarize the annual emissions of the combined HAP emissions for the facility and, if the combined HAP emissions are 10 TPY or more, the annual emissions of each individual HAP. These reports shall cover the previous calendar year and shall be submitted by April 30 of each year.

15. Methodology to Monitor and Establish Fugitive Piping Leakage Rates and Maintain Equipment (as referenced in section A.5.d):

a. Calculation Methods Using SOCMI Factors :

Fugitive piping emissions shall be computed using SOCMI factors consistent with EPA document "Protocol for Equipment Leak Emission Estimates EPA-453/R-95/017 issued November 1995. This document contains several different types of SOCMI kg/hr emission factors:

SOCMI average emission factors (Table 2-1);
SOCMI screening range emission factors (Table 2-5), with leak/no-leak factors for > vs < 10,000 ppmv TOC; and
SOCMI leak rate/screening value correlations (Table 2-9). (These use specific ppmv values.)

The appropriate SOCMI kg/hr emission factors to use for computing fugitive piping leakage rates from each source at the facility will be determined as follows:
i. Equipment Using Instrument Monitoring For Leaks:

(a) A representative sample of specific types of equipment (reactors, blend tanks, storage tanks, and filtration systems) in HAP service will be monitored prior to November 10, 2006 to measure ppmv TOC emissions from the following components: valves, flanges, pump seals, mixer seals, compressor seals, open ended lines, and pressure relief valves.

(b) The representative sample of each type of equipment shall account for at least 50 percent of potential fugitive piping HAP emissions from all such equipment "in HAP service" based on SOCMI average emission factors. (Sources "in HAP Service" are defined to contain at least 5 percent HAP for 300 hrs/year or more). The specific equipment in the representative sample may be changed as needed to continue to account for at least 50 percent of potential fugitive piping HAP emissions.

(c) For the monitored equipment, emissions will be computed based on the appropriate SOCMI leak/no-leak or ppmv factors from SOCMI Table 2-5 or 2-9.

(d) A list of the specific representative equipment to be monitored shall be supplied to the Ohio EPA Northeast District Office by the compliance date (currently November 10, 2006). This list shall also identify the approximate percent of potential fugitive piping HAP emissions accounted for by the representative equipment.

(e) The ppm TOC values measured for the representative equipment shall be used to determine the average leakage rate for each component type. (Component types would include valves, flanges, pump seals, etc. in light liquid, heavy liquid, or gas service.) (Leakage rates will be based on SOCMI leak rate factors from Table 2-5 or 2-9). The average leakage rate data for each type of component determined from representative equipment monitoring data may be used to estimate the leakage rate of such sources for other equipment that was not monitored.

ii. Equipment Not Using Instrument Monitoring For Leaks:

(a) If the vapor pressure of the fluid is less than 0.147 psia at processing temperatures, fugitive emissions may be estimated using SOCMI no-leak factors from Table 2-5. (Texas Natural Resources Conservation Commission document "Air Permit Technical Guidance for Chemical Sources: Equipment Leak Fugitives", dated October 2000, states that the theoretical saturation concentration as ppmv TOC can not exceed 10,000 if the fluid vapor pressure is less than 0.147 psia.) Alternatively, emissions may be estimated as in (b) below.

(b) If the vapor pressure of the fluid is greater than or equal to 0.147 psia at processing temperatures, fugitive emissions will be estimated based on the leakage rate data for each type of component from representative equipment monitoring, and the appropriate SOCMI leak rate factors from Table 2-5 or 2-9. This method may also be used if the vapor pressure is < 0.147 psia.

(c) The number of each type of component (valves, flanges, pump seals, mixer seals, compressor seals, open ended lines, and pressure relief valves) associated with unmonitored equipment can be estimated based on the average number of such components for the representative equipment.

(d) Fugitive piping HAP emissions will be computed for reactors, blend tanks, storage tanks, and filtration systems containing liquids with 0.1 percent or more of any individual HAP based on Material Safety Data Sheet information.

b. Continuous Compliance Assurance Monitoring and Maintenance Methods:

i. The representative equipment will be monitored for ppmv TOC values yearly. Any components found to have >1000 ppmv TOC will be repaired. A reasonable effort will be made to complete repairs within 15 days.

ii. All storage tanks in HAP service, and their associated pumps and piping, shall be inspected monthly for leaks by audio, olfactory, and visual checks. A reasonable effort will be made to repair any leaks found within 15 days. During time periods when a component source was known to be leaking, emissions for the component shall be computed using the SOCMI factors for > 10,000 ppmv TOC unless ppmv data is available. If the sensory checks detect a leak, the permittee may choose to measure the ppmv TOC using a properly calibrated monitoring instrument, and compute emissions using the SOCMI emission factors most appropriate to the size of the leak.
iii. All reactor system tanks in continuous HAP service, and their associated pumps and piping, shall be inspected monthly for leaks by audio, olfactory, and visual checks. A reasonable effort will be made to repair any leaks found within 15 days. During time periods when a component source was known to be leaking, emissions for the component shall be computed using the SOCMI factors for > 10,000 ppmv TOC unless ppmv data is available. If the sensory checks detect a leak, the permittee may choose to measure the ppmv TOC using a properly calibrated monitoring instrument, and compute emissions using the SOCMI emission factors most appropriate to the size of the leak.

iv. Reactor system tanks in non-continuous HAP service making products containing 5 percent or more HAPs, and their associated pumps and piping, shall be inspected for leaks by audio, olfactory, and visual checks. Such inspections shall be made monthly, or per batch if such products are made less frequently than monthly. A reasonable effort will be made to repair any leaks found within 15 days. During time periods when a component source was known to be leaking, emissions for the component shall be computed using the SOCMI factors for > 10,000 ppmv TOC unless ppmv data is available. If the sensory checks detect a leak, the permittee may choose to measure the ppmv TOC using a properly calibrated monitoring instrument, and compute emissions using the SOCMI emission factors most appropriate to the size of the leak.
c. Record Keeping Requirements:

For fugitive emissions of HAPs from equipment leaks, the permittee shall collect and record the following information:

i. Monthly Records:

(a) the name of each fluid containing HAPs in the equipment;

(b) the type of fluid (light liquid, heavy liquid, or vapor);

(c) the hours that the fluid was present in the equipment;

(d) the vapor pressure of the fluid in the equipment, in psia;

(e) the lb/hr leakage rate for the equipment based on the appropriate SOCMI emission factors;

(f) the weight% of each individual HAP in the leaks;

(g) records of audio, olfactory, visual or instrument checks of equipment in HAP service inspected monthly; and

(h) dates when components were found to be leaking, and date when repaired.

ii. Annual Records:

(a) ppmv TOC readings for representative equipment components;

(b) the identification of each representative equipment component;

(c) dates when representative equipment components were found to be leaking, and date when repaired; and

(d) the average leakage rate of each type of component for the representative equipment per SOCMI Table 2-5 or 2-9.

iii. Batch Records:

(a) records of audio, olfactory, visual or instrument checks of equipment in HAP service inspected each batch; and

(b) dates when components were found to be leaking, and date when repaired.

16. The following requirements apply to emissions unit B009:

40 CFR Part 63, Subpart A - General Provisions Applicability to 40 CFR Part 63, Subpart DDDDD

The permittee is subject to the following requirements specified in 40 CFR Part 63, Subpart A as listed in Table 10 of 40 CFR Part 63, Subpart DDDDD

Parts 63.1, 63.2, 63.3, 63.4, 63.5, 63.6(a), 63.6(b)(1)-(4), 63.6(b)(5), 63.6(b)(6), 63.6(b)(7), 63.6(c)(1)-(2),

63.6(c)(3)-(4), 63.6(c)(5), 63.6(d), 63.6(e)(1)-(2), 63.6(e)(3), 63.6(f)(1), 63.6(f)(2)-(3), 63.6 (g)(1)-(3), 63.6(h)(1), 63.6(h)(2)(ii), 63.6(h)(2)(iii), 63.6(h)(3), 63.6(h)(7)(i), 63.6(h)(7)(iii), 63.6(h)(7)(iv), 63.6(h)(7)(v), 63.6 (h)(8), 63.6 (h)(9), 63.6(i)(1)-(14), 63.6(j), 63.7(a)(1), 63.7(a)(2), 63.7(a)(2)(ii-viii), 63.7(a)(2)(ix), 63.7(a)(3), 63.7(b)(2), 63.7(c), 63.7(d), 63.7(e)(1) [in part, see table], 63.7(e)(2), 63.7(e)(3), 63.7(e)(4), 63.7(f), 63.7(g), 63.7(h), 63.8(a)(1), 63.8(a)(2), 63.8(a)(3), 63.8(b)(1)(i)-(ii), 63.8(b)(2)-(3), 63.8(c)(1), 63.8(c)(1)(i), 63.8(c)(1)(ii), 63.8(c)(1)(iii), 63.8(c)(2)-(3), 63.8(c)(4)(i), 63.8(c)(5), 63.8(c)(7)-(8), 63.8(d), 63.8(e), 63.8(f)(1)-(5), 63.8(g)(1)-(4), 63.9(a), 63.9(b)(1)-(5), 63.9(c), 63.9(d), 63.9(g), 63.9(h)(1)-(6), 63.9(i), 63.9(j), 63.10(a), 63.10(b)(1), 63.10(b)(2)(i)-(v), 63.10(b)(2)(vi) and (x-xi), 63.10(b)(2)(vii)-(ix), 63.10(b)(2)(xii), 63.10(b)(2)(xiv), 63.10(b)(3), 63.10(c)(1), (5)-(8),(10)-(15), 63.10(d)(1), 63.10(d)(2), 63.10(d)(3), 63.10(d)(4), 63.10(d)(5), 63.10(e)(1)-(2), 63.10(e)(4), 63.10(f), 63.12, 63.13, 63.14, 63.15.

17. The following insignificant emissions units are located at this facility:

T053 - Storage Tank 713 (PTI 02-709)
T054 - Storage Tank 715 (PTI 02-709)
T055 - Storage Tank 711 (PTI 02-709)
T056 - Storage Tank 712 (PTI 02-709)
T058 - Storage Tank 618 (PTI 02-9822)
T059 - Storage Tank 620 (PTI 02-9822)
T060 - Storage Tank 640 (PTI 02-9822)
T071 - Storage Tank 639 (PTI 02-9822)
T072 - Storage Tank 638 (PTI 02-9822)
T128 - Storage Tank 554 (PTI 02-9822)
T129 - Storage Tank 555 (PTI 02-9822)
T130 - Storage Tank 556 (PTI 02-9822)
T178 - Storage Tank B-11 (PTI 02-6628)
T179 - Storage Tks WTG-1 (PTI 02-6934)
T182 - Storage Tank 102 (PTI 02-7805)
T183 - Storage Tank 111 (PTI 02-7805)
T184 - Storage Tank 114 (PTI 02-7805)
T185 - Storage Tank 152 (PTI 02-7805)
T187 - Storage Tank 160 (PTI 02-7805)
T188 - Storage Tank 168 (PTI 02-7805)
T189 - Storage Tank 228 (PTI 02-7805)
T190 - Storage Tank 229 (PTI 02-7805)
T191 - Storage Tank 230 (PTI 02-7805)
T192 - Storage Tank 237 (PTI 02-7805)
T193 - Storage Tank 413 (PTI 02-7805)
T195 - Storage Tank 516 (PTI 02-7805)
T196 - Storage Tank 517 (PTI 02-7805)
T197 - Storage Tank 518 (PTI 02-7805)
T198 - Storage Tank 519 (PTI 02-7805)
T199 - Storage Tank 557 (PTI 02-7805)
T200 - Storage Tank 558 (PTI 02-7805)
T201 - Storage Tank 573 (PTI 02-7805)
T202 - Storage Tank 574 (PTI 02-7805)
T203 - Storage Tank 577 (PTI 02-7805)
T204 - Storage Tank 578 (PTI 02-7805)
T206 - Storage Tank 594 (PTI 02-7805)
T207 - Storage Tank 595 (PTI 02-7805)
T210 - Storage Tank 599 (PTI 02-7805)
T211 - Storage Tank 718 (PTI 02-7805)
T214 - Storage Tank 130 (PTI 02-7801)
T222 - Storage Tank 514 (PTI 02-9822)
T223 - Storage Tank 515 (PTI 02-9822)
T238 - Storage Tank 619 (PTI 02-8891)
T240 - Storage Tank 31 (PTI 02-9386)
T242 - Storage Tank D32 (PTI 02-14363)
T243 - Storage Tank D38 (PTI 02-14363)
T244 - Storage Tank 25 (PTI 02-16763)
T245 - Storage Tank 428 (PTI 02-19012)
T247 - Storage Tank 146 (PTI 02-22852)

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within the identified permit to install for the emissions unit. Insignificant emissions units listed above that are not subject to specific permit to install requirements are subject to one or more applicable requirements contained in the SIP-approved versions of OAC Chapters 3745-17, 3745-18, and 3745-21.

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b **State Only Enforceable Section**

1. B006 - Boiler A-1
B008 - Boiler D-12
B011 - Boiler J-60
B015 - Computer Back-up Generator (diesel)
B016 - 331 Generator #1
B017 - 331 Generator #2
B018 - 331 Generator #3
B019 - 332 Generator
B020 - 333 Generator
B021 - QA Generator
B022 - 105 tk Water Pump

P072 - Open Burning
- T001 - Storage Tank 9
- T002 - Storage Tank 10
- T003 - Storage Tank 11
- T005 - Storage Tank 101
- T006 - Storage Tank 221
- T007 - Storage Tank 222
- T008 - Storage Tank 223
- T009 - Storage Tank 224
- T010 - Storage Tank 225
- T011 - Storage Tank 226
- T012 - Storage Tank 231
- T014 - Storage Tank 233
- T015 - Storage Tank 234
- T016 - Storage Tank 235
- T017 - Storage Tank 236
- T018 - Storage Tank 310
- T019 - Storage Tank 401
- T020 - Storage Tank 402
- T021 - Storage Tank 403
- T024 - Storage Tank 441
- T025 - Storage Tank 442
- T026 - Storage Tank 443
- T027 - Storage Tank 444
- T028 - Storage Tank 445
- T029 - Storage Tank 446
- T030 - Storage Tank 447
- T031 - Storage Tank 450
- T032 - Storage Tank 456
- T033 - Storage Tank 457
- T035 - Storage Tank 481
- T036 - Storage Tank 482
- T037 - Storage Tank 484
- T038 - Storage Tank W-38
- T039 - Storage Tank W-34
- T040 - Storage Tank 455
- T041 - Storage Tank 483
- T042 - Storage Tank 448
- T043 - Storage Tank 311
- T044 - Storage Tank 312
- T045 - Storage Tank 660
- T046 - Storage Tank 651
- T047 - Storage Tank 650
- T048 - Storage Tank 801
- T049 - Storage Tank 802
- T050 - Storage Tank 803
- T051 - Storage Tank 804
- T063 - Storage Tank 313
- T064 - Storage Tank 805
- T074 - Storage Tank 8
- T075 - Storage Tank 240
- T076 - Storage Tank 241
- T078 - Storage Tank 243
- T079 - Storage Tank 244
- T080 - Storage Tank 714
- T081 - Storage Tank 716
- T082 - Storage Tank 717
- T083 - Storage Tank 15
- T084 - Storage Tank 17
- T085 - Storage Tank 19
- T086 - Storage Tank 20
- T087 - Storage Tank 21
- T088 - Storage Tank 23
- T089 - Storage Tank 104
- T090 - Storage Tank 121
- T092 - Storage Tank 142
- T093 - Storage Tank 150
- T094 - Storage Tank 202
- T095 - Storage Tank 203
- T096 - Storage Tank 207
- T097 - Storage Tank 208
- T098 - Storage Tank 213
- T100 - Storage Tank 212
- T101 - Storage Tank 215
- T102 - Storage Tank 216
- T103 - Storage Tank 217
- T104 - Storage Tank 218
- T105 - Storage Tank 219
- T106 - Storage Tank 410
- T107 - Storage Tank 414
- T108 - Storage Tank 418
- T109 - Storage Tank 420
- T110 - Storage Tank 421
- T111 - Storage Tank 425
- T112 - Storage Tank 426

T113 - Storage Tank 427
T114 - Storage Tank 430
T115 - Storage Tank 431
T116 - Storage Tank 432
T117 - Storage Tank 433
T118 - Storage Tank 434
T119 - Storage Tank 460
T120 - Storage Tank 461
T121 - Storage Tank 154 (466)
T124 - Storage Tank 155 (468)
T125 - Storage Tank 469
T126 - Storage Tank 470
T127 - Storage Tank 480
T131 - Storage Tank 13
T132 - Storage Tank 16
T133 - Storage Tank 24
T138 - Storage Tank 118
T140 - Storage Tank 122
T141 - Storage Tank 123
T143 - Storage Tank 147
T144 - Storage Tank 148
T145 - Storage Tank 149
T146 - Storage Tank 153
T147 - Storage Tank 201
T148 - Storage Tank 204
T149 - Storage Tank 205
T150 - Storage Tank 206
T151 - Storage Tank 209
T152 - Storage Tank 214
T153 - Storage Tank 220
T154 - Storage Tank 227
T155 - Storage Tank 409
T156 - Storage Tank 411
T157 - Storage Tank 412
T158 - Storage Tank 416
T159 - Storage Tank 417
T160 - Storage Tank 419
T161 - Storage Tank 422
T162 - Storage Tank 423
T163 - Storage Tank 424
T165 - Storage Tank 429
T166 - Storage Tank 436
T167 - Storage Tank 437
T168 - Storage Tank 463
T169 - Storage Tank 464
T170 - Storage Tank 169 (467)
T171 - Storage Tank 596
T172 - Storage Tank 110
T173 - Storage Tank 158
T174 - Storage Tank 211
T177 - Storage Tank 134
T208 - Storage Tank 597
T209 - Storage Tank 598
T212 - Storage Tank A-38
T213 - Storage Tank G-60
T215 - Storage Tank 18
T217 - Storage Tank 301
T218 - Storage Tank 302
T219 - Storage Tank 303
T220 - Storage Tank 304
T221 - Storage Tank 415
T226 - Storage Tank A-31
T227 - Storage Tank A-32
T228 - Storage Tank A-33
T229 - Storage Tank A-34
T230 - Storage Tank A-35
T231 - Storage Tank A-36
T232 - Storage Tank B-1
T234 - Storage Tank D-100
T235 - Storage Tank G-17
T236 - Storage Tank J-15
T237 - Storage Tank E-75
T239 - Storage Tank 22
T241 - Storage Tank 806
T246 - Storage Tank 178
Z010 - W-5 Tank
Z011 - 339 Drip Trays
Z012 - 400 Ball House
Z013 - Painting
Z014 - 200 Ball House
Z015 - Process Sewer
Z016 - 500 Ball House
Z021 - Car Cleaning Tank
Z022 - Car Cleaning Pit
Z023 - Car Cleaning Vapors

Z024 - Drum Sump
Z025 - Cold Cleaner #1
Z026 - Cold Cleaner #2
Z027 - Cold Cleaner #3
Z028 - W-1 Tank
Z029 - 332-S Drum Heating
Z030 - 332-N Drum Heating
Z031 - 334 Drum Heating
Z032 - Gasoline Storage
Z039 - Port. Generator #1
Z041 - Port. Generator #3
Z042 - Port. Generator #4
Z043 - Port. Pump #1
Z044 - Port. Pump #2
Z045 - Port. Pump #3
Z046 - Port. Pump #4
Z049 - 331 Tank Flushing
Z050 - 332 Tank Flushing
Z051 - 333 Tank Flushing
Z052 - 334 Tank Flushing
Z053 - 336 Tank Flushing
Z054 - 339 Tank Flushing
Z055 - Bldg. 13 Cleaner
Z056 - QA Lab
Z057 - Paved Roadways
Z058 - Unpaved Roadways
Z060 - 534A Tank
Z061 - 534B Tank
Z062 - B-5 Tank
Z063 - B-6 Tank
Z118 - Cooling Tower North
Z119 - Cooling Tower South
Z120 - Cooling Tower West
Z121 - Degreaser VD2
Z122 - Heater Admin
Z123 - Heater Locker Rm
Z124 - Heater Maintenance
Z125 - Heater QA
Z126 - Heater Receiving
Z127 - H2O deareator
Z128 - H2O hot lime softener
Z130 - Storage Tank C60
Z131 - Storage Tank C61
Z132 - Storage Tank C62
Z133 - Diesel fuel storage

The following insignificant emissions units located at this facility are exempt from permit requirements because they are not subject to any applicable requirements or because they meet the "de minimis" criteria established in OAC rule 3745-15-05:

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Go to Part III for Emissions Unit P013
Go to Part III for Emissions Unit P014
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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: B001 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Steam Boiler #1 (B001): Erie City natural gas or #2 fuel oil fired boiler rated at 41 mmBTU per hour.	OAC rule 3745-17-07(A)(1)	See section A.I.2.a below.
	OAC rule 3745-17-10(B)(1)	See section A.I.2.b below.
	OAC rule 3745-18-06(D)	See section A.I.2.c below.

2. **Additional Terms and Conditions**

a. Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as provided by the rule.

b. Particulate emissions shall not exceed 0.020 pound per million Btu of actual heat input.

c. Sulfur dioxide emissions shall not exceed 1.6 pounds per million Btu of actual heat input.

d. As used in the terms and conditions for this emissions unit, "number two fuel oil" and/or "oil" includes number two fuel oil blends and diesel fuel blends, containing water and additives.

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II. **Operational Restrictions**

1. The permittee shall burn only natural gas and/or number two fuel oil in this emissions unit.

[Authority for term: OAC rule 3745-77-07(A)(1)]

2. The quality of the oil burned in this emissions unit shall have a sulfur and heat content sufficient to comply with the allowable sulfur dioxide emission limitation of 1.6 pounds of sulfur dioxide per million Btu of actual heat input.

Compliance with the above-mentioned specifications shall be determined using the analytical results provided by the permittee or oil supplier for each shipment of oil.

[Authority for term: OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. For each day during which the permittee burns a fuel other than natural gas and/or number two fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

2. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate in lbs/mmBtu.

[Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-18-04(E)(3), and OAC rule 3745-18-04(F)]

3. The permittee shall collect or require the oil supplier to collect a representative grab sample for each shipment of oil that is received for burning in this emissions unit. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with the following ASTM methods: ASTM method D4294, ASTM method D240, or ASTM method 6010 for sulfur content; and ASTM method D240 for heat content. Alternatively, equivalent methods may be used upon written approval by the Ohio EPA Northeast District Office.

[Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-18-04(E)(3), and OAC rule 3745-18-04(F)]

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IV. **Reporting Requirements**

1. The permittee shall submit, on a quarterly basis, deviation (excursion) reports that identify each day when a fuel other than natural gas and/or number two fuel oil was burned in this emissions unit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit, on a quarterly basis, copies of the permittee's or oil supplier's analyses for each shipment of oil which is received for burning in this emissions unit. The permittee's or oil supplier's analyses shall document the sulfur content (percent) and heat content (Btu/gallon) for each shipment of oil. The following information shall also be included with the copies of the permittee's or oil supplier's analyses:

   a. the total quantity of oil received in each shipment (gallons); and

   b. the calculated sulfur dioxide emission rate (lbs/mmBtu) for each shipment of oil.

   These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall cover the oil shipments received during the previous calendar quarters.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation: Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a 6-minute average, except as provided by the rule.

      Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

      [Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

   b. Emission Limitation: Particulate emissions shall not exceed 0.020 lb/mmBtu actual heat input.

      Applicable Compliance Method: If required, the permittee shall demonstrate compliance with this emission limitation by stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, and the procedures specified in OAC rule 3745-17-03(B)(9).

      [Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(9)]

   c. Emission Limitation: 1.6 pounds of sulfur dioxide emissions per million Btu actual heat input.

      Applicable Compliance Method: Compliance shall be determined based upon the record keeping in section A.III.2 using the following equation specified in OAC rule 3745-18-04(F)(2) for each shipment of oil:

      E (lb/mmBtu) = [(1 x 10^6) / H] x D x S x 1.974

      where:

      E = SO2 emission rate, in lbs/mmBtu;
      H = heat content of the liquid fuel, in Btu/gal;
      D = density of the liquid fuel, in lbs/gal; and
      S = decimal fraction of sulfur in the liquid fuel.

      [Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-18-04(E)]

2. If required, the permittee shall conduct, or have conducted, SO2 emission testing for this emissions unit to demonstrate compliance with the allowable mass emission rate of 1.6 lbs/mmBtu actual heat input in accordance with the following requirements:

   Compliance with the allowable mass emission rate for SO2 shall be determined in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6 or 6C and the procedures in OAC rule 3745-18-04.

   The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity.

   Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date (s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Northeast District Office's refusal to accept the results of the emission test(s).

   Personnel from the Ohio EPA shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Northeast District Office.
[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1) and OAC rule 3745-18-04(E)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: B001 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: B002 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Steam Boiler #2 (B002): Erie City natural gas or #2 fuel oil fired boiler rated at 41 mmBTU per hour.	OAC rule 3745-17-07(A)(1)	See section A.I.2.a below.
	OAC rule 3745-17-10(B)(1)	See section A.I.2.b below.
	OAC rule 3745-18-06(D)	See section A.I.2.c below.

2. **Additional Terms and Conditions**

a. Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as provided by the rule.

b. Particulate emissions shall not exceed 0.020 pound per million Btu of actual heat input.

c. Sulfur dioxide emissions shall not exceed 1.6 pounds per million Btu of actual heat input.

d. As used in the terms and conditions for this emissions unit, "number two fuel oil" and/or "oil" includes number two fuel oil blends and diesel fuel blends, containing water and additives.

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II. **Operational Restrictions**

1. The permittee shall burn only natural gas and/or number two fuel oil in this emissions unit.

[Authority for term: OAC rule 3745-77-07(A)(1)]

2. The quality of the oil burned in this emissions unit shall have a sulfur and heat content sufficient to comply with the allowable sulfur dioxide emission limitation of 1.6 pounds of sulfur dioxide per million Btu of actual heat input.

Compliance with the above-mentioned specifications shall be determined using the analytical results provided by the permittee or oil supplier for each shipment of oil.

[Authority for term: OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. For each day during which the permittee burns a fuel other than natural gas and/or number two fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

2. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content,

and the calculated sulfur dioxide emission rate in lbs/mmBtu.

[Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-18-04(E)(3), and OAC rule 3745-18-04(F)]

3. The permittee shall collect or require the oil supplier to collect a representative grab sample for each shipment of oil that is received for burning in this emissions unit. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with the following ASTM methods: ASTM method D4294, ASTM method D240, or ASTM method 6010 for sulfur content; and ASTM method D240 for heat content. Alternatively, equivalent methods may be used upon written approval by the Ohio EPA Northeast District Office.

[Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-18-04(E)(3), and OAC rule 3745-18-04(F)]

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IV. **Reporting Requirements**

1. The permittee shall submit, on a quarterly basis, deviation (excursion) reports that identify each day when a fuel other than natural gas and/or number two fuel oil was burned in this emissions unit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit, on a quarterly basis, copies of the permittee's or oil supplier's analyses for each shipment of oil which is received for burning in this emissions unit. The permittee's or oil supplier's analyses shall document the sulfur content (percent) and heat content (Btu/gallon) for each shipment of oil. The following information shall also be included with the copies of the permittee's or oil supplier's analyses:

a. the total quantity of oil received in each shipment (gallons); and

b. the calculated sulfur dioxide emission rate (lbs/mmBtu) for each shipment of oil.

These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall cover the oil shipments received during the previous calendar quarters.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

b. Emission Limitation: Particulate emissions shall not exceed 0.020 lb/mmBtu actual heat input.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with this emission limitation by stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, and the procedures specified in OAC rule 3745-17-03(B)(9).

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(9)]

c. Emission Limitation: 1.6 pounds of sulfur dioxide emissions per million Btu actual heat input.

Applicable Compliance Method: Compliance shall be determined based upon the record keeping in section A.III.2 using the following equation specified in OAC rule 3745-18-04(F)(2) for each shipment of oil:

E (lb/mmBtu) = [(1 x 10^6) / H] x D x S x 1.974

where:

E = SO2 emission rate, in lbs/mmBtu;
H = heat content of the liquid fuel, in Btu/gal;
D = density of the liquid fuel, in lbs/gal; and
S = decimal fraction of sulfur in the liquid fuel.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-18-04(E)]

2. If required, the permittee shall conduct, or have conducted, SO2 emission testing for this emissions unit to demonstrate compliance with the allowable mass emission rate of 1.6 lbs/mmBtu actual heat input in accordance with the following requirements:

Compliance with the allowable mass emission rate for SO2 shall be determined in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6 or 6Cand the procedures in OAC rule 3745-18-04.

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date (s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Northeast District Office.
[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1) and OAC rule 3745-18-04(E)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: B002 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: B003 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Steam Boiler #3 (B003): 41 mmBtu per hour Erie City natural gas or #2 fuel oil-fired boiler, modified to burn on-site generated used fuel oil as a backup fuel	OAC rule 3745-31-05(A)(3) (PTI 02-19897)	particulate emissions (PE): 10.7 lbs/hour and 46.7 tons/year, based upon an allowable emissions rate of 0.26 lb per million Btu of actual heat input, as specified by Curve P-1 of "Figure I" in OAC rule 3745-17-10(C)(1) sulfur dioxide (SO2) emissions: 65.6 lbs/hour and 287 tons/year, based upon an allowable emissions rate of 1.6 lbs per million Btu of actual heat input, as established in OAC rule 3745-18-06(D) nitrogen oxides (NOx) emissions: 9.27 lbs/hour and 40.6 tons/year carbon monoxide (CO) emissions: 3.38 lbs/hr and 14.8 tons/year
	OAC rule 3745-17-07(A)(1)	See section A.I.2.a below.
	OAC rule 3745-17-10(C)(1)	The requirements established in this rule are equivalent to the requirements established pursuant to OAC rule 3745-31-05(A)(3).

OAC rule 3745-18-06(D)	The requirements established in this rule are equivalent to the requirements established pursuant to OAC rule 3745-31-05(A)(3).

2. **Additional Terms and Conditions**

   a. Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as specified by the rule.

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II. **Operational Restrictions**

1. The permittee shall burn only natural gas, number two fuel oil, and/or on-site generated used fuel oil in this emissions unit.

   [Authority for term: PTI 02-19897 and OAC rule 3745-77-07(A)(1)]

2. The quality of the number two and on-site generated used fuel oil burned in this emissions unit shall have a sulfur and heat content sufficient to comply with the allowable sulfur dioxide emission limitation of 1.6 pounds per million Btu of actual heat input.

   Compliance with the above-mentioned specifications shall be determined using the analytical results provided by the permittee or oil supplier for each shipment of oil.

   [Authority for term: PTI 02-19897 and OAC rule 3745-77-07(A)(1)]

3. All on-site generated used fuel oil burned in this emissions unit shall meet the following specifications:

   Contaminant/Property Allowable Concentration

   arsenic 5 ppm, maximum
   cadmium 2 ppm, maximum
   chromium 10 ppm, maximum
   lead 100 ppm, maximum
   PCB's 50 ppm, maximum*
   total halogens 4000 ppm, maximum**
   mercury 1 ppm, maximum
   flash point 100 degrees F, minimum
   heat content 135,000 Btu/gallon, minimum

   *If the permittee is burning used oil with any quantifiable levels of PCB's (>2 ppm and <50 ppm), then the permittee is subject to any applicable requirements found under 40 CFR Part 279, Subparts G and H, and 40 CFR 761.20(e).

   **Used oil containing more than 1000 ppm total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under 40 CFR 279.10(b)(1)(ii) and OAC rule 3745-279-10(B)(1)(b). Therefore, the permittee may receive and burn used oil exceeding 1000 ppm of total halogens (but less than 4000 ppm, maximum) only if the used oil burner has demonstrated the used oil does not contain any hazardous waste pursuant to OAC rule 3745-279-63.

   [Authority for term: PTI 02-19897 and OAC rule 3745-77-07(A)(1)]

4. The permittee may not burn any used oil which does not meet the specifications listed in OAC rule 3745-279-11 without first obtaining an air permit to install that authorizes the burning of such used oil. The burning of used oil that does not meet specifications listed in OAC rule 3745-279-11 is then subject to OAC rule 279-60 through 67 and the applicable portions of 40 CFR Part 761. In addition, if the permittee is burning used oil which exceeds the mercury limitation and falls below the heat content limitation listed in section A.II.3 of this permit, then this may trigger the requirement to apply for and obtain an air permit to install.

   [Authority for term: PTI 02-19897, OAC rule 3745-77-07(A)(1), OAC chapter 3745-279, and 40 CFR, Part 761]

5. The burning of hazardous waste is prohibited without first complying with all applicable State and federal hazardous waste and air regulations and permits.

   [Authority for term: PTI 02-19897 and OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. For each shipment of number two and on-site generated used fuel oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate in lbs/mmBtu.

   [Authority for term: PTI 02-19897, OAC rule 3745-77-07(C)(1), OAC rule 3745-18-04(E)(3), and OAC rule 3745-18-04(F)]

2. The permittee shall obtain a chemical analysis of each shipment of on-site generated used oil to be burned in this emissions unit. The analysis shall identify the following information:

   a. the Btu value of the used oil, in Btu/gallon;

b. the flash point of the used oil, in degrees F;

c. the arsenic content, in ppm;

d. the cadmium content, in ppm;

e. the chromium content, in ppm;

f. the lead content, in ppm;

g. the PCB content, in ppm;

h. the total halogen content, in ppm; and

i. the mercury content, in ppm.

Each analysis shall be kept in a readily accessible location for at least five years and shall be subject to the review and approval by the Ohio EPA Northeast District Office.

[Authority for term: PTI 02-19897, OAC rule 3745-77-07(C)(1), OAC rule 3745-18-04(E)(3), and OAC rule 3745-18-04(F)]

3. The permittee shall collect, or require the oil supplier to collect, a representative grab sample for each shipment of number two fuel oil and on-site generated used fuel oil received for burning in this emissions unit. The permittee shall perform, or require the supplier to perform, analysis for sulfur content and heat content in accordance with the following ASTM methods: ASTM method D4294, ASTM method D240, or ASTM method 6010 for sulfur content; and ASTM method D240 for heat content. Alternatively, equivalent methods may be used upon written approval by the Ohio EPA Northeast District Office.

   [Authority for term: PTI 02-19897, OAC rule 3745-77-07(C)(1), OAC rule 3745-18-04(E)(3), and OAC rule 3745-18-04(F)]

4. The permittee shall maintain annual records of the amount of natural gas, number two fuel oil, and on-site generated used fuel oil used by this emissions unit (in standard cubic feet or gallons).

   [Authority for term: PTI 02-19897 and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit, on a quarterly basis, copies of the permittee's or oil supplier's analyses for each shipment of number two fuel oil and on-site generated used fuel oil which is received for burning in this emissions unit. The permittee's or oil supplier's analysis shall document the sulfur content (percent) and heat content (Btu/gallon) for each shipment of oil. The following information shall also be included with the copies of the permittee's or oil supplier's analyses:

   a. the total quantity of number two fuel oil and on-site generated used fuel oil received (gallons); and

   b. the calculated sulfur dioxide emission rate (lbs/mmBtu) for each shipment of oil.

   These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall cover the oil shipments received during the previous calender quarters.

   [Authority for term: PTI 02-19897 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall notify the USEPA and the Ohio EPA, within thirty days after the exceedance occurs, if any of the on-site generated used fuel oil exceeds the used oil specifications found in OAC rule 3745-279-11 and the applicable portions of 40 CFR Part 761, and shall also notify Ohio EPA if any on-site generated used oil exceeds the mercury limitation and falls below the heat content limitation listed in section A.II.3 of this permit. If the permittee is burning used oil which exceeds the specifications found in OAC rule 3745-279-11 and the applicable portions of 40 CFR Part 761, the permittee is subject to that rule and must comply with all applicable provisions of the rule(s).

   [Authority for term: PTI 02-19897 and OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit an annual report which summarizes the annual amount of natural gas, number two fuel oil, and on-site generated used fuel oil used in this emissions unit (in standard cubic feet or gallons). This report shall be submitted by January 31 of each year for operations during the previous calendar year.

   Note: this annual reporting of fuel usage may be satisfied by including the past 12 month fuel usage in the quarterly deviation (excursion) report.

   [Authority for term: PTI 02-19897 and OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as specified by the rule.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

[Authority for term: PTI 02-19897, OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

b. Emission Limitation: 0.26 lb of PE per million Btu of actual heat input (10.7 lbs/hour and 46.7 tons/year)

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with this emission limitation by stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, and the procedures specified in OAC rule 3745-17-03(B)(9).

The tpy emission limitation was developed by multiplying the short-term allowable PE limitation (10.7 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-19897, OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(9)]

c. Emission Limitation: 1.6 lbs of SO2 emissions per million Btu of actual heat input (65.6 lbs/hour and 287 tons/year)

Applicable Compliance Method: Compliance shall be determined based upon the record keeping requirements specified in section A.III.1 using the following equation specified in OAC rule 3745-18-04(F)(2) for each shipment of number two and on-site generated used fuel oil:

E (lb/mmBtu) = (1 x 10^6) / H x D x S x 1.974

where:

E = SO2 emission rate, in lb/mmBtu;
H = heat content of the liquid fuel, in Btu/gal;
D = density of the liquid fuel, in lbs/gal; and
S = decimal fraction of sulfur in the liquid fuel.

The tpy emission limitation was developed by multiplying the short-term allowable SO2 limitation (65.6 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-19897, OAC rule 3745-77-07(C)(1) and OAC rule 3745-18-04(E)]

d. Emission Limitation: 9.27 lbs/hour and 40.6 tons/year NOx

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with this emission limitation by stack testing in accordance with 40 CFR Part 60, Appendix A, Method 7, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

The tpy emission limitation was developed by multiplying the short-term allowable NOx limitation (9.27 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-19897, OAC rule 3745-15-04(C), OAC rule 3745-77-07(C)(1)]

e. Emission Limitation: 3.38 lbs/hour and 14.8 tons/year CO

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with this emission limitation by stack testing in accordance with 40 CFR Part 60, Appendix A, Method 10, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

The tpy emission limitation was developed by multiplying the short-term allowable CO limitation (3.38 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-19897, OAC rule 3745-15-04(C), OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: B003 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: B004 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Steam Boiler #4 (B004): Erie City natural gas or #2 fuel oil fired boiler rate at 81 mmBTU per hour.	OAC rule 3745-31-05(A)(3) (PTI 02-862)	The requirements established pursuant to this rule are equivalent to the requirements of OAC rules 3745-17-07(A), 3745-17-10(B)(1) and 3745-18-06(D).
		See section A.I.2.a below.
	OAC rule 3745-17-07(A)	See section A.I.2.b below.
	OAC rule 3745-17-10(B)(1)	See section A.I.2.c below.
	OAC rule 3745-18-06(D)	

2. **Additional Terms and Conditions**

a. Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

b. Particulate emissions shall not exceed 0.020 pound per million Btu of actual heat input.

c. Sulfur dioxide emissions shall not exceed 1.6 pounds per million Btu of actual heat input.

d. As used in the terms and conditions for this emissions unit, "number two fuel oil" and/or "oil" includes number two fuel oil blends and diesel fuel blends, containing water and additives.

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II. **Operational Restrictions**

1. The permittee shall burn only natural gas and/or number two fuel oil in this emissions unit.

[Authority for term: OAC rule 3745-77-07(A)(1)]

2. The quality of the oil burned in this emissions unit shall have a sulfur and heat content sufficient to comply with the allowable sulfur dioxide emission limitation of 1.6 pounds of sulfur dioxide per million Btu of actual heat input.

Compliance with the above-mentioned specifications shall be determined using the analytical results provided by the permittee or oil supplier for each shipment of oil.

[Authority for term: OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. For each day during which the permittee burns a fuel other than natural gas and/or number two fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

2. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate in lbs/mmBtu.

[Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-18-04(E)(3), and OAC rule 3745-18-04(F)]

3. The permittee shall collect or require the oil supplier to collect a representative grab sample for each shipment of oil that is received for burning in this emissions unit. The permittee shall perform or require the supplier to

perform the analyses for sulfur content and heat content in accordance with the following ASTM methods: ASTM method D4294, ASTM method D240, or ASTM method 6010 for sulfur content; and ASTM method D240 for heat content. Alternatively, equivalent methods may be used upon written approval by the Ohio EPA Northeast District Office.

[Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-18-04(E)(3), and OAC rule 3745-18-04(F)]

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IV. **Reporting Requirements**

1. The permittee shall submit, on a quarterly basis, deviation (excursion) reports that identify each day when a fuel other than natural gas and/or number two fuel oil was burned in this emissions unit.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit, on a quarterly basis, copies of the permittee's or oil supplier's analyses for each shipment of oil which is received for burning in this emissions unit. The permittee's or oil supplier's analyses shall document the sulfur content (percent) and heat content (Btu/gallon) for each shipment of oil. The following information shall also be included with the copies of the permittee's or oil supplier's analyses:

   a. the total quantity of oil received in each shipment (gallons); and

   b. the calculated sulfur dioxide emission rate (lbs/mmBtu) for each shipment of oil.

   These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall cover the oil shipments received during the previous calendar quarters.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation: Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

      Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

      [Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

   b. Emission Limitation: Particulate emissions shall not exceed 0.020 lb/mmBtu actual heat input.

      Applicable Compliance Method: If required, the permittee shall demonstrate compliance with this emission limitation by stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, and the procedures specified in OAC rule 3745-17-03(B)(9).

      [Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(9)]

   c. Emission Limitation: 1.6 pounds of sulfur dioxide emissions per million Btu actual heat input.

      Applicable Compliance Method: Compliance shall be determined based upon the record keeping in Section A.III.2 using the following equation specified in OAC rule 3745-18-04(F)(2) for each shipment of oil:

      E (lb/mmBtu) = [(1 x 10^6) / H] x D x S x 1.974

      where:

      E = SO2 emission rate, in lbs/mmBtu;
      H = heat content of the liquid fuel, in Btu/gal;
      D = density of the liquid fuel, in lbs/gal; and
      S = decimal fraction of sulfur in the liquid fuel.

      [Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-18-04(E)]

2. If required, the permittee shall conduct, or have conducted, SO2 emission testing for this emissions unit to demonstrate compliance with the allowable mass emission rate of 1.6 lbs/mmBtu actual heat input in

accordance with the following requirements:

Compliance with the allowable mass emission rate for SO2 shall be determined in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6 or 6C and the procedures in OAC rule 3745-18-04.

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date (s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Northeast District Office.
[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1) and OAC rule 3745-18-04(E)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: B004 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: B009 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
18 mmBtu per hour natural gas fired boiler	OAC rule 3745-31-05(A)(3) (PTI 02-18165)	1.76 lbs/hour and 7.73 tons/year of nitrogen oxides (NOx) 1.48 lbs/hour and 6.49 tons/year of carbon monoxide (CO) The requirements of this rule also include the requirements of OAC rule 3745-17-07(A)(1) and OAC rule 3745-17-10(B)(1).
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-10(B)(1)	Particulate emissions shall not exceed 0.020 pound per million Btu of actual heat input.
	40 CFR Part 63, Subpart DDDDD	400 ppm by volume of CO on a dry basis corrected to 3 percent oxygen See section A.I.2.a below.

2. **Additional Terms and Conditions**

a. The permittee shall comply with all applicable requirements of 40 CFR Part 63, Subpart DDDDD.

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II. **Operational Restrictions**

1. The permittee shall burn only natural gas in this emissions unit.

[Authority for term: PTI 02-18165 and OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

   [Authority for term: PTI 02-18165 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall maintain annual records of the amount of natural gas used by this emissions unit in standard cubic feet (scf).

   [Authority for term: PTI 02-18165 and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

   [Authority for term: PTI 02-18165 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report that summarizes the following information:

   a. the annual amount of natural gas used in this emissions unit in scf; and

   b. the total annual emissions of NOx, CO and PE from this emissions unit for the previous calendar year.

   This report shall be submitted by January 31 of each year for operations during the previous calendar year.

   [Authority for term: PTI 02-18165 and OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emissions limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation:
      1.76 lbs/hr and 7.73 tons/yr of NOx

      Applicable Compliance Method:
      Compliance shall be based on a one time calculation by using emission factors from AP-42, Section 1.4 (1998) for natural gas combustion and the maximum input capacity of the gas burners.

      E(NOx) = (18 mm Btu/hr) x [(100 lbs/106 scf)/(1,020 Btu/scf)] = 1.76 lbs/hour

      Annual emissions are determined by multiplying the emission factor (100 lb/mm cu ft) by the annual natural gas usage (in scf) and dividing by 2000 lbs/ton.

      [Authority for term: PTI 02-18165 and OAC rule 3745-77-07(C)(1)]

   b. Emission Limitation:
      1.48 lbs/hr and 6.49 tons/yr of CO

      Applicable Compliance Method:
      Compliance shall be based on a one time calculation by using emission factors from AP-42, Section 1.4 (1998) for natural gas combustion and the maximum input capacity of the gas burners.

      E(CO) = (18 mm Btu/hr.) x [(84 lbs/106 scf)/(1,020 Btu/scf)] = 1.48 lbs CO per hour

      Annual emissions are determined by multiplying the emission factor (84 lb/106 scf) by the annual natural gas usage (in scf) and dividing by 2000 lbs/ton.

      [Authority for term: PTI 02-18165 and OAC rule 3745-77-07(C)(1)]

   c. Emission Limitation:
      Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

      Applicable Compliance Method:
      If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

[Authority for term: PTI 02-18165, OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03 (B)(1)]

d. Emission Limitation:
Particulate emissions shall not exceed 0.020 lb/mmBtu actual heat input.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with this emission limitation by stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, and the procedures specified in OAC rule 3745-17-03(B)(9).

[Authority for term: PTI 02-18165, OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(9)]

e. Emission Limitation:
400 ppm by volume of CO on a dry basis corrected to 3 percent oxygen

Applicable Compliance Method:
Compliance shall be demonstrated based upon the emission testing methods and procedures specified in section A.V.2.

[Authority for term: PTI 02-18165, OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1) and 40 CFR Part 63, Subpart DDDDD]

2. Pursuant to section 63.7515(e) of 40 CFR Part 63, the permittee shall conduct annual performance stack emissions tests for this emissions unit using Method 10, 10A or 10B of 40 CFR Part 60, Appendix A. Each required annual performance stack emissions test must be conducted between 10 and 12 months after the previous performance test.

Pursuant to section 63.7545(d) of 40 CFR Part 63, the permittee is required to submit a Notification of Intent to conduct a performance stack emissions test at least 30 days prior to the performance stack emissions test is scheduled to begin. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the fields office(s) refusal to accept the emissions test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), examine the testing equipment and acquire data and information regarding the emissions unit operating parameters.

Pursuant to section 63.7515(g) of 40 CFR Part 63, a comprehensive written report on the results of the emission test(s) shall be submitted within 60 days following completion of the test(s).

[Authority for term: PTI 02-18165, OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1) and 40 CFR Part 63, Subpart DDDDD]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: B009 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: N001 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Waste heat recovery incinerator (N001): rated capacity of 5,500.00 pounds per hour. Combustible waste consists of waste oil and process by-products. Particulate emissions are controlled by a fabric filter baghouse (WHRI BagH). HCl and SO2 emissions are controlled by a wet caustic scrubber (WHRI CScrb).	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-09	Particulate emissions shall not exceed 0.10 pound per one hundred pounds of liquid, semi-solid or solid refuse and salvageable material charged.

OAC rule 3745-18-06(E)	SO2: 39.4 lbs/hour [per 18-06(E)(1) equation]
40 CFR Part 63, Subpart EEE (MACT for Hazardous Waste Combustors)	See sections A.2.a through A.2.e, A.II.1 through A.II.11, A.III.1 through A.III.9, A.IV.1 through A.IV.14, A.V.2 and A.V.3.

2. **Additional Terms and Conditions**

a. 40 CFR 63.1203(a): Emission Standards and Operating Limits For Hazardous Waste Incinerators.

(a)

The permittee shall comply with the following operating limits, or as established in the most recent Document of Compliance or Notification of Compliance, whichever are currently applicable:

i. Emissions of metals shall be controlled by limiting their feed rates as follows:

(a) The feed rate of mercury shall not exceed 0.0014 pounds per hour as a 12 hour rolling average.

(b) The feed rate of lead and cadmium combined shall not exceed 0.89 pounds per hour as a 12 hour rolling average.

(c) The feed rate of arsenic, beryllium and chromium combined shall not exceed 13.4 pounds per hour as a 12 hour rolling average

ii. Other pollutants shall be controlled as follows:

(a) The feed rate of chlorine shall not exceed 29 pounds per hour as a 12 hour rolling average.

(b) The total ash feed rate shall not exceed 443 pounds per hour as a 12 hour rolling average.

b. 40 CFR 63.1203(a): continued.

The permittee shall comply with the following emission limits, or as established in the final rule after its compliance date, whichever are currently applicable:

i. Emission limits for existing sources. You must not discharge or cause combustion gases to be emitted into the atmosphere that contain:

(a) For dioxins and furans: Emissions in excess of 0.20 ng TEQ/dscm corrected to 7 percent oxygen.

(b) Mercury in excess of 130 ug/dscm corrected to 7 percent oxygen.

(c) Lead and cadmium in excess of 240 ug/dscm* combined emissions per the interim standard, corrected to 7 percent oxygen (*expected to change to 230 ug/dscm in the final MACT standard, unless otherwise specified in the latest revision to the MACT).

(d) Arsenic, beryllium, and chromium in excess of 97 ug/dscm* combined emissions per the interim standard, corrected to 7 percent oxygen (*expected to change to 92 ug/dscm in the final MACT standard, unless otherwise specified in the latest revision to the MACT).

(e) For carbon monoxide:

(i) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If the permittee elects to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (a)(5)(ii) of 63.1203, the permittee must also document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by 63.1206(b)(7), hydrocarbons do not exceed 10 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane.

b. (f) Hydrochloric acid and chlorine gas in excess of 77 parts per million* by volume, combined emissions per the interim standard, expressed as hydrochloric acid equivalents, dry basis and corrected to 7 percent oxygen (*expected to change to 32 parts per million in the final MACT standard, unless otherwise specified in the latest revision to the MACT).

(g) Particulate matter in excess of of 34 mg/dscm* corrected to 7 percent oxygen per the interim standard (*expected to change to 0.013 gr/dscf in the final MACT standard, unless otherwise specified in the latest revision to the MACT).

c. 40 CFR 63.1203(c): The permittee shall comply with the following emission limits, or as established in the final rule after its compliance date, whichever are currently applicable:

i. The permittee must achieve a destruction and removal efficiency (DRE) of 99.99% for each principle organic hazardous constituent (POHC) designated under paragraph (c)(3) of 63.1203. The permittee must calculate DRE for each POHC from the following equation:

DRE = [1 - (Wout / Win)] 100%

where:

Win = mass feedrate of one POHC in a waste feedstream; and
Wout = mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere.

d. 40 CFR 63.1206(b): Compliance with standards.

The emission standards and operating requirements set forth in this subpart apply at all times except:

i. during periods of startup, shutdown, and malfunction; and

ii. when hazardous waste is not in the combustion chamber (i.e., the hazardous waste feed to the combustor has been cut off for a period of time not less than the hazardous waste residence time) and the permittee has documented in the operating record that the permittee is complying with all otherwise applicable requirements and standards promulgated under authority of sections 112 or 129 of the Clean Air Act in lieu of the emission standards of 63.1203 through 63.1205; the monitoring and compliance standards of this section and 63.1207 through 63.1209, except the modes of operation requirements of 63.1209(q); and the notification, reporting, and record keeping requirements of 63.1210 through 63.1212.

e. 40 CFR 63.1209(q): Operating under different modes of operation.

Operating under otherwise applicable standards after the hazardous waste residence time has transpired. As provided by 63.1206(b)(1)(ii), the permittee may operate under otherwise applicable requirements promulgated under sections 112 and 129 of the Clean Air Act in lieu of the substantive requirements of 40 CFR 63 Subpart EEE. Specifically, when operating in the "warm stand-by maintenance mode" as documented in the Operating and Maintenance Plan, only the following otherwise applicable requirements apply:

i. OAC rule 3745-17-07(A), OAC rule 3745-17-09, and OAC rule 3745-18-06(E) per A.I.1. above pertaining to PE and SO2 limits.

ii. The monitoring, record keeping, reporting, and testing requirements III.3, IV.3, and V.1 below pursuant to the OAC rules.

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II. **Operational Restrictions**

1. 40 CFR 63, Subpart EEE: The permittee shall comply with the following operating limits, or as established in the most recent Document of Compliance or Notification of Compliance, whichever are currently applicable:

The pressure drop across the baghouse shall be maintained within the range of 1.5 to 8 inches of water as an hourly rolling average while burning waste.

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(A)(1)]

2. 40 CFR 63, Subpart EEE: The permittee shall comply with the following operating limits, or as established in the most recent Document of Compliance or Notification of Compliance, whichever are currently applicable:

The permittee shall operate and maintain the wet scrubber at all times the process vent stream is vented to the scrubber, and burning waste in accordance with the following parameters:

a. the pH of the scrubber liquid shall be maintained at or above 4.6 as an hourly rolling average;

b. the liquid-to-gas ratio shall be maintained at or above six gallons per 1,000 actual cubic feet as an hourly rolling average;

c. the pressure drop across the scrubber shall be maintained at a value of not less than 3.5 inches of water as an hourly rolling average; and

d. the blowdown rate for the scrubber shall be maintained above 2.01 gallons per minute as an hourly rolling average.

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(A)(1)]

3. 40 CFR 63, Subpart EEE: The permittee shall comply with the following operating limits, or as established in the most recent Document of Compliance or Notification of Compliance, whichever are currently applicable:

The permittee shall maintain the combustion hearth at the following conditions while burning waste:

a. the hearth flue gas temperature shall be maintained at or above 1,323 degrees F as an hourly rolling average; and

b. the hearth pressure shall be maintained below 0.0 inches of water with a 5-second delay.

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(A)(1)]

4. 40 CFR 63, Subpart EEE: The permittee shall comply with the following operating limits, or as established in the most recent Document of Compliance or Notification of Compliance, whichever are currently applicable:

The permittee shall maintain the secondary combustion chamber gas temperature at or above 1,629 degrees F as an hourly rolling average while burning waste.

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(A)(1)]

5. 40 CFR 63, Subpart EEE: The permittee shall comply with the following operating limits, or as established in

the most recent Document of Compliance or Notification of Compliance, whichever are currently applicable:

The permittee shall minimize baghouse leaks as follows:

a. the permittee shall maintain an indicator to detect baghouse leaks, and not have a 100 percent indication for more than 30 minutes while burning waste; and

b. the temperature of the baghouse inlet gas shall not exceed 487 degrees F as an hourly rolling average while burning waste.

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(A)(1)]

6. 40 CFR 63, Subpart EEE: The permittee shall comply with the following operating limits, or as established in the most recent Document of Compliance or Notification of Compliance, whichever are currently applicable:

The permittee shall maintain waste feed rates as follows:

a. the pumpable waste feed rate shall be maintained below 4,214 pounds per hour as an hourly rolling average; and

b. the total waste feed rate shall be maintained below 4,250 pounds per hour as an hourly rolling average.

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(A)(1)]

7. 40 CFR 63, Subpart EEE: The permittee shall comply with the following operating limits, or as established in the most recent Document of Compliance or Notification of Compliance, whichever are currently applicable:

The permittee shall maintain combustion gas flow rates (stack gas flow rates) as follows while burning waste:

a. the maximum combustion gas flow rate shall be maintained below 13,620 acfm as an hourly rolling average; and

b. the minimum combustion gas flow rate shall be maintained above 7,738 acfm (as a 12 hour rolling average).

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(A)(1)]

8. 40 CFR 63.1206(c)(2)(v): Operating under the startup, shutdown, and malfunction plan.

Compliance with AWFCO requirements during malfunctions:

a. During malfunctions, the automatic waste feed cutoff requirements of 63.1206(c)(3) continue to apply, except for paragraphs (c)(3)(v) and (c)(3)(vi) of 63.1206. If the permittee exceeds a 40 CFR 63, Subpart EEE, emission standard monitored by a CEMS or COMs or operating limit specified under 63.1209, the automatic waste feed cutoff system must immediately and automatically cutoff the hazardous waste feed, except as provided by paragraph (c)(3)(viii) of 63.1206. If the malfunction itself prevents immediate and automatic cutoff of the hazardous waste feed, however, the permittee must cease feeding hazardous waste as quickly as possible.

b. Although the automatic waste feed cutoff requirements continue to apply during a malfunction, an exceedance of an emission standard monitored by a CEMS or COMS or operating limit specified under 63.1209 is not a violation of this subpart if the permittee takes the corrective measures prescribed in the startup, shutdown, and malfunction plan.

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(A)(1)]

9. 40 CFR 63.1206(c)(3): Automatic waste feed cutoff (AWFCO).

a. General. Upon the compliance date, the permittee must operate the hazardous waste combustor with a functioning system that immediately and automatically cuts off the hazardous waste feed, except as provided by paragraph (c)(3)(viii) of 63.1206:

i. When any of the following are exceeded: Operating parameter limits specified under 63.1209; an emission standard monitored by a CEMS; and the allowable combustion chamber pressure.

ii. When the span value of any CMS detector, except a CEMS, is met or exceeded.

iii. Upon malfunction of a CMS monitoring an operating parameter limit specified under 63.1209 or an emission level.

iv. When any component of the automatic waste feed cutoff system fails.

b. Ducting of combustion gases. During an AWFCO, the permittee must continue to duct combustion gasses to the air pollution control system while hazardous waste remains in the combustion chamber (i.e., if the hazardous waste residence time has not transpired since the hazardous waste feed cutoff system was activated).

c. Restarting waste feed. The permittee must continue to monitor, during the cutoff, the operating parameters for which limits are established under 63.1209 and the emissions required under that section to be monitored by a CEMS, and the permittee must not restart the hazardous waste feed until the operating parameters and emission levels are within the specified limits.
d. Failure of the AWFCO system. If the AWFCO system fails to automatically and immediately cutoff the flow of hazardous waste upon exceedance of parameter required to be interlocked with the AWFCO system under paragraph (c)(3)(i) of 63.1206, the permittee has failed to comply with the AWFCO requirements of paragraph (c)(3) of 63.1206.

e. Corrective measures. If, after any AWFCO, there is an exceedance of an emission standard or operating requirement, irrespective of whether the exceedance occurred while hazardous waste remained in the combustion chamber (i.e., whether the hazardous waste residence time has transpired since the hazardous waste feed cutoff system was activated), the permittee must investigate the cause of the AWFCO, take appropriate corrective measures to minimize future AWFCOs, and record the findings and corrective measures in the operating record.

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(A)(1)]

10. 40 CFR 63.1206(c)(6): Operator training and certification.

a. The permittee must establish training programs for all categories of personnel whose activities may reasonably be expected to directly affect emissions of hazardous air pollutants from the source. Such persons include, but are not limited to, chief facility operators, control room operators, continuous monitoring system operators, persons that sample and analyze feedstreams, persons that manage and charge feedstreams to the combustor, persons that operate emission control devices, and ash and waste handlers. Each training program shall be of a technical level commensurate with the person's job duties specified in the training manual. Each commensurate training program shall require an examination to be administered by the instructor at the end of the training course. Passing of this test shall be deemed the "certification" for personnel, except that, for control room operators, the training and certification program shall be as specified in paragraphs (c)(6)(iii) through (c)(6)(vi) of 63.1206.

b. The permittee must ensure that the source is operated and maintained at all times by persons who are trained and certified to perform these and any other duties that may affect emissions of hazardous air pollutants. A certified control room operator must be on duty at the site at all times the source is in operation.

c. Hazardous waste incinerator control room operators must:

i. Be trained and certified under a site-specific, source-developed and implemented program that meets the requirements of paragraph (c)(6)(v) of 63.1206; or
ii. Be trained under the requirements of, and certified under, the American Society of Mechanical Engineers Standard Number QHO-1-1994 and QHO-1a-1996 Addenda [incorporated by reference--see 63.14(e)]. If the permittee chooses to use the ASME program:

(a) Control room operators must, prior to the compliance date, achieve provisional certification, and must submit an application to ASME and be scheduled for the full certification exam. Within one year of the compliance date, control room operators must achieve full certification;

(b) New operators and operators of new sources must, before assuming their duties, achieve provisional certification, and must submit an application to ASME, and be scheduled for the full certification exam. Within one year of assuming their duties, these operators must achieve full certification; or

(iii) Be trained and certified under a State program.

d. Site-specific, source developed and implemented training programs for control room operators must include the following elements:

i. Training on the following subjects:

(a) Environmental concerns, including types of emissions.

(b) Basic combustion principles, including products of combustion.

(c) Operation of the specific type of combustor used by the operator, including proper startup, waste firing, and shutdown procedures.

(d) Combustion controls and continuous monitoring systems.

(e) Operation of air pollution control equipment and factors affecting performance.

(f) Inspection and maintenance of the combustor, continuous monitoring systems, and air pollution control devices.

(g) Actions to correct malfunctions or conditions that may lead to malfunction.

(h) Residue characteristics and handling procedures.

(i) Applicable Federal, state, and local regulations, including Occupational Safety and Health Administration workplace standards.

ii. An examination designed and administered by the instructor; and

iii. Written material covering the training course topics that may serve as reference material following completion of the course.

e. To maintain control room operator qualification under a site-specific, source developed and implemented training program as provided by paragraph (c)(6)(v) of 63.1206, control room operators must complete an annual review or refresher course covering, at a minimum, the following topics:

i. update of regulations;
ii. combustor operation, including startup and shutdown procedures, waste firing, and residue handling;
iii. inspection and maintenance;

iv. responses to malfunctions or conditions that may lead to malfunction; and
v. operating problems encountered by the operator.

f. The permittee must record the operator training and certification program in the operating record.

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(A)(1)]

11. 40 CFR 63.1206(c)(7): Operation and maintenance plan.

General.

a. The permittee must prepare and at all times operate according to an operation and maintenance plan that describes in detail procedures for operation, inspection, maintenance, and corrective measures for all components of the combustor, including associated pollution control equipment, that could affect emissions of regulated hazardous air pollutants.

b. The plan must prescribe how you will operate and maintain the combustor in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels achieved during the comprehensive performance test.

c. This plan ensures compliance with the operation and maintenance requirements of 63.6(e) and minimizes emissions of pollutants, automatic waste feed cutoffs, and malfunctions.

d. The permittee must record the plan in the operating record.

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. 40 CFR 63, Subpart EEE: Monitoring and Compliance Provisions.

The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s).

The permittee shall record the following parameters for the baghouse while burning waste:

a. the leak indicator reading [per 63.1206(c)(7)(ii)];

b. baghouse inlet gas temperature (as an hourly rolling average) [per 63.1209(k)(1) & 1209(n)(1)]; and

c. the pressure drop across the baghouse (as an hourly rolling average) [per 63.1209(g)(2)].

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(C)(1)]

2. 40 CFR 63, Subpart EEE: Monitoring and Compliance Provisions.

The permittee shall properly install, operate and maintain equipment to continuously monitor the scrubber liquor flow rate of the wet scrubber while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the folowing information while burning waste:

a. the pH of the scrubber liquor, (as an hourly rolling average) [per 63.1209(o)(3)(iv)];

b. the liquid-to-gas ratio, in gallons per 1000 cubic feet, (as an hourly rolling average) [per 63.1209(o)(3)(v)];

c. the pressure drop across the scrubber, (as an hourly rolling average) [per 63.1209(o)(3)(ii)];

d. the operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit; and

e. the scrubber blowdown rate gpm (as an hourly rolling average) [per 63.1209(m)(1)(i)(B)(1)(ii)].

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(C)(1)]

3. To comply with OAC rule 3745-18-06(E) the permittee shall operate and maintain existing equipment to continuously monitor and record SO2 from this emissions unit in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13(d)(1), (e)(2) and (h), respectively. The permittee may request alternative monitoring procedures or requirements and alternative relative accuracy test procedures in accordance with the relevant provisions of 40 CFR Part 60.13(i) and (j), by submitting a written request to the Director. Any alternative monitoring and/or testing acceptable to the Director shall be approved by the U.S. EPA as a revision to the State Implementation Plan (SIP) prior to the implementation of the alternative monitoring and/or testing.

A statement of certification of the existing continuous SO2 monitoring system shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 6. Proof of certification shall be

made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

The permittee shall maintain records of all data obtained by the continuous SO2 monitoring system including, but not limited to, parts per million SO2 on an instantaneous (one-minute) basis, emissions of SO2 in units of lbs/hr and lbs/hr rolling, three-hour average, and in the appropriate averaging period (e.g., hourly and hourly rolling of consecutive three-hour periods), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.
The permittee shall implement a quality assurance/quality control plan for the continuous SO2 monitoring system designed to ensure continuous valid and representative readings of SO2 emission concentrations and exhaust gas flow rates. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and include provisions for conducting a relative accuracy test following each monitor probe replacement. The relative accuracy test shall be performed, and the monitoring system operated, in accordance with the procedures specified in Performance Specification Tests 2 and 3, 40 CFR Part 60, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous SO2 monitoring system must be kept on site and available for inspection during regular office hours. Each record of any monitoring data, testing data, and support information required shall be retained for a period of five years from the date the record was created. Support information shall include, but not limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation.

[Authority for term: 40 CFR Part 60.13 and OAC rule 3745-77-07(C)(1)]

4. 40 CFR 63.1209(a)(2) & (j)(4): Performance specifications.

The permittee shall install, calibrate, maintain, and continuously operate the CEMS and COMS in compliance with the quality assurance procedures provided in the appendix to Subpart EEE and Performance Specifications 4B (carbon monoxide and oxygen) in appendix B, part 60 of this chapter. Specifically, the permittee shall operate and maintain existing equipment to continuously monitor and record CO from this emissions unit in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in 63.1209(a)(2), (a)(3), (a)(6) and the Appendix to Subpart EEE.

A statement of certification of the existing continuous CO monitoring system shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 4B. Proof of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one-minute) basis, emissions of CO in units of ppm in the appropriate averaging period , results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

[Authority for term: 40 CFR, Part 63, Subpart EEE]
The permittee shall implement a quality assurance/quality control plan for the continuous CO monitoring system designed to ensure continuous valid and representative readings of CO emission concentrations and exhaust gas flow rates. The plan shall follow the requirements of the Appendix to Subpart EEE and include provisions for conducting a relative accuracy test following each monitor probe replacement. The relative accuracy test shall be performed, and the monitoring system operated, in accordance with the procedures specified in Performance Specification 4B, 40 CFR Part 60, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours. Each record of any monitoring data, testing data, and support information required shall be retained for a period of five years from the date the record was created. Support information shall include, but not limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation.

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(C)(1)]

5. 40 CFR 63, Subpart EEE:

The permittee shall continuously record the stack flow rate in acfm (as an hourly average) while burning waste. [per 63.1209(j)(2) & (k)(3) & (m)(2) & (n)(5) & (o)(2) & 1207(m)(4)(i)]

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(C)(1)]

6. 40 CFR 63, Subpart EEE:

The permittee shall continuously record the following hourly average lb/hour waste feed rates:

a. total waste feed rate to the hearth [per 63.1209(j)(3) & (k)(4)];

b. the waste feed rate to secondary combustion chamber [per 63.1209(j)(3) & (k)(4)]; and

c. the pumpable waste feed rate to the hearth [per 63.1209(j)(3) & (k)(4)].

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(C)(1)]

7. 40 CFR 63, Subpart EEE:

The permittee shall record the rolling, 12-hour average lb/hr flow rates of the following:

a. the feed rate of chromium, arsenic and beryllium combined [per 63.1209(n)(2)];

b. the feed rate of lead and cadmium combined [per 63.1209(n)(2)];

c. the mercury feed rate [per 63.1209(l)(1) & 1207(m)(4)(i)];

d. the ash flow rate [per 63.1209(m)(3)]; and

e. the chlorine feed rate [per 63.1209(n)(4) & (o)(1)].

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(C)(1)]

8. 40 CFR 63, Subpart EEE:

The permittee shall continuously record the following combustion temperatures while burning waste:

a. the hearth flue temperature (as an hourly average) [per 63.1209(j)(1) & (k)(2)]; and

b. the secondary combustion chamber temperature (as an hourly average) [per 63.1209(j)(1) & (k)(2)].

[Authority for term: 40 CFR, Part 63, Subpart EEE]

9. 40 CFR 63.1209(p):

The permittee shall continuously record the hearth pressure while burning waste.

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. 40 CFR 63.10(e)(3):

The permittee shall submit deviation (excursion) reports (excess emissions and continuous monitoring system performance reports) that identify all periods of time during which the following parameters for the baghouse did not comply with the allowable range specified above while burning waste:

a. the leak indicator reading;

b. baghouse inlet gas temperature; and

c. the pressure drop across the baghouse.

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(C)(1)]

2. 40 CFR 63.10(e)(3):

The permittee shall submit deviation (excursion) reports (excess emissions and continuous monitoring system performance reports) that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels for the wet scrubber while burning waste:

a. the pH of the scrubber liquor;

b. the liquid-to-gas ratio;

c. the pressure drop across the scrubber; and

d. the scrubber blowdown rate.

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(C)(1)]

3. Pursuant to OAC rules 3745-15-04, 3745-35-02, ORC sections 3704.03(I) and 3704.031, and 60.7 and 60.13 (h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA Northeast District Office documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of SO2 values in excess of the applicable limits specified in OAC Chapter 3745-18, the 30-day rolling, weighted average SO2 emission rates, and average daily SO2 emission rates in units of the applicable standard(s). These reports shall also contain the total SO2 emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA Northeast District Office documenting any continuous SO2 monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.
If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(C)(1)]

4. 40 CFR 63.10(e)(3):

The permittee shall submit deviation (excursion) reports (excess emissions and continuous monitoring

system performance reports) that identify all periods of time during which the ppm CO emission rate was not maintained at or below the required levels while burning waste.

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(C)(1)]

5. 40 CFR 63.10(e)(3):

The permittee shall submit deviation (excursion) reports (excess emissions and continuous monitoring system performance reports) that identify all periods of time during which the combustion gas flow rate (stack gas flow rate) was not maintained as follows while burning waste:

a. at or below the required maximum flow rate in acfm (as an hourly average); and

b. at or above the required minimum flow rate in acfm (as a 12 hour average).

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(C)(1)]

6. 40 CFR 63.10(e)(3):

The permittee shall submit deviation (excursion) reports (excess emissions and continuous monitoring system performance reports) that identify all periods of time during which the following hourly average lb/hour waste feed rates were not maintained at or below the required levels while burning waste:

a. total waste feed rate to the hearth;

b. the waste feed rate to secondary combustion chamber; and

c. the pumpable waste feed rate to the hearth.

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(C)(1)]

7. 40 CFR 63.10(e)(3):

The permittee shall submit deviation (excursion) reports (excess emissions and continuous monitoring system performance reports) that identify all periods of time during which the 12 hour rolling average lb/hr flow rates of the following were not maintained at or below the required levels while burning waste:

a. the feed rate of chromium, arsenic and beryllium combined;

b. the feed rate of lead and cadmium combined;

c. the mercury feed rate;

d. the ash flow rate; and

e. the lb/hr chlorine feed rate.

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(C)(1)]

8. 40 CFR 63.10(e)(3):

The permittee shall submit deviation (excursion) reports (excess emissions and continuous monitoring system performance reports) that identify all periods of time during which the following combustion temperatures were not maintained at or above the required levels while burning waste:

a. the hearth flue temperature (as an hourly average); and

b. the secondary combustion chamber temperature (as an hourly average).

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(C)(1)]

9. 40 CFR 63.10(e)(3):

The permittee shall submit deviation (excursion) reports (excess emissions and continuous monitoring system performance reports) that identify all periods of time during which the hearth pressure was not maintained at or below the required levels while burning waste.

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(C)(1)]

10. 40 CFR 63.1211:

Record Keeping and Reporting Requirements

Summary of reporting requirements. The permittee must submit the following reports to the Administrator:

Reference Report
63.10(d)(5)(i).....Periodic startup, shutdown, and malfunction reports.
63.10(d)(5)(ii).....Immediate startup, shutdown and malfunction reports.
63.10(e)(3).....Excessive emissions and continuous monitoring system performance report and summary report.
63.1206(c)(3)(vi).....Excessive exceedances reports.

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(C)(1)]

11. 40 CFR 63.10(d)(5)(i):

Periodic startup, shutdown, and malfunction reports.

If actions taken by the permittee during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan [see 63.6(e)(3)], the permittee shall state such information in a startup, shutdown, and malfunction report. Such a report shall identify any instance where any action taken by a permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the affected source's startup, shutdown, and malfunction plan, but the source does not exceed any applicable emission limitation in the relevant emission standard. Such a report shall also include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report shall consist of a letter, containing the name, title, and signature of the permittee or other responsible official who is certifying its accuracy, that shall be submitted to the Administrator (the Ohio EPA Northeast District Office) semiannually (or on a more frequent basis if specified otherwise in a relevant standard or as established otherwise by the permitting authority in the source's Title V permit). The startup, shutdown, and malfunction report shall be delivered or postmarked by the 30th day following the end of each calendar half (or other calendar reporting period, as appropriate).
If the permittee is required to submit excess emissions and continuous monitoring system performance (or other periodic) reports under this part, the startup, shutdown, and malfunction reports required under this paragraph may be submitted simultaneously with the excess emissions and continuous monitoring system performance (or other) reports.

Alternatively, the permittee may submit the periodic startup, shutdown, and malfunction reports quarterly along with the deviation (excursion) reports.

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(C)(1)]

12. 40 CFR 63.10(d)(5)(ii):

Immediate startup, shutdown, and malfunction reports.

Notwithstanding the allowance to reduce the frequency of reporting for periodic startup, shutdown, and malfunction reports under paragraph (d)(5)(i) of 63.10, any time an action taken by a permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, and the source exceeds any applicable emission limitation in the relevant emission standard, the permittee shall report the actions taken for that event within 2 working days after commencing actions inconsistent with the plan followed by a letter within 7 working days after the end of the event. The immediate report required under 63.10(d)(5)(ii) shall consist of a telephone call (or facsimile (FAX) transmission) to the Administrator (the Ohio EPA Northeast District Office) within 2 working days after commencing actions inconsistent with the plan, and it shall be followed by a letter, delivered or postmarked within 7 working days after the end of the event, that contains the name, title, and signature of the permittee or other responsible official who is certifying its accuracy, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and describing all excess emissions and/or parameter monitoring exceedances which are believed to have occurred. Notwithstanding the requirements of the previous sentence, after the effective date of an approved permit program in the State in which an affected source is located, the permittee may make alternative reporting arrangements, in advance, with the permitting authority in that State. Procedures governing the arrangement of alternative reporting requirements under 63.10(d)(5)(ii) are specified in 63.9(i).
[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(C)(1)]

13. 40 CFR 63.10(e)(3):

Excess emissions and continuous monitoring system performance report and summary report.

Excess emissions and parameter monitoring exceedances are defined in relevant standards. The permittee of an affected source required to install a CMS by a relevant standard shall submit an excess emissions and continuous monitoring system performance report and/or a summary report to the Administrator (the appropriate Ohio EPA District Office or local air agency) semiannually.

40 CFR 63.10(e)(3)(v):

Content and submittal dates for excess emissions and monitoring system performance reports.

All excess emissions and monitoring system performance reports and all summary reports, if required, shall be delivered or postmarked by the 30th day following the end of each calendar half or quarter, as appropriate. Written reports of excess emissions or exceedances of process or control system parameters shall include all the information required in paragraphs (c)(5) through (c)(13) of 63.10, in 63.8(c)(7) and 63.8 (c)(8), and in the relevant standard, and they shall contain the name, title, and signature of the responsible official who is certifying the accuracy of the report. When no excess emissions or exceedances of a parameter have occurred, or a CMS has not been inoperative, out of control, repaired, or adjusted, such information shall be stated in the report.

40 CFR 63.10(e)(3)(vi): Summary report.

As required under paragraphs (e)(3)(vii) and (e)(3)(viii) of 63.10, one summary report shall be submitted for the hazardous air pollutants monitored at each affected source (unless the relevant standard specifies that more than one summary report is required, e.g., one summary report for each hazardous air pollutant monitored). The summary report shall be entitled "Summary Report--Gaseous and Opacity Excess Emission and Continuous Monitoring System Performance" and shall contain the following information:
a. the company name and address of the affected source;
b. an identification of each hazardous air pollutant monitored at the affected source;
c. the beginning and ending dates of the reporting period;
d. a brief description of the process units;
e. the emission and operating parameter limitations specified in the relevant standard(s);

f. the monitoring equipment manufacturer(s) and model number(s);
g. the date of the latest CMS certification or audit;
h. the total operating time of the affected source during the reporting period;
i. an emission data summary (or similar summary if the permittee monitors control system parameters), including the total duration of excess emissions during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of excess emissions expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total duration of excess emissions during the reporting period into those that are due to startup/shutdown, control equipment problems, process problems, other known causes, and other unknown causes;
j. a CMS performance summary (or similar summary if the permittee monitors control system parameters), including the total CMS downtime during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of CMS downtime expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total CMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, non-monitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes;
k. a description of any changes in CMS, processes, or controls since the last reporting period;
l. the name, title, and signature of the responsible official who is certifying the accuracy of the report; and
m. the date of the report.

40 CFR 63.10(e)(3)(vii):

If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is less than 1 percent of the total operating time for the reporting period, and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report shall be submitted, and the full excess emissions and continuous monitoring system performance report need not be submitted unless required by the Administrator.

40 CFR 63.10(e)(3)(viii):

If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is 1 percent or greater of the total operating time for the reporting period, or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, both the summary report and the excess emissions and continuous monitoring system performance report shall be submitted.

Alternatively, the permitte may submit the excess emissions and continuous monitoring system performance report and summary report quarterly along with the Title V deviation (excursion) reports.

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(C)(1)]

14. 40 CFR 63.1206(c)(3)(vi):

Excessive exceedance reporting.

a. For each set of 10 exceedances of an emission standard or operating requirement while hazardous waste remains in the combustion chamber (i.e., when the hazardous waste residence time has not transpired since the hazardous waste feed was cutoff) during a 60-day block period, you must submit to the Administrator (the Ohio EPA Northeast District Office) a written report within 5 calendar days of the 10th exceedance documenting the exceedances and results of the investigation and corrective measures taken.

b. On a case-by-case basis, the Administrator may require excessive exceedance reporting when fewer than 10 exceedances occur during a 60-day block period.

40 CFR 63.1206(c)(2)(v)(A)(3)

Excessive exceedances during malfunctions.

For each set of 10 exceedances of an emission standard or operating requirement while hazardous waste remains in the combustion chamber (i.e., when the hazardous waste residence time has not transpired since the hazardous waste feed was cutoff) during a 60-day block period, you must:

i. within 45 days of the 10th exceedance, complete an investigation of the cause of each exceedance and evaluation of approaches to minimize the frequency, duration, and severity of each exceedance, and revise the startup, shutdown, and malfunction plan as warranted by the evaluation to minimize the frequency, duration, and severity of each exceedance; and

ii. record the results of the investigation and evaluation in the operating record, and include a summary of the investigation and evaluation, and any changes to the startup, shutdown, and malfunction plan, in the excess emissions report required under 63.10(e)(3).

[Authority for term: 40 CFR, Part 63, Subpart EEE]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1)

[Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-15-04(A), and OAC rule 3745-17-03(B)(1)]

b. Emission Limitation:
Particulate emissions shall not exceed 0.10 pound per one hundred pounds of liquid, semi-solid or solid refuse and salvageable material charged.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with this emission limitation by stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

[Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-15-04(A), and OAC rule 3745-17-03(B)(9)]

c. Emission Limitation:
39.4 lbs of SO2 per hour.

Applicable Compliance Method:
Compliance shall be demonstrated by records of data obtained by the continuous SO2 monitoring system, and, if required, using the procedures specified in OAC rule 3745-18-04(A) and test Method 6 or 6C of 40 CFR, Part 60, Appendix A.

Emissions testing and the relative accuracy test on the continuous SO2 monitor may be conducted at the same time while the emissions unit is operating at worst case emission conditions.

[Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-15-04(A), and OAC rule 3745-18-04(A)]

2. 40 CFR 63.1206(c)(3)(vii): Testing.

The AWFCO system and associated alarms must be tested at least monthly to verify operability. The permittee must document and record in the operating record AWFCO operability test procedures and results.

[Authority for term: 40 CFR, Part 63, Subpart EEE and OAC rule 3745-77-07(C)(1)]

3. 40 CFR 63.1207(d)(4): Performance Testing.

Applicable testing requirements under the current interim standards (effective until the final rule is promulgated).

a. Waiver of periodic comprehensive performance tests. Except as provided by paragraph (c)(2) of 63.1207, the permittee must conduct only an initial comprehensive performance test under the interim standards (i.e., the standards published in the Federal Register on February 13, 2002); all subsequent comprehensive performance testing requirements are waived under the interim standards. The provisions in the introductory text to paragraph (d) and in paragraph (d)(1) of 63.1207 do not apply until USEPA promulgates permanent replacement standards pursuant to the Settlement Agreement noticed in the Federal Register on November 16, 2001.
b. Waiver of confirmatory performance tests. The permittee is not required to conduct a confirmatory test under the interim standards (i.e., the standards published in the Federal Register on February 13, 2002). The confirmatory testing requirements in the introductory text to paragraph (d) and in paragraph (d)(2) of 63.1207 are waived until US EPA promulgates permanent replacement standards pursuant to the Settlement Agreement noticed in the Federal Register on November 16, 2001.

Frequency of testing.

Except as otherwise specified in 63.1207(d)(4), the permittee must conduct testing periodically as prescribed in paragraphs (d)(1) through (d)(3) of 63.1207. The date of commencement of the initial comprehensive performance test is the basis for establishing the deadline to commence the initial confirmatory performance test and the next comprehensive performance test. The permittee may conduct performance testing at any time prior to the required date. The deadline for commencing subsequent confirmatory and comprehensive performance testing is based on the date of commencement of the previous comprehensive performance test. Unless the Administrator grants a time extension under 63.1207 (i), the permittee must conduct testing as follows:
b. 40 CFR 63.1207: Frequency of testing under the proposed final rule (to become applicable when promulgated):

Comprehensive performance testing.

Except as otherwise specified in 63.1207(d)(4), the permittee must commence testing no later than 61 months after the date of commencing the previous comprehensive performance test. If the permittee submits data in lieu of the initial performance test, you must commence the subsequent comprehensive performance test within 61 months of commencing the test used to provide the data in lieu of the initial performance test.

Confirmatory performance testing.

Except as otherwise specified in 63.1207(d)(4), the permittee must commence confirmatory performance testing no later than 31 months after the date of commencing the previous comprehensive performance test. If the permittee submits data in lieu of the initial performance test, the permittee must commence the initial confirmatory performance test within 31 months of the date six months after the compliance date. To

ensure that the confirmatory test is conducted approximately midway between comprehensive performance tests, the Administrator will not approve a test plan that schedules testing within 18 months of commencing the previous comprehensive performance test.

Duration of testing.

The permittee must complete performance testing within 60 days after the date of commencement, unless the Administrator determines that a time extension is warranted based on the permittee's documentation in writing of factors beyond the permittee's control that prevent the permittee from meeting the 60-day deadline.

40 CFR 63.1207(h): Operating conditions during subsequent testing.

Current operating parameter limits established under 63.1209 are waived during subsequent comprehensive performance testing.
Current operating parameter limits are also waived during pretesting prior to comprehensive performance testing for an aggregate time not to exceed 720 hours of operation (renewable at the discretion of the Administrator) under an approved test plan or if the source records the results of the pretesting.

[Authority for term: 40 CFR, Part 63, Subpart EEE, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: N001 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P001 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process C (P001): production of lubricant additives through neutralization of thiophosphoryl compounds using three reactor systems. A reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks. Volatile organic compound (VOC) emissions from the three reactor systems are controlled by either a wet scrubber using water as the scrubbing solution (C-1 WScrb), or one of two flares (A-28 or C-5 Flare). SO2 emissions will result from the combustion of sulfur-containing organic compounds at the flares.	OAC rule 3745-21-09(LL)	See A.I.2.a. through A.I.2.d. below.
	OAC rule 3745-18-06(E)	SO2: 19.05 lbs/hr

2. **Additional Terms and Conditions**

a. The VOC emissions shall be controlled by a flare that meets the requirements of paragraph OAC rule 3745-21-09(DD)(10)(d), unless otherwise exempted by OAC rule 3745-21-09(LL)(3).

b. Total VOC emissions not controlled by a flare shall not exceed five tons per rolling twelve-month period, pursuant to OAC rule 3745-21-09(LL)(3)(a). The total VOC emissions not controlled by a flare shall be based on the emissions from all process vent streams.

c. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the flare shall be designed and operated as follows:

i. The flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of five minutes during any two consecutive hours.

ii. The flare shall be operated with either an electric arc ignition system or a pilot flame. If a pilot flame is employed, the flame shall be present at all times and shall be monitored with a thermocouple or any

other equivalent device to detect the presence of the pilot flame. If an electric arc ignition system is employed, the arcing shall pulse continually and shall be monitored to detect any failure.

iii. The flare shall be steam-assisted, air-assisted or non-assisted.

iv. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be three hundred Btu/scf or greater if the flare is steam-assisted or air-assisted, or shall be two hundred Btu/scf or greater if the flare is non-assisted.

v. Except as provided in paragraph A.I.2.c.vi. of this permit, the flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, of less than sixty feet per second if the flare is steam-assisted or non-assisted, or less than the maximum permitted velocity, as determined in paragraph (P)(4) of rule 3745-21-10 of the Administrative Code, if the flare is air-assisted.

c. vi. Excluded from the requirements of paragraph A.I.2.c.v. of this permit is any steam-assisted or non-assisted flare that meets both of the following requirements:

a. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be greater than one thousand Btu/scf.

b. The flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, less than four hundred feet per second.

d. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

   The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

   If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

   a. the company identification of each final product generated;

   b. the quantity of each final product generated, in tons;

   c. the number of batches run for each final product generated;

   d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

   e. the VOC emission rate for each final product generated that was not controlled by the flare(s) or the wet scrubber, in tons, using the following equation:

   E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run)

f. the VOC emission rate for each final product generated that was controlled by the wet scrubber, in tons, using the following equation:

E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

Where: CE = control efficiency of the wet scrubber, as demonstrated during the most recent emissions test;

g. the total VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the flare(s) (in tons, determined by adding the values from A.III.3.e. and A.III.3.f. for all final products generated); and

h. the rolling, twelve-month summation of the monthly VOC emissions, for all final products generated, in which the VOC emissions were not controlled by the flare(s) (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

[Authority for term: OAC rule 3745-21-09(LL), and OAC rule 3745-77-07(C)(1)]

4. The permittee shall develop emission factors for the amount of SO2 emitted from the flare, either for each final product generated or for each batch run in this emissions unit. The emission factors shall be in units of pounds of SO2 emitted per ton of final product generated, or pounds of SO2 emitted per batch.

The permittee shall submit SO2 emission factors for all products containing sulfur. The specific methodology used to calculate the SO2 emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all SO2 emission factors shall be kept on site and available for Ohio EPA review.

If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. The permittee shall collect and record the following information monthly for each batch:

a. the company identification of each final product generated;

b. the quantity of each final product generated per batch in kg;

c. the processing time for each batch in hours;

d. the emission factor for sulfur compound emissions used to determine the amount of SO2 emitted from the process for each final product generated (in pounds/kg of final product generated or pounds/batch run);

e. the SO2 emission rate for each batch of final product generated after control or combustion devices, in pounds, using the following equation:

E=(quantity of product in kg or number of batches run) x (sulfur compound emission factor in lbs/kg or lbs/batch) x (conversion factor for lbs SO2/lb sulfur compound) x (1-CE/100))

Where:

CE= control efficiency of the control device removing sulfur compounds based on the most recent stack test data;

f. the total SO2 emission rate to the atmosphere for all final products generated, in pounds;

g. the number of hours per batch; and

h. the average hourly SO2 emission rate for each batch, in pounds per hour, and the maximum lb/hr SO2 emission rate accounting for the possibility of multiple batches being made simultaneously.

[Authority for term: OAC rule 3745-77-07(C)(1)]

6. A pilot flame shall be maintained in the flare's pilot light burner at all times the process vent stream is vented to the flare.

The permittee shall properly operate, and maintain equipment to continuously monitor and record the presence of a pilot flame during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer''s recommendations, instructions, and operating manual(s).

The permittee shall record the following information each day:

a. all periods during which there was no pilot flame; and

b. the operating times for the flare, monitoring equipment, and the associated emissions unit.

Whenever the monitoring indicates that there is no pilot flame while the emissions unit is in operation, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable operating scenario, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain

records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the results of monitoring immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

7. The permittee shall properly operate and maintain equipment to continuously monitor and record the scrubber water flow rate, in gallons per minute, during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the flow rate on a continuous basis.

Whenever the monitored value for the flow rate falls below the level specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the scrubber water flow rate above the minimum level specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the flow rate readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.
The acceptable level for the scrubber water flow rate for this scrubber is not less than 2 gallons per minute.

This acceptable level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

If the control efficiency of the wet scrubber is always assumed to be zero, and compliance with the emission limitation of five tons per rolling twelve-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the wet scrubber as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of five tons per rolling twelve-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

8. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the flares. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to eliminate the visible emissions.

At any time the permittee observes visible emissions from the flares, the permittee shall monitor the visible emissions for a minimum period of 10 minutes in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 and record the results in an operations log.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

[Authority for term: OAC rule 3745-21-09(LL), and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that

specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.g. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit deviation (excursion) reports that identify all exceedances of the pound per hour emission limitation for SO2.

[Authority for term: OAC rule 3745-77-07(C)(1)]

4. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. each period of time when the pilot light was not lit while the emissions unit was in operation;

b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the operation of the flare into compliance with the acceptable operating criteria, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. Unless the control efficiency of the wet scrubber is assumed to be zero, the permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. each period of time when the scrubber water flow rate was below the acceptable level;

b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the scrubber water flow rate into compliance with the acceptable level, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

6. The permittee shall submit quarterly reports that (a) identify all days during which any visible particulate emissions were observed from the flares, (b) describe any corrective actions taken to eliminate the visible particulate emissions, and (c) include all visible emission readings conducted pursuant to the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 as a result of the presence of visible emissions from the flares. These quarterly reports shall be submitted to the appropriate Ohio EPA District Office by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

7. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams not controlled by the flare(s).

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation: 19.05 lbs of SO2 per hour

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, compliance shall be demonstrated by testing the amount of sulfur produced by this emissions unit prior to the flare using a U.S. EPA approved test method subject to the review and approval of the Ohio EPA Northeast District Office.

[Authority for term: OAC rule 3745-15-04(A) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. the emission testing shall be conducted within 2 years of issuance of the permit, or within 3 months of startup (if temporarily shutdown at the time of permit issuance), and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to determine the control efficiency of the wet scrubber (unless assumed to be zero);

c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of the wet scrubber shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

d. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

e. the emission testing shall be conducted over an entire batch cycle.
Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10, and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Issuance type: Title V Final Permit

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Facility ID: 0243000024 Emissions Unit ID: P005 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process F (P005): production of lubricant additives through alkylation using one reactor system. A reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks. Volatile organic compound (VOC) emissions from the reactor system are controlled by one of two flares (A-28 or F-4 Flare).	OAC rule 3745-21-09 (LL)	See A.I.2.a. through A.I.2.d. below.

2. **Additional Terms and Conditions**

a. The VOC emissions shall be controlled by a flare that meets the requirements of paragraph OAC rule 3745-21-09(DD)(10)(d), unless otherwise exempted by OAC rule 3745-21-09(LL)(3).

b. Total VOC emissions not controlled by a flare shall not exceed five tons per rolling twelve-month period, pursuant to OAC rule 3745-21-09(LL)(3)(a). The total VOC emissions not controlled by a flare shall be based on the emissions from all process vent streams.

c. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the flare shall be designed and operated as follows:

i. The flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of five minutes during any two consecutive hours.

ii. The flare shall be operated with either an electric arc ignition system or a pilot flame. If a pilot flame is employed, the flame shall be present at all times and shall be monitored with a thermocouple or any other equivalent device to detect the presence of the pilot flame. If an electric arc ignition system is employed, the arcing shall pulse continually and shall be monitored to detect any failure.

iii. The flare shall be steam-assisted, air-assisted or non-assisted.

iv. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be three hundred Btu/scf or greater if the flare is steam-assisted or air-assisted, or shall be two hundred Btu/scf or greater if the flare is non-assisted.

v. Except as provided in paragraph A.I.2.c.vi. of this permit, the flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, of less than sixty feet per second if the flare is steam-assisted or non-assisted, or less than the maximum permitted velocity, as determined in paragraph (P)(4) of rule 3745-21-10 of the Administrative Code, if the flare is air-assisted.

c. vi. Excluded from the requirements of paragraph A.I.2.c.v. of this permit is any steam-assisted or non-assisted flare that meets both of the following requirements:

a. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be greater than one thousand Btu/scf.

b. The flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, less than four hundred feet per second.

d. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

a. the company identification of each final product generated;

b. the quantity of each final product generated, in tons;

c. the number of batches run for each final product generated;

d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

e. the VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the flare(s), in tons, using the following equation:

E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run);

f. the total VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the flare(s), in tons; and

g. the rolling, twelve-month summation of the monthly VOC emissions, for all final products generated, in which the VOC emissions were not controlled by the flare(s) (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. A pilot flame shall be maintained in the flare's pilot light burner at all times the process vent stream is vented to the flare.

The permittee shall properly operate, and maintain equipment to continuously monitor and record the presence of a pilot flame during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer"s recommendations, instructions, and operating manual(s).

The permittee shall record the following information each day:

a. all periods during which there was no pilot flame; and

b. the operating times for the flare, monitoring equipment, and the associated emissions unit.

Whenever the monitoring indicates that there is no pilot flame while the emissions unit is in operation, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable operating scenario, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the results of monitoring immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

5. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the flares. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to eliminate the visible emissions.

At any time the permittee observes visible emissions from the flares, the permittee shall monitor the visible emissions for a minimum period of 10 minutes in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 and record the results in an operations log.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.f. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the pilot light was not lit while the emissions unit was in operation;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the operation of the flare into compliance with the acceptable operating criteria, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

4. The permittee shall submit quarterly reports that (a) identify all days during which any visible particulate emissions were observed from the flares, (b) describe any corrective actions taken to eliminate the visible particulate emissions, and (c) include all visible emission readings conducted pursuant to the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 as a result of the presence of visible emissions from the flares. These quarterly reports shall be submitted to the appropriate Ohio EPA District Office by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

5. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams not controlled by the flare(s).

      Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

      [Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P005 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P006 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process G (P006): production of lubricant additives through the use of corrosive inorganic and organic reactions using three reactor systems. Each reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks. Volatile organic compound (VOC) emissions from the three reactor systems are controlled by a wet scrubber using a scrubbing solution of variable pH (G-3 Scrb), a caustic wet scrubber (G-4 CScrb), or an incinerator (AC-6/7 Fm Inc) followed by an emergency flare (S-4 Flare) as backup. SO2 emissions are controlled by the caustic wet scrubber.	OAC rule 3745-21-09(LL)	See A.I.2.a. through A.I.2.d. below.
	OAC rule 3745-18-06(E)	SO2: 26.99 lbs/hour, See A.I.2.e. below.

2. **Additional Terms and Conditions**

a. The VOC emissions shall be controlled by an incinerator that meets the requirements of paragraph OAC rule 3745-21-09(LL)(1)(a), unless otherwise exempted by OAC rule 3745-21-09(LL)(3).

b. Total VOC emissions not controlled by an incinerator or a flare shall not exceed five tons per rolling twelve-month period, pursuant to OAC rule 3745-21-09(LL)(3)(a). The total VOC emissions not controlled by an incinerator or a flare shall be based on the emissions from all process vent streams.

c. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the incinerator shall be designed and operated as follows:

i. The incinerator shall reduce the VOC emissions vented to it with an efficiency of at least ninety-eight percent by weight or shall emit VOC at a concentration not exceeding twenty parts per million by volume (dry basis), either of which is determined under OAC rule 3745-21-10(C); or

ii. The incinerator shall provide a minimum residence time of 0.75 second at a minimum temperature of sixteen hundred degrees Fahrenheit.

d. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

e. SO2 emissions generated from all of the reactor tanks when processing sulfur containing materials shall be controlled by the caustic wet scrubber.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

a. the company identification of each final product generated;

b. the quantity of each final product generated, in tons;

c. the number of batches run for each final product generated;

d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

e. the VOC emission rate for each final product generated that was not controlled by the incinerator(s) or wet scrubbers, in tons, using the following equation:

E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run)

f. the VOC emission rate for each final product generated that was controlled by either wet scrubber G-3 or G-4, in tons, using the following equation:

E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

Where: CE = control efficiency of either wet scrubber G-3 or G-4, whichever is associated with that particular vent stream, as demonstrated during the most recent emissions test;

g. the total VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) (in tons, determined by adding the values from A.III.3.e. and A.III.3.f. for all final products generated); and

h. the rolling, twelve-month summation of the monthly VOC emissions, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. The permittee shall develop emission factors for the amount of SO2 emitted from the process, either for each final product generated or for each batch run in this emissions unit. The emission factors shall be in units of pounds of SO2 emitted per ton of final product generated, or pounds of SO2 emitted per batch.

The permittee shall submit SO2 emission factors for all products containing sulfur. The specific methodology used to calculate the SO2 emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all SO2 emission factors shall be kept on site and available for Ohio EPA review.

If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. The permittee shall collect and record the following information monthly for each batch:

a. the company identification of each final product generated;

b. the quantity of each final product generated per batch in kg;

c. the processing time for each batch in hours;

d. the emission factor for sulfur compound emissions used to determine the amount of SO2 emitted from the process for each final product generated (in pounds/kg of final product generated or pounds/batch run);

e. the SO2 emission rate for each batch of final product generated after control or combustion devices, in pounds, using the following equation:

E=(quantity of product in kg or number of batches run) x (sulfur compound emission factor in lbs/kg or lbs/batch) x (conversion factor for lbs SO2/lb sulfur compound) x (1-CE/100))

Where:

CE= control efficiency of the control device removing sulfur compounds based on the most recent stack test data;

f. the total SO2 emission rate to the atmosphere for all final products generated, in pounds;

g. the number of hours per batch; and

h. the average hourly SO2 emission rate for each batch, in pounds per hour, and the maximum lb/hr SO2 emission rate accounting for the possibility of multiple batches being made simultaneously.

[Authority for term: OAC rule 3745-77-07(C)(1)]

6. The permittee shall operate and maintain equipment to continuously monitor and record the average combustion temperature within the thermal incinerator during operation of this emissions unit, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

a. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than the average combustion temperature specified below or less than the average combustion temperature specified by the manufacturer; and

b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

Whenever the monitored value for the average combustion temperature deviates from the average combustion temperature specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment above the acceptable value specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (minutes) during which there was a deviation, the average combustion temperature immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The acceptable average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, is not less than 1,600 degrees Fahrenheit, or shall meet the manufacturer's design specifications for temperature.

This temperature level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the temperature level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the temperature level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C)(1)]

7. The permittee shall properly operate and maintain equipment to monitor the pH of the G-3 (G-3 Scrb) scrubber liquor and to continuously monitor the scrubber liquor flow rate, in gallons per minute, during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s).

Unless the control efficiency of the wet scrubber is assumed to be zero, the permittee shall collect and record the following information each day:

a. the pH of the caustic scrubber liquor, before and after each batch and once during the batch (if the scrubber liquor is changed after a batch, the pH shall be collected and recorded at the end of the batch run);

b. the scrubber liquor flow rate, in gallons per minute, at the start of each batch; and

c. the operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

Whenever the monitored values for the pH or flow rate fall below the levels specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the pH or flow rate above the minimum levels specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the pH and/or flow rate readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The acceptable level for the pH of the scrubber liquor is not less than 7.0.

The acceptable level for the scrubber liquor flow rate for this scrubber is not less than 2 gallons per minute.

These levels are effective for the duration of this permit. Any changes in the acceptable levels must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the levels based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the levels will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.
If the control efficiency of the wet scrubber is always assumed to be zero, and compliance with the emission limitation of five tons per rolling twelve-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the wet scrubber, as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of five tons per rolling twelve-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

8. The permittee shall properly operate and maintain equipment to monitor the free NaOH concentration of the scrubber liquor and properly operate and maintain equipment to continuously monitor the scrubber liquor flow rate of wet scrubber G-4 (G-4 CScrb) while the emissions unit is in operation, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s).

Unless the control efficiency of the wet scrubber is assumed to be zero, the permittee shall collect and record the following information each day:

a. the free NaOH concentration (percent) of the scrubber liquor (the permittee shall record the percent free NaOH concentration before and after each batch reaction);

b. the scrubber liquor flow rates, in gallons per minute, at the start of each batch; and

c. the operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

Whenever the monitored values for the NaOH concentration or flow rate fall below the levels specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the NaOH concentration or flow rate above the minimum levels specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the NaOH concentration and/or flow rate readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The acceptable level for the NaOH concentration of the scrubber liquor shall be the minimum concentration established during the most recent emission test that demonstrated the emissions unit was in compliance with the allowable mass emission rate for SO2. If a deviation in the minimum free NaOH concentration occurs, the facility may choose to demonstrate compliance through stack testing and establish a lower minimum free NaOH concentration..

The acceptable level for the scrubber liquor flow rate for this scrubber is not less than 2 gallons per minute.
These levels are effective for the duration of this permit. If the acceptable levels are not rule based, the permittee may request revisions. Any changes in the acceptable levels must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the levels based upon information obtained during future SO2 emission tests that demonstrate compliance with the allowable SO2 emission rate for this emissions unit. In addition, approved revisions to the levels will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

If the control efficiency of the wet scrubber is always assumed to be zero, and compliance with the emission limitation of five tons per rolling twelve-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the wet scrubber, as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of five tons per rolling twelve-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

9. The permittee shall record daily any time period that emissions of SO2 were not vented to the caustic wet scrubber.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.g. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit deviation (excursion) reports that identify all exceedances of the pound per hour emission limitation for SO2.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

4. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the average combustion temperature within the thermal incinerator was less than 1600 degrees Fahrenheit or less than the average combustion temperature specified by the manufacturer;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the average combustion temperature within the thermal incinerator into compliance with the acceptable value, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

5. The permittee shall submit quarterly summaries that include a log of the downtime for the thermal incinerator when the associated emissions unit was in operation.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

6. Unless the control efficiency of wet scrubber G-3 is assumed to be zero, the permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the scrubber liquor pH or the scrubber liquor flow rate was below the respective acceptable levels;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the scrubber liquor pH and scrubber liquor flowrate into compliance with the acceptable levels, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

7. Unless the control efficiency of wet scrubber G-4 is assumed to be zero, the permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the free NaOH concentration (percent) of the scrubber liquor or the scrubber liquor flow rate was below the respective acceptable levels;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the free NaOH concentration (percent) of the scrubber liquor and scrubber liquor flow rate into compliance with the acceptable levels, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

8. The permittee shall submit deviation (excursion) reports that identify all periods of time during which emissions of SO2 were not vented to the caustic wet scrubber.

[Authority for term: OAC rule 3745-77-07(C)(1)]

9. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams not controlled by the incinerator(s).

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation: 26.99 lbs of SO2 per hour

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, compliance shall be demonstrated by emissions testing of wet scrubber G-4 using the procedures specified in OAC rule 3745-18-04(A) and test Method 6 or 6C of 40 CFR, Part 60, Appendix A.

[Authority for term: OAC rule 3745-15-04(A) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. the emission testing shall be conducted within 2 years of issuance of the permit and within 1 year prior to permit expiration;

b. emission testing of wet scrubbers G-3 and G-4 shall be conducted to determine control efficiency (unless assumed to be zero);

c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of wet scrubbers G-3 and G-4 shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

d the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

e. the emission testing shall be conducted over an entire batch cycle.
Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10, and OAC rule 3745-77-07(C)(1)]

3. Compliance for fume incinerators AC-7 and AC-6 shall be demonstrated by the testing conducted for

emissions units P051 and P052. No additional testing shall be required for this emissions unit to comply with this emission limitation.

[Authority for term: OAC rule 3745-15-04(A) and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P006 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P007 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process H (P007): production of lubricant additives through the use of corrosive inorganic and organic reactions using four reactor systems. Each reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks. Volatile organic compound (VOC) emissions from the four reactor systems are controlled by either a caustic wet scrubber (H-1 CScrb) or an incinerator (AC-6/7 Fm Inc's) followed by an emergency flare (S-4 Flare) as backup.	OAC rule 3745-21-09(LL)	See A.I.2.a. through A.I.2.d. below.

2. **Additional Terms and Conditions**

a. The VOC emissions shall be controlled by an incinerator that meets the requirements of paragraph OAC rule 3745-21-09(LL)(1)(a), unless otherwise exempted by OAC rule 3745-21-09(LL)(3).

b. Total VOC emissions not controlled by an incinerator or a flare shall not exceed five tons per rolling twelve-month period, pursuant to OAC rule 3745-21-09(LL)(3)(a). The total VOC emissions not controlled by an incinerator or a flare shall be based on the emissions from all process vent streams.

c. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the incinerator shall be designed and operated as follows:

i. The incinerator shall reduce the VOC emissions vented to it with an efficiency of at least ninety-eight percent by weight or shall emit VOC at a concentration not exceeding twenty parts per million by volume (dry basis), either of which is determined under OAC rule 3745-21-10(C); or

ii. The incinerator shall provide a minimum residence time of 0.75 second at a minimum temperature of sixteen hundred degrees Fahrenheit.

d. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final

product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

a. the company identification of each final product generated;

b. the quantity of each final product generated, in tons;

c. the number of batches run for each final product generated;

d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

e. the VOC emission rate for each final product generated that was not controlled by the incinerator(s) or wet scrubbers, in tons, using the following equation:

E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run)

f. the VOC emission rate for each final product generated that was controlled by either wet scrubber H-1 alone, or in conjunction with wet scrubber H-2, in tons, using the following equation:

E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

Where: CE = control efficiency of either wet scrubber H-1 alone or in conjunction with wet scrubber H-2 (when associated with that particular vent stream) as demonstrated during the most recent emissions test;

g. the total VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) (in tons, determined by adding the values from A.III.3.e. and A.III.3.f. for all final products generated); and

h. the rolling, twelve-month summation of the monthly VOC emissions, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. The permittee shall operate and maintain equipment to continuously monitor and record the average combustion temperature within the thermal incinerator during operation of this emissions unit, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

a. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than the average combustion temperature specified below or less than the average combustion temperature specified by the manufacturer; and

b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

Whenever the monitored value for the average combustion temperature deviates from the average combustion temperature specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment above the acceptable value specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action,

the date it was completed, the date and time the deviation ended, the total period of time (minutes) during which there was a deviation, the average combustion temperature immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The acceptable average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, is not less than 1,600 degrees Fahrenheit, or shall meet the manufacturer's design specifications for temperature.

This temperature level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the temperature level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the temperature level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. The permittee shall properly operate and maintain equipment to monitor the pH of the H-1 (H-1 CScrb) scrubber liquor and to continuously monitor the scrubber liquor flow rate, in gallons per minute, during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s).

Unless the control efficiency of the wet scrubber is assumed to be zero, the permittee shall collect and record the following information each day:

a. the pH of the caustic scrubber liquor, before and after each batch and once during the batch (if the scrubber liquor is changed after a batch, the pH shall be collected and recorded at the end of the batch run);

b. the caustic scrubber liquor flow rate, in gallons per minute, at the start of each batch; and

c. the operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

Whenever the monitored values for the pH or flow rate fall below the levels specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the pH or flow rate above the minimum levels specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the pH and/or flow rate readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The acceptable level for the pH of the scrubber liquor is not less than 7.0.

The acceptable level for the scrubber liquor flow rate for this scrubber is not less than 2 gallons per minute.

These levels are effective for the duration of this permit. Any changes in the acceptable levels must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the levels based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the levels will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.
If the control efficiency of the wet scrubber is always assumed to be zero, and compliance with the emission limitation of five tons per rolling twelve-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the wet scrubber, as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of five tons per rolling twelve-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.g. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the average combustion temperature within the thermal incinerator was less than 1600 degrees Fahrenheit or less than the average combustion temperature specified by the manufacturer;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the average combustion temperature within the thermal incinerator into compliance with the acceptable value, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

4. The permittee shall submit quarterly summaries that include a log of the downtime for the thermal incinerator when the associated emissions unit was in operation.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

5. Unless the control efficiency of wet scrubber H-1 is assumed to be zero, the permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the scrubber liquor pH or the scrubber liquor flow rate was below the respective acceptable levels;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the scrubber liquor pH and scrubber liquor flowrate into compliance with the acceptable levels, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

6. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams not controlled by the incinerator(s).

      Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

      [Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission testing shall be conducted within 2 years of issuance of the permit and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to determine the control efficiency of wet scrubber H-1 (unless assumed to be zero);

c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of wet scrubber H-1 shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

d. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

e. the emission testing shall be conducted over an entire batch cycle.
Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10, and OAC rule 3745-77-07(C)(1)]

3. Compliance for fume incinerators AC-7 and AC-6 shall be demonstrated by the testing conducted for emissions units P051 and P052. No additional testing shall be required for this emissions unit to comply with this emission limitation.

[Authority for term: OAC rule 3745-15-04(A) and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P007 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P008 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process I (P008): production of lubricant additives through the use of corrosive inorganic and organic reactions using two reactor systems. Each reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks. Volatile organic compound (VOC) emissions from the two reactor systems are controlled by a wet scrubber using water as the scrubbing solution (C-1 WScrb) or a flare (F-4 Flare).	OAC rule 3745-21-09(LL)	See A.I.2.a. through A.I.2.d. below.

2. **Additional Terms and Conditions**

a. The VOC emissions shall be controlled by a flare that meets the requirements of paragraph OAC rule 3745-21-09(DD)(10)(d), unless otherwise exempted by OAC rule 3745-21-09(LL)(3).

b. Total VOC emissions not controlled by a flare shall not exceed five tons per rolling twelve-month period, pursuant to OAC rule 3745-21-09(LL)(3)(a). The total VOC emissions not controlled by a flare shall be based on the emissions from all process vent streams.

c. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the flare shall be designed and operated as follows:

i. The flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of five minutes during any two consecutive hours.

ii. The flare shall be operated with either an electric arc ignition system or a pilot flame. If a pilot flame is employed, the flame shall be present at all times and shall be monitored with a thermocouple or any other equivalent device to detect the presence of the pilot flame. If an electric arc ignition system is employed, the arcing shall pulse continually and shall be monitored to detect any failure.

iii. The flare shall be steam-assisted, air-assisted or non-assisted.

iv. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be three hundred Btu/scf or greater if the flare is steam-assisted or air-assisted, or shall be two hundred Btu/scf or greater if the flare is non-assisted.

v. Except as provided in paragraph A.I.2.c.vi. of this permit, the flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, of less than sixty feet per second if the flare is steam-assisted or non-assisted, or less than the maximum permitted velocity, as determined in paragraph (P)(4) of rule 3745-21-10 of the Administrative Code, if the flare is air-assisted.

c. vi. Excluded from the requirements of paragraph A.I.2.c.v. of this permit is any steam-assisted or non-assisted flare that meets both of the following requirements:

a. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be greater than one thousand Btu/scf.

b. The flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, less than four hundred feet per second.

d. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

   The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

   If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

   a. the company identification of each final product generated;

b. the quantity of each final product generated, in tons;

c. the number of batches run for each final product generated;

d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

e. the VOC emission rate for each final product generated that was not controlled by the flare or wet scrubber, in tons, using the following equation:

E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run)

f. the VOC emission rate for each final product generated that was controlled by the wet scrubber, in tons, using the following equation:

E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

Where: CE = control efficiency of the wet scrubber, as demonstrated during the most recent emissions test;

g. the total VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the flare (in tons, determined by adding the values from A.III.3.e. and A.III.3.f. for all final products generated); and

h. the rolling, twelve-month summation of the monthly VOC emissions, for all final products generated, in which the VOC emissions were not controlled by the flare (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. A pilot flame shall be maintained in the flare's pilot light burner at all times the process vent stream is vented to the flare.

The permittee shall properly operate, and maintain equipment to continuously monitor and record the presence of a pilot flame during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer''s recommendations, instructions, and operating manual(s).

The permittee shall record the following information each day:

a. all periods during which there was no pilot flame; and

b. the operating times for the flare, monitoring equipment, and the associated emissions unit.

Whenever the monitoring indicates that there is no pilot flame while the emissions unit is in operation, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable operating scenario, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the results of monitoring immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

5. The permittee shall properly operate and maintain equipment to continuously monitor and record the scrubber water flow rate, in gallons per minute, during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the flow rate on a continuous basis.

Whenever the monitored value for the flow rate falls below the level specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the scrubber water flow rate above the minimum level specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the flow rate readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.
The acceptable level for the scrubber water flow rate for this scrubber is not less than 2 gallons per minute.

This acceptable level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

If the control efficiency of the wet scrubber is always assumed to be zero, and compliance with the emission limitation of five tons per rolling twelve-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the wet scrubber as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of five tons per rolling twelve-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

6. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the flare. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to eliminate the visible emissions.

At any time the permittee observes visible emissions from the flare, the permittee shall monitor the visible emissions for a minimum period of 10 minutes in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 and record the results in an operations log.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.g. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. each period of time when the pilot light was not lit while the emissions unit was in operation;

b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the operation of the flare into compliance with the acceptable operating criteria, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

4. Unless the control efficiency of the wet scrubber is assumed to be zero, the permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. each period of time when the scrubber water flow rate was below the acceptable level;

b. an identification of each incident of deviation described in (a) where a prompt investigation was not

conducted;

c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the scrubber water flow rate into compliance with the acceptable level, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. The permittee shall submit quarterly reports that (a) identify all days during which any visible particulate emissions were observed from the flare, (b) describe any corrective actions taken to eliminate the visible particulate emissions, and (c) include all visible emission readings conducted pursuant to the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 as a result of the presence of visible emissions from the flare. These quarterly reports shall be submitted to the appropriate Ohio EPA District Office by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

6. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams not controlled by the flare.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. the emission testing shall be conducted within 2 years of issuance of the permit and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to determine the control efficiency of the wet scrubber (unless assumed to be zero);

c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of the wet scrubber shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

d. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

e. the emission testing shall be conducted over an entire batch cycle.
Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10, and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P008 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P011 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process L (P011): production of lubricant additives through thiophosphorylation using two reactor systems. Each reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks. Volatile organic compound (VOC) emissions from the two reactor systems are controlled by carbon adsorber (O-1 CDrum) or a an incinerator (AC-6/7 Fm Inc's) followed by an emergency flare (S-4 Flare) as backup. SO2 emissions will result from the combustion of sulfur-containing organic compounds at the fume incinerator system.	OAC rule 3745-21-09(LL)	See A.I.2.a. through A.I.2.d. below.
	Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000	SO2: 2.4 lbs/hr, See A.I.2.e. below.

2. **Additional Terms and Conditions**

a. The VOC emissions shall be controlled by an incinerator that meets the requirements of paragraph OAC rule 3745-21-09(LL)(1)(a), unless otherwise exempted by OAC rule 3745-21-09(LL)(3).

b. Total VOC emissions not controlled by an incinerator or a flare shall not exceed five tons per rolling twelve-month period, pursuant to OAC rule 3745-21-09(LL)(3)(a). The total VOC emissions not controlled by an incinerator or a flare shall be based on the emissions from all process vent streams.

c. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the incinerator shall be designed and operated as follows:

i. The incinerator shall reduce the VOC emissions vented to it with an efficiency of at least ninety-eight percent by weight or shall emit VOC at a concentration not exceeding twenty parts per million by volume (dry basis), either of which is determined under OAC rule 3745-21-10(C); or

ii. The incinerator shall provide a minimum residence time of 0.75 second at a minimum temperature of sixteen hundred degrees Fahrenheit.

d. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals which minimize the amount of VOC exposed to the ambient air.

e. The total hourly and annual SO2 emissions from emissions units P011, P012, P013, P014, P022 and P030, combined, shall not exceed 247.4 lbs per hour and 100 tons per year.

The total allowable SO2 emissions for the fume incinerator system for any hour shall be the sum of the individual allowable SO2 emissions limitations for those emissions units that are in operation during any part of that hour. The total allowable SO2 emission rate for the fume incinerator system for any rolling, three-hour period shall be the average of the three, one-hour allowables comprising the three-hour period.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

   The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

   If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

   a. the company identification of each final product generated;

   b. the quantity of each final product generated, in tons;

   c. the number of batches run for each final product generated;

   d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

   e. the VOC emission rate for each final product generated that was not controlled by the incinerator(s) or carbon adsorber, in tons, using the following equation:

   E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run)

   f. the VOC emission rate for each final product generated that was controlled by the carbon adsorber, in tons, using the following equation:

   E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

   Where: CE = control efficiency of the carbon adsorber, as demonstrated during the most recent emissions test;

   g. the total VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) (in tons, determined by adding the values from A.III.3.e. and A.III.3.f. for all final products generated); and

   h. the rolling, twelve-month summation of the monthly VOC emissions, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. The permittee shall operate and maintain equipment to continuously monitor and record the average combustion temperature within the thermal incinerator during operation of this emissions unit, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

   The permittee shall collect and record the following information for each day:

   a. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than the average combustion temperature specified below or less than the average combustion temperature specified by the manufacturer; and

   b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

   Whenever the monitored value for the average combustion temperature deviates from the average combustion temperature specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation

was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations. In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment above the acceptable value specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (minutes) during which there was a deviation, the average combustion temperature immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The acceptable average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, is not less than 1,600 degrees Fahrenheit, or shall meet the manufacturer's design specifications for temperature.

This temperature level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the temperature level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the temperature level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. The carbon adsorption system shall be continuously maintained to ensure that the existing carbon is replaced with fresh carbon immediately when breakthrough is indicated.

If the control efficiency of the carbon adsorber is always assumed to be zero, and compliance with the emission limitation of 5 tons per rolling, 12-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the carbon adsorber, as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of 5 tons per rolling, 12-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

Unless the control efficiency of the carbon adsorption system is assumed to be zero, the permittee shall monitor and record the concentration level of the organic compounds in the carbon adsorption system's exhaust stream daily, or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater.

The permittee shall monitor and record all periods when carbon breakthrough is detected. Existing carbon shall be replaced with fresh carbon immediately upon carbon breakthrough. As an alternative, the permittee shall replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval, as determined by the maximum design flow rate and the organic concentration in the gas stream.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

6. The permittee shall maintain hourly records of the following information:

a. the actual SO2 emission rate from the fume incinerator system, in pounds per hour;

b. the rolling, three-hour average, actual SO2 emission rate from the fume incinerator system, in pounds per hour;

c. the total allowable SO2 emission rate, in pounds per hour, for all the emissions units (P011, P012, P013, P014, P022 and P030) in operation during the hour; and

d. the rolling, three-hour average, allowable SO2 emission rate, in pounds per hour.

The permittee shall maintain records that document which emissions units (P011, P012, P013, P014, P022 and P030) were in operation during each hour. If an emissions unit is in operation during any portion of an hour, it is considered to be in operation for the entire hour for purposes of determining compliance with the total allowable SO2 emission rate for all the emissions units in operation during any hour. Compliance shall be determined by comparing the rolling, three-hour average, actual and allowable, SO2 emission rates for each hour.

The total allowable SO2 emissions for the fume incinerator system for any hour shall be the sum of the individual allowable SO2 emissions limitations for those emissions units that are in operation during any part of that hour. The total allowable SO2 emission rate for the fume incinerator system for any rolling, three-hour period shall be the average of the three, one-hour allowables comprising the three-hour period.

[Authority for term: OAC rule 3745-77-07(C)(1) and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

7. The permittee shall maintain daily records of the actual SO2 emission rate from the fume incinerator system, in pounds per day.

[Authority for term: OAC rule 3745-77-07(C)(1)]

8. The permittee shall operate and maintain existing equipment to continuously monitor and record SO2 from this emissions unit in units of the applicable standard(s). Such continuous monitoring and recording

equipment shall comply with the requirements specified in 40 CFR Part 60.13(d)(1), (e)(2) and (h), respectively. The permittee may request alternative monitoring procedures or requirements and alternative relative accuracy test procedures, in accordance with the relevant provisions of 40 CFR Parts 60.13(i) and (j), by submitting a written request to the Director. Any alternative monitoring and/or testing acceptable to the Director shall be approved by the U.S. EPA as a revision to the State Implementation Plan (SIP) prior to the implementation of the alternative monitoring and/or testing.

A statement of certification of the existing continuous SO2 monitoring system shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 6. Proof of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

The permittee shall maintain records of all data obtained by the continuous SO2 monitoring system including, but not limited to, parts per million SO2 on an instantaneous (one-minute) basis, emissions of SO2 in units of lbs/hr and lbs/hr rolling, three-hour average, and in the appropriate averaging period (e.g., hourly and hourly rolling of consecutive three-hour periods), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

[Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR Part 60.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

9. The permittee shall implement a quality assurance/quality control plan for the continuous SO2 monitoring system designed to ensure continuous valid and representative readings of SO2 emission concentrations and exhaust gas flow rates. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and include provisions for conducting a relative accuracy test following each monitor probe replacement. The relative accuracy test shall be performed, and the monitoring system operated, in accordance with the procedures specified in Performance Specification Tests 2 and 3, 40 CFR Part 60, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous SO2 monitoring system must be kept on site and available for inspection during regular office hours. Each record of any monitoring data, testing data, and support information required shall be retained for a period of five years from the date the record was created. Support information shall include, but not limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation.

[Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR Part 60.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.g. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit quarterly reports, for the preceding calendar quarter, that specifies the total SO2 emissions from emissions units P011, P012, P013, P014, P022 and P030 (as determined by record keeping required under A.III. of these terms and conditions).

[Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

4. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. each period of time when the average combustion temperature within the thermal incinerator was less than 1600 degrees Fahrenheit or less than the average combustion temperature specified by the manufacturer;

b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the average combustion temperature within the thermal incinerator into compliance with the acceptable value, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

5. The permittee shall submit quarterly summaries that include a log of the downtime for the thermal incinerator

when the associated emissions unit was in operation.

[Authority for term: OAC rule 3745-77-07(C)(1)]

6. Unless the control efficiency of the carbon adsorption system is assumed to be zero, the permittee shall submit deviation (excursion) reports that identify all periods during which the existing carbon is not replaced with fresh carbon immediately when breakthrough is indicated. These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

7. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit quarterly deviation reports that identify all rolling, three-hour periods during which the average SO2 emission rate exceeded the corresponding total allowable SO2 emission rate for the fume incinerator system.

The permittee shall submit quarterly reports documenting any downtime of the SO2 continuous emission rate monitoring system and/or control equipment while any of the emissions units were on line. The permittee shall provide the date, time, duration, reason (if known), an estimate of excess emissions, and any any corrective action(s) taken for each such incident. Normal downtimes for daily calibration and zero checks or periods where monitoring is maintained by a backup analyzer when the primary analyzer malfunctions shall not be reportable.
If no deviations occurred during a calendar year, the permittee shall submit a quarterly report that states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter. These reports shall also contain the total SO2 emissions for the calender quarter (in tons).

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-35-02, OAC rule 3745-77-07(C)(1), 40 CFR Part 60.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

8. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams not controlled by the incinerator(s).

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation: 2.4 lbs of SO2 per hour

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping of the total hourly emission rate, as required in Section A.III. of these terms and conditions.

[Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

c. Emission Limitation: The total hourly emissions from emissions units P011, P012, P013, P014, P022 and P030, combined, shall not exceed 247.4 lbs of SO2 per hour.

Applicable Compliance Method: Compliance shall be demonstrated by the records of data obtained by the continuous SO2 monitoring system, as required in Section A.III of these terms and conditions, and, if required, by emissions testing of the fume incinerator system using the procedures specified in OAC rule 3745-18-04(A) and test Method 6 or 6C of 40 CFR, Part 60, Appendix A.

Emissions testing and the relative accuracy test on the continuous SO2 monitor may be conducted at the same time while operating emissions units P011, P012, P013, P014, P022 and P030 at worst case emission conditions.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-18-04(A), OAC rule 3745-77-07(C)(1), 40 CFR, Part 63.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

d. Emission Limitation: The total annual emissions from emissions units P011, P012, P013, P014, P022 and P030, combined, shall not exceed 100 tons of SO2 per year.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions and by records of data obtained by the continuous SO2 monitoring system.

[Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. the emission testing shall be conducted within 2 years of issuance of the permit, or within 3 months of startup (if temporarily shutdown at the time of permit issuance), and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to determine the control efficiency of the carbon adsorber (unless assumed to be zero);

c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of the carbon adsorber shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

d. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

e. the emission testing shall be conducted over an entire batch cycle.
Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10, and OAC rule 3745-77-07(C)(1)]

3. Compliance for fume incinerators AC-7 and AC-6 shall be demonstrated by the testing conducted for emissions units P051 and P052. No additional testing shall be required for this emissions unit to comply with this emission limitation.

[Authority for term: OAC rule 3745-15-04(A) and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P011 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P012 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process M (P012): production of lubricant additives through condensation using four reactor systems. Each reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks.	OAC rule 3745-21-09 (LL)	See A.I.2.a. through A.I.2.e. below.
	Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000	SO2: 160.0 lbs/hr, See A.I.2.f. below.

Volatile organic compound (VOC) emissions from the four reactor systems are controlled by either a wet scrubber using water as the scrubbing solution (P-2 WScrb), a carbon adsorber (P-3 CDrum), or an incinerator (AC-6/7 Fm Inc's) followed by an emergency flare (S-4 Flare) as backup.

SO2 emissions will result from the combustion of sulfur-containing organic compounds at the fume incinerator system.

2. **Additional Terms and Conditions**

a. The VOC emissions shall be controlled by an incinerator that meets the requirements of paragraph OAC rule 3745-21-09(LL)(1)(a), or a flare that meets the requirements of paragraph OAC rule 3745-21-09 (DD)(10)(d), unless otherwise exempted by OAC rule 3745-21-09(LL)(3).

b. Total VOC emissions not controlled by an incinerator or a flare shall not exceed five tons per rolling twelve-month period, pursuant to OAC rule 3745-21-09(LL)(3)(a). The total VOC emissions not controlled by an incinerator or a flare shall be based on the emissions from all process vent streams.

c. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the incinerator shall be designed and operated as follows:

i. The incinerator shall reduce the VOC emissions vented to it with an efficiency of at least ninety-eight percent by weight or shall emit VOC at a concentration not exceeding twenty parts per million by volume (dry basis), either of which is determined under OAC rule 3745-21-10(C); or

ii. The incinerator shall provide a minimum residence time of 0.75 second at a minimum temperature of sixteen hundred degrees Fahrenheit.

d. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the flare shall be designed and operated as follows:

i. The flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of five minutes during any two consecutive hours.

ii. The flare shall be operated with either an electric arc ignition system or a pilot flame. If a pilot flame is employed, the flame shall be present at all times and shall be monitored with a thermocouple or any other equivalent device to detect the presence of the pilot flame. If an electric arc ignition system is employed, the arcing shall pulse continually and shall be monitored to detect any failure.

iii. The flare shall be steam-assisted, air-assisted or non-assisted.

iv. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be three hundred Btu/scf or greater if the flare is steam-assisted or air-assisted, or shall be two hundred Btu/scf or greater if the flare is non-assisted.

v. Except as provided in paragraph A.I.2.c.vi. of this permit, the flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, of less than sixty feet per second if the flare is steam-assisted or non-assisted, or less than the maximum permitted velocity, as determined in paragraph (P)(4) of rule 3745-21-10 of the Administrative Code, if the flare is air-assisted.

d. vi. Excluded from the requirements of paragraph A.I.2.c.v. of this permit is any steam-assisted or non-assisted flare that meets both of the following requirements:

a. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be greater than one thousand Btu/scf.

b. The flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, less than four hundred feet per second.

e. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

f. The total hourly and annual SO2 emissions from emissions units P011, P012, P013, P014, P022 and P030, combined, shall not exceed 247.4 lbs per hour and 100 tons per year.

The total allowable SO2 emissions for the fume incinerator system for any hour shall be the sum of the individual allowable SO2 emissions limitations for those emissions units that are in operation during any part of that hour. The total allowable SO2 emission rate for the fume incinerator system for any rolling, three-hour period shall be the average of the three, one-hour allowables comprising the three-hour period.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

   The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

   If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

   a. the company identification of each final product generated;

   b. the quantity of each final product generated, in tons;

   c. the number of batches run for each final product generated;

   d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

   e. the VOC emission rate for each final product generated that was not controlled by the incinerator(s), flare, wet scrubber or carbon adsorber, in tons, using the following equation:

   E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run)

   f. the VOC emission rate for each final product generated that was controlled by either the wet scrubber or carbon adsorber, in tons, using the following equation:

   E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

   Where: CE = control efficiency of the wet scrubber or carbon adsorber, whichever is associated with that particular vent stream, as demonstrated during the most recent emissions test;

   g. the total VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) or flare (in tons, determined by adding the values from A.III.3.e. and A.III.3.f. for all final products generated); and

   h. the rolling, twelve-month summation of the monthly VOC emissions, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) or flare (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. The permittee shall operate and maintain equipment to continuously monitor and record the average combustion temperature within the thermal incinerator during operation of this emissions unit, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

   The permittee shall collect and record the following information for each day:

   a. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than the average combustion temperature specified below or less than the average combustion temperature specified by the manufacturer; and

   b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when

the associated emissions unit was in operation.

Whenever the monitored value for the average combustion temperature deviates from the average combustion temperature specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment above the acceptable value specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (minutes) during which there was a deviation, the average combustion temperature immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The acceptable average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, is not less than 1,600 degrees Fahrenheit, or shall meet the manufacturer's design specifications for temperature.

This temperature level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the temperature level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the temperature level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. A pilot flame shall be maintained in the flare's pilot light burner at all times the process vent stream is vented to the flare.

The permittee shall properly operate, and maintain equipment to continuously monitor and record the presence of a pilot flame during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s).

The permittee shall record the following information each day:

a. all periods during which there was no pilot flame; and

b. the operating times for the flare, monitoring equipment, and the associated emissions unit.

Whenever the monitoring indicates that there is no pilot flame while the emissions unit is in operation, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable operating scenario, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the results of monitoring immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

6. The permittee shall properly operate and maintain equipment to continuously monitor and record the scrubber water flow rate for scrubber P-2 (P-2 WScrb), in gallons per minute, during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the flow rate on a continuous basis.

Whenever the monitored value for the flow rate falls below the level specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the scrubber water flow rate above the minimum level specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the flow rate readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The acceptable level for the scrubber water flow rate for scrubber P-2 is not less than 2 gallons per minute.

This acceptable level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

If the control efficiency of the wet scrubber is always assumed to be zero, and compliance with the emission limitation of five tons per rolling twelve-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the wet scrubber as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of five tons per rolling twelve-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

7. The carbon adsorption system shall be continuously maintained to ensure that the existing carbon is replaced with fresh carbon immediately when breakthrough is indicated.

If the control efficiency of the carbon adsorber is always assumed to be zero, and compliance with the emission limitation of 5 tons per rolling, 12-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the carbon adsorber, as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of 5 tons per rolling, 12-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

Unless the control efficiency of the carbon adsorption system is assumed to be zero, the permittee shall monitor and record the concentration level of the organic compounds in the carbon adsorption system's exhaust stream daily, or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater.

The permittee shall monitor and record all periods when carbon breakthrough is detected. Existing carbon shall be replaced with fresh carbon immediately upon carbon breakthrough. As an alternative, the permittee shall replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval, as determined by the maximum design flow rate and the organic concentration in the gas stream.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

8. The permittee shall maintain hourly records of the following information:

a. the actual SO2 emission rate from the fume incinerator system, in pounds per hour;

b. the rolling, three-hour average, actual SO2 emission rate from the fume incinerator system, in pounds per hour;

c. the total allowable SO2 emission rate, in pounds per hour, for all the emissions units (P011, P012, P013, P014, P022 and P030) in operation during the hour; and

d. the rolling, three-hour average, allowable SO2 emission rate, in pounds per hour.

The permittee shall maintain records that document which emissions units (P011, P012, P013, P014, P022 and P030) were in operation during each hour. If an emissions unit is in operation during any portion of an hour, it is considered to be in operation for the entire hour for purposes of determining compliance with the total allowable SO2 emission rate for all the emissions units in operation during any hour. Compliance shall be determined by comparing the rolling, three-hour average, actual and allowable, SO2 emission rates for each hour.

The total allowable SO2 emissions for the fume incinerator system for any hour shall be the sum of the individual allowable SO2 emissions limitations for those emissions units that are in operation during any part of that hour. The total allowable SO2 emission rate for the fume incinerator system for any rolling, three-hour period shall be the average of the three, one-hour allowables comprising the three-hour period.

[Authority for term: OAC rule 3745-77-07(C)(1) and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

9. The permittee shall maintain daily records of the actual SO2 emission rate from the fume incinerator system, in pounds per day.

[Authority for term: OAC rule 3745-77-07(C)(1)]

10. The permittee shall operate and maintain existing equipment to continuously monitor and record SO2 from this emissions unit in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13(d)(1), (e)(2) and (h), respectively. The permittee may request alternative monitoring procedures or requirements and alternative relative accuracy test procedures, in accordance with the relevant provisions of 40 CFR Parts 60.13(i) and

(j), by submitting a written request to the Director. Any alternative monitoring and/or testing acceptable to the Director shall be approved by the U.S. EPA as a revision to the State Implementation Plan (SIP) prior to the implementation of the alternative monitoring and/or testing.

A statement of certification of the existing continuous SO2 monitoring system shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 6. Proof of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

The permittee shall maintain records of all data obtained by the continuous SO2 monitoring system including, but not limited to, parts per million SO2 on an instantaneous (one-minute) basis, emissions of SO2 in units of lbs/hr and lbs/hr rolling, three-hour average, and in the appropriate averaging period (e.g., hourly and hourly rolling of consecutive three-hour periods), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

[Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR Part 60.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

11. The permittee shall implement a quality assurance/quality control plan for the continuous SO2 monitoring system designed to ensure continuous valid and representative readings of SO2 emission concentrations and exhaust gas flow rates. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and include provisions for conducting a relative accuracy test following each monitor probe replacement. The relative accuracy test shall be performed, and the monitoring system operated, in accordance with the procedures specified in Performance Specification Tests 2 and 3, 40 CFR Part 60, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous SO2 monitoring system must be kept on site and available for inspection during regular office hours. Each record of any monitoring data, testing data, and support information required shall be retained for a period of five years from the date the record was created. Support information shall include, but not limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation.

[Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR Part 60.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

12. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the flare. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to eliminate the visible emissions.

At any time the permittee observes visible emissions from the flare, the permittee shall monitor the visible emissions for a minimum period of 10 minutes in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 and record the results in an operations log.

[Authority for term: OAC rule 3745-77-07(C)(1)]

13. The carbon adsorption system shall be continuously maintained to ensure that the existing carbon is replaced with fresh carbon immediately when breakthrough is indicated.

If the control efficiency of the carbon adsorber is always assumed to be zero, and compliance with the emission limitation of 5 tons per rolling, 12-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the carbon adsorber, as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of 5 tons per rolling, 12-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

Unless the control efficiency of the carbon adsorption system is assumed to be zero, the permittee shall monitor and record the concentration level of the organic compounds in the carbon adsorption system's exhaust stream daily, or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater.

The permittee shall monitor and record all periods when carbon breakthrough is detected. Existing carbon shall be replaced with fresh carbon immediately upon carbon breakthrough. As an alternative, the permittee shall replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval, as determined by the maximum design flow rate and the organic concentration in the gas stream.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.g. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit quarterly reports, for the preceding calendar quarter, that specifies the total SO2 emissions from emissions units P011, P012, P013, P014, P022 and P030 (as determined by record keeping required under A.III. of these terms and conditions).

   [Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

4. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the average combustion temperature within the thermal incinerator was less than 1600 degrees Fahrenheit or less than the average combustion temperature specified by the manufacturer;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the average combustion temperature within the thermal incinerator into compliance with the acceptable value, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

5. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the pilot light was not lit while the emissions unit was in operation;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the operation of the flare into compliance with the acceptable operating criteria, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

6. Unless the control efficiency of the wet scrubber P-2 is assumed to be zero, the permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the scrubber water flow rate was below the acceptable level;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the scrubber water flow rate into compliance with the acceptable level, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

7. Unless the control efficiency of the carbon adsorption system is assumed to be zero, the permittee shall

submit deviation (excursion) reports that identify all periods during which the existing carbon is not replaced with fresh carbon immediately when breakthrough is indicated. These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

8. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit quarterly deviation reports that identify all rolling, three-hour periods during which the average SO2 emission rate exceeded the corresponding total allowable SO2 emission rate for the fume incinerator system.

The permittee shall submit quarterly reports documenting any downtime of the SO2 continuous emission rate monitoring system and/or control equipment while any of the emissions units were on line. The permittee shall provide the date, time, duration, reason (if known), an estimate of excess emissions, and any any corrective action(s) taken for each such incident. Normal downtimes for daily calibration and zero checks or periods where monitoring is maintained by a backup analyzer when the primary analyzer malfunctions shall not be reportable.
If no deviations occurred during a calendar year, the permittee shall submit a quarterly report that states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter. These reports shall also contain the total SO2 emissions for the calender quarter (in tons).

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-35-02, OAC rule 3745-77-07(C)(1), 40 CFR Part 60.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

9. The permittee shall submit quarterly reports that (a) identify all days during which any visible particulate emissions were observed from the flare, (b) describe any corrective actions taken to eliminate the visible particulate emissions, and (c) include all visible emission readings conducted pursuant to the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 as a result of the presence of visible emissions from the flare. These quarterly reports shall be submitted to the appropriate Ohio EPA District Office by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

10. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams not controlled by the incinerator(s) or flare.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation: 160.0 lbs of SO2 per hour

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping of the total hourly emission rate, as required in Section A.III. of these terms and conditions.

[Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

c. Emission Limitation: The total hourly emissions from emissions units P011, P012, P013, P014, P022 and P030, combined, shall not exceed 247.4 lbs of SO2 per hour.

Applicable Compliance Method: Compliance shall be demonstrated by the records of data obtained by the continuous SO2 monitoring system, as required in Section A.III of these terms and conditions, and, if required, by emissions testing of the fume incinerator system using the procedures specified in OAC rule 3745-18-04(A) and test Method 6 or 6C of 40 CFR, Part 60, Appendix A.

Emissions testing and the relative accuracy test on the continuous SO2 monitor may be conducted at the same time while operating emissions units P011, P012, P013, P014, P022 and P030 at worst case emission conditions.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-18-04(A), OAC rule 3745-77-07(C)(1), 40 CFR, Part 63.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy,

November 9, 2000]

d. Emission Limitation: The total annual emissions from emissions units P011, P012, P013, P014, P022 and P030, combined, shall not exceed 100 tons of SO2 per year.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions and by records of data obtained by the continuous SO2 monitoring system.

[Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. the emission testing shall be conducted within 2 years of issuance of the permit and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to determine the control efficiency of wet scrubber P-2 and the carbon adsorber (unless assumed to be zero);

c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of wet scrubber P-2 and the carbon adsorber shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

d. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

e. the emission testing shall be conducted over an entire batch cycle.
Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10, and OAC rule 3745-77-07(C)(1)]

3. Compliance for fume incinerators AC-7 and AC-6 shall be demonstrated by the testing conducted for emissions units P051 and P052. No additional testing shall be required for this emissions unit to comply with this emission limitation.

[Authority for term: OAC rule 3745-15-04(A) and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P012 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P013 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process N (P013): production of lubricant additives through organic sulfurization using	OAC rule 3745-21-09 (LL)	See A.I.2.a. through A.I.2.e. below.

four reactor systems. Each reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks. Volatile organic compound (VOC) emissions from the four reactor systems are controlled by either a carbon adsorber (P-3 CDrum), a wet scrubber using water as the scrubbing solution (P-2 Wscrb), or an incinerator (AC-6/7 Fm Inc's) followed by an emergency flare (S-4 Flare) as backup. SO2 emissions will result from the combustion of sulfur-containing organic compounds at the fume incinerator system.	Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000	SO2: 25.0 lbs/hr, See A.I.2.f. below.

2. **Additional Terms and Conditions**

a. The VOC emissions shall be controlled by an incinerator that meets the requirements of paragraph OAC rule 3745-21-09(LL)(1)(a), or a flare that meets the requirements of paragraph OAC rule 3745-21-09 (DD)(10)(d), unless otherwise exempted by OAC rule 3745-21-09(LL)(3).

b. Total VOC emissions not controlled by an incinerator or a flare shall not exceed five tons per rolling twelve-month period, pursuant to OAC rule 3745-21-09(LL)(3)(a). The total VOC emissions not controlled by an incinerator or a flare shall be based on the emissions from all process vent streams.

c. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the incinerator shall be designed and operated as follows:

i. The incinerator shall reduce the VOC emissions vented to it with an efficiency of at least ninety-eight percent by weight or shall emit VOC at a concentration not exceeding twenty parts per million by volume (dry basis), either of which is determined under OAC rule 3745-21-10(C); or

ii. The incinerator shall provide a minimum residence time of 0.75 second at a minimum temperature of sixteen hundred degrees Fahrenheit.

d. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the flare shall be designed and operated as follows:

i. The flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of five minutes during any two consecutive hours.

ii. The flare shall be operated with either an electric arc ignition system or a pilot flame. If a pilot flame is employed, the flame shall be present at all times and shall be monitored with a thermocouple or any other equivalent device to detect the presence of the pilot flame. If an electric arc ignition system is employed, the arcing shall pulse continually and shall be monitored to detect any failure.

iii. The flare shall be steam-assisted, air-assisted or non-assisted.

iv. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be three hundred Btu/scf or greater if the flare is steam-assisted or air-assisted, or shall be two hundred Btu/scf or greater if the flare is non-assisted.

v. Except as provided in paragraph A.I.2.c.vi. of this permit, the flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, of less than sixty feet per second if the flare is steam-assisted or non-assisted, or less than the maximum permitted velocity, as determined in paragraph (P)(4) of rule 3745-21-10 of the Administrative Code, if the flare is air-assisted.

d. vi. Excluded from the requirements of paragraph A.I.2.c.v. of this permit is any steam-assisted or non-assisted flare that meets both of the following requirements:

a. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be greater than one thousand Btu/scf.

b. The flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, less than four hundred feet per second.

e. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

f. The total hourly and annual SO2 emissions from emissions units P011, P012, P013, P014, P022 and P030, combined, shall not exceed 247.4 lbs per hour and 100 tons per year.

The total allowable SO2 emissions for the fume incinerator system for any hour shall be the sum of

the individual allowable SO2 emissions limitations for those emissions units that are in operation during any part of that hour. The total allowable SO2 emission rate for the fume incinerator system for any rolling, three-hour period shall be the average of the three, one-hour allowables comprising the three-hour period.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

   The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

   If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

   a. the company identification of each final product generated;

   b. the quantity of each final product generated, in tons;

   c. the number of batches run for each final product generated;

   d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

   e. the VOC emission rate for each final product generated that was not controlled by the incinerator(s), flare, wet scrubber or carbon adsorber, in tons, using the following equation:

   E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run)

   f. the VOC emission rate for each final product generated that was controlled by either the wet scrubber or carbon adsorber, in tons, using the following equation:

   E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

   Where: CE = control efficiency of the wet scrubber or carbon adsorber, whichever is associated with that particular vent stream, as demonstrated during the most recent emissions test;

   g. the total VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) or flare (in tons, determined by adding the values from A.III.3.e. and A.III.3.f. for all final products generated); and

   h. the rolling, twelve-month summation of the monthly VOC emissions, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) or flare (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. The permittee shall operate and maintain equipment to continuously monitor and record the average combustion temperature within the thermal incinerator during operation of this emissions unit, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

   The permittee shall collect and record the following information for each day:

a. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than the average combustion temperature specified below or less than the average combustion temperature specified by the manufacturer; and

b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

Whenever the monitored value for the average combustion temperature deviates from the average combustion temperature specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment above the acceptable value specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (minutes) during which there was a deviation, the average combustion temperature immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The acceptable average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, is not less than 1,600 degrees Fahrenheit, or shall meet the manufacturer's design specifications for temperature.

This temperature level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the temperature level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the temperature level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. A pilot flame shall be maintained in the flare's pilot light burner at all times the process vent stream is vented to the flare.

The permittee shall properly operate, and maintain equipment to continuously monitor and record the presence of a pilot flame during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer''s recommendations, instructions, and operating manual(s).

The permittee shall record the following information each day:

a. all periods during which there was no pilot flame; and

b. the operating times for the flare, monitoring equipment, and the associated emissions unit.

Whenever the monitoring indicates that there is no pilot flame while the emissions unit is in operation, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable operating scenario, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the results of monitoring immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

6. The permittee shall properly operate and maintain equipment to continuously monitor and record the scrubber water flow rate, in gallons per minute, during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the flow rate on a continuous basis.

Whenever the monitored value for the flow rate falls below the level specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the scrubber water flow rate above the minimum level specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the

following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the flow rate readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.
The acceptable level for the scrubber water flow rate for the scrubber is not less than 2 gallons per minute.

This acceptable level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

If the control efficiency of the wet scrubber is always assumed to be zero, and compliance with the emission limitation of five tons per rolling twelve-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the wet scrubber as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of five tons per rolling twelve-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

7. The carbon adsorption system shall be continuously maintained to ensure that the existing carbon is replaced with fresh carbon immediately when breakthrough is indicated.

If the control efficiency of the carbon adsorber is always assumed to be zero, and compliance with the emission limitation of 5 tons per rolling, 12-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the carbon adsorber, as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of 5 tons per rolling, 12-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

Unless the control efficiency of the carbon adsorption system is assumed to be zero, the permittee shall monitor and record the concentration level of the organic compounds in the carbon adsorption system's exhaust stream daily, or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater.

The permittee shall monitor and record all periods when carbon breakthrough is detected. Existing carbon shall be replaced with fresh carbon immediately upon carbon breakthrough. As an alternative, the permittee shall replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval, as determined by the maximum design flow rate and the organic concentration in the gas stream.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

8. The permittee shall maintain hourly records of the following information:

a. the actual SO_2 emission rate from the fume incinerator system, in pounds per hour;

b. the rolling, three-hour average, actual SO_2 emission rate from the fume incinerator system, in pounds per hour;

c. the total allowable SO_2 emission rate, in pounds per hour, for all the emissions units (P011, P012, P013, P014, P022 and P030) in operation during the hour; and

d. the rolling, three-hour average, allowable SO_2 emission rate, in pounds per hour.

The permittee shall maintain records that document which emissions units (P011, P012, P013, P014, P022 and P030) were in operation during each hour. If an emissions unit is in operation during any portion of an hour, it is considered to be in operation for the entire hour for purposes of determining compliance with the total allowable SO_2 emission rate for all the emissions units in operation during any hour. Compliance shall be determined by comparing the rolling, three-hour average, actual and allowable, SO_2 emission rates for each hour.

The total allowable SO_2 emissions for the fume incinerator system for any hour shall be the sum of the individual allowable SO_2 emissions limitations for those emissions units that are in operation during any part of that hour. The total allowable SO_2 emission rate for the fume incinerator system for any rolling, three-hour period shall be the average of the three, one-hour allowables comprising the three-hour period.

[Authority for term: OAC rule 3745-77-07(C)(1) and Director's Final Findings and Orders for alternative SO_2 emission control strategy, November 9, 2000]

9. The permittee shall maintain daily records of the actual SO_2 emission rate from the fume incinerator system, in pounds per day.

[Authority for term: OAC rule 3745-77-07(C)(1)]

10. The permittee shall operate and maintain existing equipment to continuously monitor and record SO2 from this emissions unit in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13(d)(1), (e)(2) and (h), respectively. The permittee may request alternative monitoring procedures or requirements and alternative relative accuracy test procedures, in accordance with the relevant provisions of 40 CFR Parts 60.13(i) and (j), by submitting a written request to the Director. Any alternative monitoring and/or testing acceptable to the Director shall be approved by the U.S. EPA as a revision to the State Implementation Plan (SIP) prior to the implementation of the alternative monitoring and/or testing.

    A statement of certification of the existing continuous SO2 monitoring system shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 6. Proof of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

    The permittee shall maintain records of all data obtained by the continuous SO2 monitoring system including, but not limited to, parts per million SO2 on an instantaneous (one-minute) basis, emissions of SO2 in units of lbs/hr and lbs/hr rolling, three-hour average, and in the appropriate averaging period (e.g., hourly and hourly rolling of consecutive three-hour periods), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

    [Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR Part 60.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

11. The permittee shall implement a quality assurance/quality control plan for the continuous SO2 monitoring system designed to ensure continuous valid and representative readings of SO2 emission concentrations and exhaust gas flow rates. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and include provisions for conducting a relative accuracy test following each monitor probe replacement. The relative accuracy test shall be performed, and the monitoring system operated, in accordance with the procedures specified in Performance Specification Tests 2 and 3, 40 CFR Part 60, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous SO2 monitoring system must be kept on site and available for inspection during regular office hours. Each record of any monitoring data, testing data, and support information required shall be retained for a period of five years from the date the record was created. Support information shall include, but not limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation.

    [Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR Part 60.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

12. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the flare. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

    a. the location and color of the emissions;

    b. whether the emissions are representative of normal operations;

    c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

    d. the total duration of any visible emission incident; and

    e. any corrective actions taken to eliminate the visible emissions.

    At any time the permittee observes visible emissions from the flare, the permittee shall monitor the visible emissions for a minimum period of 10 minutes in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 and record the results in an operations log.

    [Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.g. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit quarterly reports, for the preceding calendar quarter, that specifies the total SO2 emissions from emissions units P011, P012, P013, P014, P022 and P030 (as determined by record keeping required under A.III. of these terms and conditions).

   [Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

4. The permittee shall submit quarterly reports that identify the following information concerning the operation of

the control equipment during the operation of this emissions unit:

a. each period of time when the average combustion temperature within the thermal incinerator was less than 1600 degrees Fahrenheit or less than the average combustion temperature specified by the manufacturer;

b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the average combustion temperature within the thermal incinerator into compliance with the acceptable value, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

5. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. each period of time when the pilot light was not lit while the emissions unit was in operation;

b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the operation of the flare into compliance with the acceptable operating criteria, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

6. Unless the control efficiency of the wet scrubber is assumed to be zero, the permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. each period of time when the scrubber water flow rate was below the acceptable level;

b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the scrubber water flow rate into compliance with the acceptable level, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

7. Unless the control efficiency of the carbon adsorption system is assumed to be zero, the permittee shall submit deviation (excursion) reports that identify all periods during which the existing carbon is not replaced with fresh carbon immediately when breakthrough is indicated. These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

8. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit quarterly deviation reports that identify all rolling, three-hour periods during which the average SO2 emission rate exceeded the corresponding total allowable SO2 emission rate for the fume incinerator system.

The permittee shall submit quarterly reports documenting any downtime of the SO2 continuous emission rate monitoring system and/or control equipment while any of the emissions units were on line. The permittee shall provide the date, time, duration, reason (if known), an estimate of excess emissions, and any any corrective action(s) taken for each such incident. Normal downtimes for daily calibration and zero checks or periods where monitoring is maintained by a backup analyzer when the primary analyzer malfunctions shall not be reportable.
If no deviations occurred during a calendar year, the permittee shall submit a quarterly report that states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter. These reports shall also contain the total SO2 emissions for the calender quarter (in tons).

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-35-02, OAC rule 3745-77-07(C)(1), 40 CFR Part 60.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

9. The permittee shall submit quarterly reports that (a) identify all days during which any visible particulate emissions were observed from the flare, (b) describe any corrective actions taken to eliminate the visible particulate emissions, and (c) include all visible emission readings conducted pursuant to the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 as a result of the presence of visible emissions from the flare. These quarterly reports shall be submitted to the appropriate Ohio EPA District Office by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

10. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams not controlled by the incinerator(s) or flare.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation: 25.0 lbs of SO2 per hour

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping of the total hourly emission rate, as required in Section A.III. of these terms and conditions.

[Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

c. Emission Limitation: The total hourly emissions from emissions units P011, P012, P013, P014, P022 and P030, combined, shall not exceed 247.4 lbs of SO2 per hour.

Applicable Compliance Method: Compliance shall be demonstrated by the records of data obtained by the continuous SO2 monitoring system, as required in Section A.III of these terms and conditions, and, if required, by emissions testing of the fume incinerator system using the procedures specified in OAC rule 3745-18-04(A) and test Method 6 or 6C of 40 CFR, Part 60, Appendix A.

Emissions testing and the relative accuracy test on the continuous SO2 monitor may be conducted at the same time while operating emissions units P011, P012, P013, P014, P022 and P030 at worst case emission conditions.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-18-04(A), OAC rule 3745-77-07(C)(1), 40 CFR, Part 63.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

d. Emission Limitation: The total annual emissions from emissions units P011, P012, P013, P014, P022 and P030, combined, shall not exceed 100 tons of SO2 per year.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions and by records of data obtained by the continuous SO2 monitoring system.

[Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. the emission testing shall be conducted within 2 years of issuance of the permit and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to determine the control efficiency of wet scrubber P-2 and the carbon adsorber (unless assumed to be zero);

c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of wet scrubber P-2 and the carbon adsorber shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

d. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

e. the emission testing shall be conducted over an entire batch cycle.
Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10, and OAC rule 3745-77-07(C)(1)]

3. Compliance for fume incinerators AC-7 and AC-6 shall be demonstrated by the testing conducted for emissions units P051 and P052. No additional testing shall be required for this emissions unit to comply with this emission limitation.

[Authority for term: OAC rule 3745-15-04(A) and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P013 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P014 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process O (P014): production of lubricant additives through thiophosphorylation using two reactor systems. Each reactor system may contain all or some of the following: reactors, filters, filter tanks holding tanks, charging tanks, drying tanks and neutralization tanks. Volatile organic compound (VOC) emissions from the two reactor systems are controlled by a carbon adsorber (O-1 CDrum) or an incinerator (AC-6/7 Fm Inc's) followed by an emergency flare (S-4 Flare) as backup. SO2 emissions will result from the combustion of sulfur-containing organic compounds at the fume incinerator system.	OAC rule 3745-21-09(LL)	See A.I.2.a. through A.I.2.d. below.
	Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000	SO2: 10.0 lbs/hr, See A.I.2.e. below.

2. **Additional Terms and Conditions**

a. The VOC emissions shall be controlled by an incinerator that meets the requirements of paragraph OAC rule 3745-21-09(LL)(1)(a), unless otherwise exempted by OAC rule 3745-21-09(LL)(3).

b. Total VOC emissions not controlled by an incinerator or a flare shall not exceed five tons per rolling

twelve-month period, pursuant to OAC rule 3745-21-09(LL)(3)(a). The total VOC emissions not controlled by an incinerator or a flare shall be based on the emissions from all process vent streams.

c. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the incinerator shall be designed and operated as follows:

i. The incinerator shall reduce the VOC emissions vented to it with an efficiency of at least ninety-eight percent by weight or shall emit VOC at a concentration not exceeding twenty parts per million by volume (dry basis), either of which is determined under OAC rule 3745-21-10(C); or

ii. The incinerator shall provide a minimum residence time of 0.75 second at a minimum temperature of sixteen hundred degrees Fahrenheit.

d. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

e. The total hourly and annual SO2 emissions from emissions units P011, P012, P013, P014, P022 and P030, combined, shall not exceed 247.4 lbs per hour and 100 tons per year.

The total allowable SO2 emissions for the fume incinerator system for any hour shall be the sum of the individual allowable SO2 emissions limitations for those emissions units that are in operation during any part of that hour. The total allowable SO2 emission rate for the fume incinerator system for any rolling, three-hour period shall be the average of the three, one-hour allowables comprising the three-hour period.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

   The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

   If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

   a. the company identification of each final product generated;

   b. the quantity of each final product generated, in tons;

   c. the number of batches run for each final product generated;

   d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

   e. the VOC emission rate for each final product generated that was not controlled by the incinerator(s) or carbon adsorber, in tons, using the following equation:

   E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run)

   f. the VOC emission rate for each final product generated that was controlled by the carbon adsorber, in tons, using the following equation:

   E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

Where: CE = control efficiency of the carbon adsorber, as demonstrated during the most recent emissions test;

g. the total VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) (in tons, determined by adding the values from A.III.3.e. and A.III.3.f. for all final products generated); and

h. the rolling, twelve-month summation of the monthly VOC emissions, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. The permittee shall operate and maintain equipment to continuously monitor and record the average combustion temperature within the thermal incinerator during operation of this emissions unit, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

a. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than the average combustion temperature specified below or less than the average combustion temperature specified by the manufacturer; and

b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

Whenever the monitored value for the average combustion temperature deviates from the average combustion temperature specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment above the acceptable value specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (minutes) during which there was a deviation, the average combustion temperature immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The acceptable average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, is not less than 1,600 degrees Fahrenheit, or shall meet the manufacturer's design specifications for temperature.

This temperature level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the temperature level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the temperature level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. The carbon adsorption system shall be continuously maintained to ensure that the existing carbon is replaced with fresh carbon immediately when breakthrough is indicated.

If the control efficiency of the carbon adsorber is always assumed to be zero, and compliance with the emission limitation of 5 tons per rolling, 12-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the carbon adsorber, as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of 5 tons per rolling, 12-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

Unless the control efficiency of the carbon adsorption system is assumed to be zero, the permittee shall monitor and record the concentration level of the organic compounds in the carbon adsorption system's exhaust stream daily, or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater.

The permittee shall monitor and record all periods when carbon breakthrough is detected. Existing carbon shall be replaced with fresh carbon immediately upon carbon breakthrough. As an alternative, the permittee shall replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval, as determined by the maximum design flow rate and the organic concentration in the gas stream.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

6. The permittee shall maintain hourly records of the following information:

a. the actual SO2 emission rate from the fume incinerator system, in pounds per hour;

b. the rolling, three-hour average, actual SO2 emission rate from the fume incinerator system, in pounds per hour;

c. the total allowable SO2 emission rate, in pounds per hour, for all the emissions units (P011, P012, P013, P014, P022 and P030) in operation during the hour; and

d. the rolling, three-hour average, allowable SO2 emission rate, in pounds per hour.

The permittee shall maintain records that document which emissions units (P011, P012, P013, P014, P022 and P030) were in operation during each hour. If an emissions unit is in operation during any portion of an hour, it is considered to be in operation for the entire hour for purposes of determining compliance with the total allowable SO2 emission rate for all the emissions units in operation during any hour. Compliance shall be determined by comparing the rolling, three-hour average, actual and allowable, SO2 emission rates for each hour.

The total allowable SO2 emissions for the fume incinerator system for any hour shall be the sum of the individual allowable SO2 emissions limitations for those emissions units that are in operation during any part of that hour. The total allowable SO2 emission rate for the fume incinerator system for any rolling, three-hour period shall be the average of the three, one-hour allowables comprising the three-hour period.

[Authority for term: OAC rule 3745-77-07(C)(1) and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

7. The permittee shall maintain daily records of the actual SO2 emission rate from the fume incinerator system, in pounds per day.

[Authority for term: OAC rule 3745-77-07(C)(1)]

8. The permittee shall operate and maintain existing equipment to continuously monitor and record SO2 from this emissions unit in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13(d)(1), (e)(2) and (h), respectively. The permittee may request alternative monitoring procedures or requirements and alternative relative accuracy test procedures, in accordance with the relevant provisions of 40 CFR Parts 60.13(i) and (j), by submitting a written request to the Director. Any alternative monitoring and/or testing acceptable to the Director shall be approved by the U.S. EPA as a revision to the State Implementation Plan (SIP) prior to the implementation of the alternative monitoring and/or testing.

A statement of certification of the existing continuous SO2 monitoring system shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 6. Proof of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

The permittee shall maintain records of all data obtained by the continuous SO2 monitoring system including, but not limited to, parts per million SO2 on an instantaneous (one-minute) basis, emissions of SO2 in units of lbs/hr and lbs/hr rolling, three-hour average, and in the appropriate averaging period (e.g., hourly and hourly rolling of consecutive three-hour periods), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

[Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR Part 60.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

9. The permittee shall implement a quality assurance/quality control plan for the continuous SO2 monitoring system designed to ensure continuous valid and representative readings of SO2 emission concentrations and exhaust gas flow rates. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and include provisions for conducting a relative accuracy test following each monitor probe replacement. The relative accuracy test shall be performed, and the monitoring system operated, in accordance with the procedures specified in Performance Specification Tests 2 and 3, 40 CFR Part 60, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous SO2 monitoring system must be kept on site and available for inspection during regular office hours. Each record of any monitoring data, testing data, and support information required shall be retained for a period of five years from the date the record was created. Support information shall include, but not limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation.

[Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR Part 60.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required

under A.III.3.g. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit quarterly reports, for the preceding calendar quarter, that specifies the total SO2 emissions from emissions units P011, P012, P013, P014, P022 and P030 (as determined by record keeping required under A.III. of these terms and conditions).

[Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

4. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. each period of time when the average combustion temperature within the thermal incinerator was less than 1600 degrees Fahrenheit or less than the average combustion temperature specified by the manufacturer;

b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the average combustion temperature within the thermal incinerator into compliance with the acceptable value, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

5. The permittee shall submit quarterly summaries that include a log of the downtime for the thermal incinerator when the associated emissions unit was in operation.

[Authority for term: OAC rule 3745-77-07(C)(1)]

6. Unless the control efficiency of the carbon adsorption system is assumed to be zero, the permittee shall submit deviation (excursion) reports that identify all periods during which the existing carbon is not replaced with fresh carbon immediately when breakthrough is indicated. These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

7. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit quarterly deviation reports that identify all rolling, three-hour periods during which the average SO2 emission rate exceeded the corresponding total allowable SO2 emission rate for the fume incinerator system.

The permittee shall submit quarterly reports documenting any downtime of the SO2 continuous emission rate monitoring system and/or control equipment while any of the emissions units were on line. The permittee shall provide the date, time, duration, reason (if known), an estimate of excess emissions, and any any corrective action(s) taken for each such incident. Normal downtimes for daily calibration and zero checks or periods where monitoring is maintained by a backup analyzer when the primary analyzer malfunctions shall not be reportable.
If no deviations occurred during a calendar year, the permittee shall submit a quarterly report that states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter. These reports shall also contain the total SO2 emissions for the calender quarter (in tons).

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-35-02, OAC rule 3745-77-07(C)(1), 40 CFR Part 60.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

8. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams not controlled by the incinerator(s).

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be

determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation: 10.0 lbs of SO2 per hour

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping of the total hourly emission rate, as required in Section A.III. of these terms and conditions.

[Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

c. Emission Limitation: The total hourly emissions from emissions units P011, P012, P013, P014, P022 and P030, combined, shall not exceed 247.4 lbs of SO2 per hour.

Applicable Compliance Method: Compliance shall be demonstrated by the records of data obtained by the continuous SO2 monitoring system, as required in Section A.III of these terms and conditions, and, if required, by emissions testing of the fume incinerator system using the procedures specified in OAC rule 3745-18-04(A) and test Method 6 or 6C of 40 CFR, Part 60, Appendix A.

Emissions testing and the relative accuracy test on the continuous SO2 monitor may be conducted at the same time while operating emissions units P011, P012, P013, P014, P022 and P030 at worst case emission conditions.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-18-04(A), OAC rule 3745-77-07(C)(1), 40 CFR, Part 63.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

d. Emission Limitation: The total annual emissions from emissions units P011, P012, P013, P014, P022 and P030, combined, shall not exceed 100 tons of SO2 per year.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions and by records of data obtained by the continuous SO2 monitoring system.

[Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. the emission testing shall be conducted within 2 years of issuance of the permit and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to determine the control efficiency of the carbon adsorber (unless assumed to be zero);

c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of the carbon adsorber shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

d. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

e. the emission testing shall be conducted over an entire batch cycle.
Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10, and OAC rule 3745-77-07(C)(1)]

3. Compliance for fume incinerators AC-7 and AC-6 shall be demonstrated by the testing conducted for emissions units P051 and P052. No additional testing shall be required for this emissions unit to comply with this emission limitation.

[Authority for term: OAC rule 3745-15-04(A) and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P014 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P015 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process P (P015): production of lubricant additives through neutralization with an organic base using five reactor systems. Each reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks. Volatile organic compound (VOC) emissions from the five reactor systems are controlled by either a wet scrubber using water as the scrubbing solution (P-2 WScrb), a carbon adsorber (P-3 CDrum), or an incinerator (AC-6/7 Fm Inc's) followed by an emergency flare (S-4 Flare) as backup.	OAC rule 3745-21-09 (LL)	See A.I.2.a. through A.I.2.d. below.

2. **Additional Terms and Conditions**

a. The VOC emissions shall be controlled by an incinerator that meets the requirements of paragraph OAC rule 3745-21-09(LL)(1)(a), unless otherwise exempted by OAC rule 3745-21-09(LL)(3).

b. Total VOC emissions not controlled by an incinerator or a flare shall not exceed five tons per rolling twelve-month period, pursuant to OAC rule 3745-21-09(LL)(3)(a). The total VOC emissions not controlled by an incinerator or a flare shall be based on the emissions from all process vent streams.

c. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the incinerator shall be designed and operated as follows:

i. The incinerator shall reduce the VOC emissions vented to it with an efficiency of at least ninety-eight percent by weight or shall emit VOC at a concentration not exceeding twenty parts per million by volume (dry basis), either of which is determined under OAC rule 3745-21-10(C); or

ii. The incinerator shall provide a minimum residence time of 0.75 second at a minimum temperature of sixteen hundred degrees Fahrenheit.

d. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

a. the company identification of each final product generated;

b. the quantity of each final product generated, in tons;

c. the number of batches run for each final product generated;

d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

e. the VOC emission rate for each final product generated that was not controlled by the incinerator(s), wet scrubber or carbon adsorber, in tons, using the following equation:

E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run)

f. the VOC emission rate for each final product generated that was controlled by either the wet scrubber or carbon adsorber, in tons, using the following equation:

E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

Where: CE = control efficiency of the wet scrubber or carbon adsorber, whichever is associated with that particular vent stream, as demonstrated during the most recent emissions test;

g. the total VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) (in tons, determined by adding the values from A.III.3.e. and A.III.3.f. for all final products generated); and

h. the rolling, twelve-month summation of the monthly VOC emissions, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. The permittee shall operate and maintain equipment to continuously monitor and record the average combustion temperature within the thermal incinerator during operation of this emissions unit, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

a. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than the average combustion temperature specified below or less than the average combustion temperature specified by the manufacturer; and

b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

Whenever the monitored value for the average combustion temperature deviates from the average combustion temperature specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment above the acceptable value specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (minutes) during which there was a deviation, the average combustion temperature immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this

paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The acceptable average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, is not less than 1,600 degrees Fahrenheit, or shall meet the manufacturer's design specifications for temperature.

This temperature level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the temperature level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the temperature level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. The permittee shall properly operate and maintain equipment to continuously monitor and record the scrubber water flow rate, in gallons per minute, during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the flow rate on a continuous basis.

Whenever the monitored value for the flow rate falls below the level specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the scrubber water flow rate above the minimum level specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the flow rate readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.
The acceptable level for the scrubber water flow rate for the scrubber is not less than 2 gallons per minute.

This acceptable level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

If the control efficiency of the wet scrubber is always assumed to be zero, and compliance with the emission limitation of five tons per rolling twelve-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the wet scrubber as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of five tons per rolling twelve-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

6. The carbon adsorption system shall be continuously maintained to ensure that the existing carbon is replaced with fresh carbon immediately when breakthrough is indicated.

If the control efficiency of the carbon adsorber is always assumed to be zero, and compliance with the emission limitation of 5 tons per rolling, 12-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the carbon adsorber, as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of 5 tons per rolling, 12-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

Unless the control efficiency of the carbon adsorption system is assumed to be zero, the permittee shall monitor and record the concentration level of the organic compounds in the carbon adsorption system's exhaust stream daily, or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater.

The permittee shall monitor and record all periods when carbon breakthrough is detected. Existing carbon shall be replaced with fresh carbon immediately upon carbon breakthrough. As an alternative, the permittee shall replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval, as determined by the maximum design flow rate and the organic concentration in the gas stream.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.g. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the average combustion temperature within the thermal incinerator was less than 1600 degrees Fahrenheit or less than the average combustion temperature specified by the manufacturer;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the average combustion temperature within the thermal incinerator into compliance with the acceptable value, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

4. The permittee shall submit quarterly summaries that include a log of the downtime for the thermal incinerator when the associated emissions unit was in operation.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

5. Unless the control efficiency of the wet scrubber is assumed to be zero, the permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the scrubber water flow rate was below the acceptable level;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the scrubber water flow rate into compliance with the acceptable level, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

6. Unless the control efficiency of the carbon adsorption system is assumed to be zero, the permittee shall submit deviation (excursion) reports that identify all periods during which the existing carbon is not replaced with fresh carbon immediately when breakthrough is indicated. These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

7. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions

shall be determined in accordance with the following methods:

a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams not controlled by the incinerator(s).

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. the emission testing shall be conducted within 2 years of issuance of the permit and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to determine the control efficiency of wet scrubber P-2 and the carbon adsorber (unless assumed to be zero);

c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of wet scrubber P-2 and the carbon adsorber shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

d. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

e. the emission testing shall be conducted over an entire batch cycle.
Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10, and OAC rule 3745-77-07(C)(1)]

3. Compliance for fume incinerators AC-7 and AC-6 shall be demonstrated by the testing conducted for emissions units P051 and P052. No additional testing shall be required for this emissions unit to comply with this emission limitation.

[Authority for term: OAC rule 3745-15-04(A) and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P015 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P018 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process S (P018): production of lubricant additives through neutralization with an	OAC rule 3745-21-09 (LL)	See A.I.2.a. through A.I.2.e. below.

organic base in solvent using three reactor systems. Each reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks.

Volatile organic compound (VOC) emissions from the three reactor systems are controlled by either a wet scrubber using water as the scrubbing solution (P-2 WScrb), a carbon adsorber (P-3 CDrum), a caustic wet scrubber (N-2 CScrb) followed by a flare (S-4 Flare), or an incinerator (AC-6/7 Fm Inc's).

2. **Additional Terms and Conditions**

a. The VOC emissions shall be controlled by an incinerator that meets the requirements of paragraph OAC rule 3745-21-09(LL)(1)(a), or a flare that meets the requirements of paragraph OAC rule 3745-21-09 (DD)(10)(d), unless otherwise exempted by OAC rule 3745-21-09(LL)(3).

b. Total VOC emissions not controlled by an incinerator or a flare shall not exceed five tons per rolling twelve-month period, pursuant to OAC rule 3745-21-09(LL)(3)(a). The total VOC emissions not controlled by an incinerator or a flare shall be based on the emissions from all process vent streams.

c. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the incinerator shall be designed and operated as follows:

i. The incinerator shall reduce the VOC emissions vented to it with an efficiency of at least ninety-eight percent by weight or shall emit VOC at a concentration not exceeding twenty parts per million by volume (dry basis), either of which is determined under OAC rule 3745-21-10(C); or

ii. The incinerator shall provide a minimum residence time of 0.75 second at a minimum temperature of sixteen hundred degrees Fahrenheit.

d. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the flare shall be designed and operated as follows:

i. The flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of five minutes during any two consecutive hours.

ii. The flare shall be operated with either an electric arc ignition system or a pilot flame. If a pilot flame is employed, the flame shall be present at all times and shall be monitored with a thermocouple or any other equivalent device to detect the presence of the pilot flame. If an electric arc ignition system is employed, the arcing shall pulse continually and shall be monitored to detect any failure.

iii. The flare shall be steam-assisted, air-assisted or non-assisted.

iv. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be three hundred Btu/scf or greater if the flare is steam-assisted or air-assisted, or shall be two hundred Btu/scf or greater if the flare is non-assisted.

v. Except as provided in paragraph A.I.2.c.vi. of this permit, the flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, of less than sixty feet per second if the flare is steam-assisted or non-assisted, or less than the maximum permitted velocity, as determined in paragraph (P)(4) of rule 3745-21-10 of the Administrative Code, if the flare is air-assisted.

d. vi. Excluded from the requirements of paragraph A.I.2.c.v. of this permit is any steam-assisted or non-assisted flare that meets both of the following requirements:

a. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be greater than one thousand Btu/scf.

b. The flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, less than four hundred feet per second.

e. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

   The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

   If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

   a. the company identification of each final product generated;

   b. the quantity of each final product generated, in tons;

   c. the number of batches run for each final product generated;

   d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

   e. the VOC emission rate for each final product generated that was not controlled by the incinerator(s), flare, wet scrubber or carbon adsorber, in tons, using the following equation:

   E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run)

   f. the VOC emission rate for each final product generated that was controlled by either the wet scrubber or carbon adsorber, in tons, using the following equation:

   E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

   Where: CE = control efficiency of the wet scrubber or carbon adsorber, whichever is associated with that particular vent stream, as demonstrated during the most recent emissions test;

   g. the total VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) or flare (in tons, determined by adding the values from A.III.3.e. and A.III.3.f. for all final products generated); and

   h. the rolling, twelve-month summation of the monthly VOC emissions, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) or flare (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. The permittee shall operate and maintain equipment to continuously monitor and record the average combustion temperature within the thermal incinerator during operation of this emissions unit, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

   The permittee shall collect and record the following information for each day:

   a. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than the average combustion temperature specified below or less than the average combustion temperature specified by the manufacturer; and

   b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

   Whenever the monitored value for the average combustion temperature deviates from the average combustion temperature specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment above the acceptable value specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (minutes) during which there was a deviation, the average combustion temperature immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The acceptable average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, is not less than 1,600 degrees Fahrenheit, or shall meet the manufacturer's design specifications for temperature.

This temperature level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the temperature level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the temperature level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. A pilot flame shall be maintained in the flare's pilot light burner at all times the process vent stream is vented to the flare.

The permittee shall properly operate, and maintain equipment to continuously monitor and record the presence of a pilot flame during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer''s recommendations, instructions, and operating manual(s).

The permittee shall record the following information each day:

a. all periods during which there was no pilot flame; and

b. the operating times for the flare, monitoring equipment, and the associated emissions unit.

Whenever the monitoring indicates that there is no pilot flame while the emissions unit is in operation, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable operating scenario, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the results of monitoring immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

6. The permittee shall properly operate and maintain equipment to continuously monitor and record the scrubber water flow rate, in gallons per minute, during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the flow rate on a continuous basis.

Whenever the monitored value for the flow rate falls below the level specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the scrubber water flow rate above the minimum level specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the flow rate readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.
The acceptable level for the scrubber water flow rate for the scrubber is not less than 2 gallons per minute.

This acceptable level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

If the control efficiency of the wet scrubber is always assumed to be zero, and compliance with the emission limitation of five tons per rolling twelve-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the wet scrubber as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of five tons per rolling twelve-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

7. The carbon adsorption system shall be continuously maintained to ensure that the existing carbon is replaced with fresh carbon immediately when breakthrough is indicated.

If the control efficiency of the carbon adsorber is always assumed to be zero, and compliance with the emission limitation of 5 tons per rolling, 12-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the carbon adsorber, as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of 5 tons per rolling, 12-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

Unless the control efficiency of the carbon adsorption system is assumed to be zero, the permittee shall monitor and record the concentration level of the organic compounds in the carbon adsorption system's exhaust stream daily, or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater.

The permittee shall monitor and record all periods when carbon breakthrough is detected. Existing carbon shall be replaced with fresh carbon immediately upon carbon breakthrough. As an alternative, the permittee shall replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval, as determined by the maximum design flow rate and the organic concentration in the gas stream.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

8. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the flare. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to eliminate the visible emissions.

At any time the permittee observes visible emissions from the flare, the permittee shall monitor the visible emissions for a minimum period of 10 minutes in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 and record the results in an operations log.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.g. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. each period of time when the average combustion temperature within the thermal incinerator was less than 1600 degrees Fahrenheit or less than the average combustion temperature specified by the manufacturer;

b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the average combustion temperature within the thermal incinerator into compliance with the acceptable value, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

4. The permittee shall submit quarterly summaries that include a log of the downtime for the thermal incinerator when the associated emissions unit was in operation.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. each period of time when the pilot light was not lit while the emissions unit was in operation;

b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the operation of the flare into compliance with the acceptable operating criteria, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

6. Unless the control efficiency of the wet scrubber is assumed to be zero, the permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. each period of time when the scrubber water flow rate was below the acceptable level;

b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the scrubber water flow rate into compliance with the acceptable level, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

7. Unless the control efficiency of the carbon adsorption system is assumed to be zero, the permittee shall submit deviation (excursion) reports that identify all periods during which the existing carbon is not replaced with fresh carbon immediately when breakthrough is indicated. These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

8. The permittee shall submit quarterly reports that (a) identify all days during which any visible particulate emissions were observed from the flare, (b) describe any corrective actions taken to eliminate the visible particulate emissions, and (c) include all visible emission readings conducted pursuant to the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 as a result of the presence of visible emissions from the flare. These quarterly reports shall be submitted to the appropriate Ohio EPA District Office by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

9. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams not controlled by the incinerator(s) or flare.

      Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

      [Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission testing shall be conducted within 2 years of issuance of the permit and within 1 year prior to permit expiration;

   b. the emission testing shall be conducted to determine the control efficiency of the wet scrubber and carbon adsorber (unless assumed to be zero);

   c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of the wet scrubber and carbon adsorber shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

   d. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

   e. the emission testing shall be conducted over an entire batch cycle.
   Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

   Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

   A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

   [Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10, and OAC rule 3745-77-07(C)(1)]

3. Compliance for fume incinerators AC-7 and AC-6 shall be demonstrated by the testing conducted for emissions units P051 and P052. No additional testing shall be required for this emissions unit to comply with this emission limitation.

   [Authority for term: OAC rule 3745-15-04(A) and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P018 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P019 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process T (P019): production of lubricant additives through esterification using four reactor systems. Each reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks. Volatile organic compound (VOC) emissions from the four reactor systems are controlled by one of two wet scrubbers that use water as the scrubbing solution (T-3 or T-4 WScrb).	OAC rule 3745-21-09(LL)	See A.I.2.a. and A.I.2.b. below.

2. **Additional Terms and Conditions**

   a. The total VOC emissions not controlled by an incinerator or flare shall not exceed five tons per rolling twelve-month period. The total VOC emissions not controlled by an incinerator or flare shall be based on the emissions from all process vent streams.

   b. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

   The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

   If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

   a. the company identification of each final product generated;

   b. the quantity of each final product generated, in tons;

   c. the number of batches run for each final product generated;

   d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

   e. the VOC emission rate for each final product generated that was not controlled by the wet scrubber(s), in tons, using the following equation:

   E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run)

   f. the VOC emission rate for each final product generated that was controlled by either wet scrubber T-3 or T-4, in tons, using the following equation:

   E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

   Where: CE = control efficiency of either wet scrubber T-3 or T-4, whichever is associated with that particular vent stream, as demonstrated during the most recent emissions test;

g. the total VOC emission rate for all final products generated (in tons, determined by adding the values from A.III.3.e. and A.III.3.f. for all final products generated); and

h. the rolling, twelve-month summation of the monthly VOC emissions for all final products generated (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. The permittee shall properly operate and maintain equipment to continuously monitor and record the scrubber water flow rate for wet scrubbers T-3 and T-4 (T-3/4 WScrb), in gallons per minute, during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the flow rate on a continuous basis.

Whenever the monitored value for the flow rate falls below the level specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the scrubber water flow rate above the minimum level specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the flow rate readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.
The acceptable level for the scrubber water flow rate for scrubbers T-3 and T-4 is not less than 2 gallons per minute.

This acceptable level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

If the control efficiency of the wet scrubber is always assumed to be zero, and compliance with the emission limitation of five tons per rolling twelve-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the wet scrubber as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of five tons per rolling twelve-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.g. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. Unless the control efficiency of wet scrubbers T-3 and T-4 is assumed to be zero, the permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. each period of time when the scrubber water flow rate was below the acceptable level;

b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the scrubber water flow rate into compliance with the acceptable level, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

4. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. the emission testing shall be conducted within 2 years of issuance of the permit and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to determine the control efficiency of wet scrubbers T-3 and T-4 (unless assumed to be zero);

c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of wet scrubbers T-3 and T-4 shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

d. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

e. the emission testing shall be conducted over an entire batch cycle.
Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10, and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P019 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P020 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process U (P020): production of lubricant additives through terpolymerization using two reactor systems. Each reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks. Volatile organic compound (VOC) emissions from the two reactor systems are controlled by either a carbon adsorber (U-7 CDrum), a flare (U-5 Flare), or an incinerator (AC-6/7 Fm Inc's).	OAC rule 3745-21-09 (LL) PTI 02-784	See A.I.2.a. through A.I.2.e. below.

2. **Additional Terms and Conditions**

a. The VOC emissions shall be controlled by an incinerator that meets the requirements of paragraph OAC rule 3745-21-09(LL)(1)(a), or a flare that meets the requirements of paragraph OAC rule 3745-21-09 (DD)(10)(d), unless otherwise exempted by OAC rule 3745-21-09(LL)(3).

b. Total VOC emissions not controlled by an incinerator or a flare shall not exceed five tons per rolling twelve-month period, pursuant to OAC rule 3745-21-09(LL)(3)(a). The total VOC emissions not controlled by an incinerator or a flare shall be based on the emissions from all process vent streams.

c. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the incinerator shall be designed and operated as follows:

i. The incinerator shall reduce the VOC emissions vented to it with an efficiency of at least ninety-eight percent by weight or shall emit VOC at a concentration not exceeding twenty parts per million by volume (dry basis), either of which is determined under OAC rule 3745-21-10(C); or

ii. The incinerator shall provide a minimum residence time of 0.75 second at a minimum temperature of sixteen hundred degrees Fahrenheit.

d. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the flare shall be designed and operated as follows:

i. The flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of five minutes during any two consecutive hours.

ii. The flare shall be operated with either an electric arc ignition system or a pilot flame. If a pilot flame is employed, the flame shall be present at all times and shall be monitored with a thermocouple or any other equivalent device to detect the presence of the pilot flame. If an electric arc ignition system is employed, the arcing shall pulse continually and shall be monitored to detect any failure.

iii. The flare shall be steam-assisted, air-assisted or non-assisted.

iv. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be three hundred Btu/scf or greater if the flare is steam-assisted or air-assisted, or shall be two hundred Btu/scf or greater if the flare is non-assisted.

v. Except as provided in paragraph A.I.2.c.vi. of this permit, the flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, of less than sixty feet per second if the flare is steam-assisted or non-assisted, or less than the maximum permitted velocity, as determined in paragraph (P)(4) of rule 3745-21-10 of the Administrative Code, if the flare is air-assisted.

d. vi. Excluded from the requirements of paragraph A.I.2.c.v. of this permit is any steam-assisted or non-assisted flare that meets both of the following requirements:

a. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be greater than one thousand Btu/scf.

b. The flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, less than four hundred feet per second.

e. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

   The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

   If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

   a. the company identification of each final product generated;

   b. the quantity of each final product generated, in tons;

   c. the number of batches run for each final product generated;

   d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

   e. the VOC emission rate for each final product generated that was not controlled by the incinerator(s), flare or carbon adsorber, in tons, using the following equation:

   E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run)

   f. the VOC emission rate for each final product generated that was controlled by the carbon adsorber, in tons, using the following equation:

   E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

   Where: CE = control efficiency of the carbon adsorber, as demonstrated during the most recent emissions test;

   g. the total VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) or flare (in tons, determined by adding the values from A.III.3.e. and A.III.3.f. for all final products generated); and

   h. the rolling, twelve-month summation of the monthly VOC emissions, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) or flare (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. The permittee shall operate and maintain equipment to continuously monitor and record the average combustion temperature within the thermal incinerator during operation of this emissions unit, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

   The permittee shall collect and record the following information for each day:

   a. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than the average combustion temperature specified below or less than the average combustion temperature specified by the manufacturer; and

   b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when

the associated emissions unit was in operation.

Whenever the monitored value for the average combustion temperature deviates from the average combustion temperature specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment above the acceptable value specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (minutes) during which there was a deviation, the average combustion temperature immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The acceptable average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, is not less than 1,600 degrees Fahrenheit, or shall meet the manufacturer's design specifications for temperature.

This temperature level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the temperature level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the temperature level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. A pilot flame shall be maintained in the flare's pilot light burner at all times the process vent stream is vented to the flare.

The permittee shall properly operate, and maintain equipment to continuously monitor and record the presence of a pilot flame during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer''s recommendations, instructions, and operating manual(s).

The permittee shall record the following information each day:

a. all periods during which there was no pilot flame; and

b. the operating times for the flare, monitoring equipment, and the associated emissions unit.

Whenever the monitoring indicates that there is no pilot flame while the emissions unit is in operation, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable operating scenario, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the results of monitoring immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

6. The carbon adsorption system shall be continuously maintained to ensure that the existing carbon is replaced with fresh carbon immediately when breakthrough is indicated.

If the control efficiency of the carbon adsorber is always assumed to be zero, and compliance with the emission limitation of 5 tons per rolling, 12-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the carbon adsorber, as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of 5 tons per rolling, 12-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

Unless the control efficiency of the carbon adsorption system is assumed to be zero, the permittee shall monitor and record the concentration level of the organic compounds in the carbon adsorption system's exhaust stream daily, or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater.

The permittee shall monitor and record all periods when carbon breakthrough is detected. Existing carbon shall be replaced with fresh carbon immediately upon carbon breakthrough. As an alternative, the permittee shall replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time

interval that is less than the carbon replacement interval, as determined by the maximum design flow rate and the organic concentration in the gas stream.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

7. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the flare. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to eliminate the visible emissions.

At any time the permittee observes visible emissions from the flare, the permittee shall monitor the visible emissions for a minimum period of 10 minutes in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 and record the results in an operations log.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.g. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit deviation (excursion) reports that identify all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified above.

[Authority for term: OAC rule 3745-77-07(C)(1)]

4. The permittee shall submit quarterly summaries that include a log of the downtime for the thermal incinerator when the associated emissions unit was in operation.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. each period of time when the average combustion temperature within the thermal incinerator was less than 1600 degrees Fahrenheit or less than the average combustion temperature specified by the manufacturer;

b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the average combustion temperature within the thermal incinerator into compliance with the acceptable value, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

6. Unless the control efficiency of the carbon adsorption system is assumed to be zero, the permittee shall submit deviation (excursion) reports that identify all periods during which the existing carbon is not replaced with fresh carbon immediately when breakthrough is indicated. These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

7. The permittee shall submit quarterly reports that (a) identify all days during which any visible particulate emissions were observed from the flare, (b) describe any corrective actions taken to eliminate the visible

particulate emissions, and (c) include all visible emission readings conducted pursuant to the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 as a result of the presence of visible emissions from the flare. These quarterly reports shall be submitted to the appropriate Ohio EPA District Office by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

8. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams not controlled by the incinerator(s) or flare.

   Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

   [Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission testing shall be conducted within 2 years of issuance of the permit and within 1 year prior to permit expiration;

   b. the emission testing shall be conducted to determine the control efficiency of the carbon adsorber (unless assumed to be zero);

   c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of the carbon adsorber shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

   d. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

   e. the emission testing shall be conducted over an entire batch cycle.
   Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

   Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

   A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

   [Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10, and OAC rule 3745-77-07(C)(1)]

3. Compliance for fume incinerators AC-7 and AC-6 shall be demonstrated by the testing conducted for emissions units P051 and P052. No additional testing shall be required for this emissions unit to comply with this emission limitation.

   [Authority for term: OAC rule 3745-15-04(A) and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P020 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P022 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process W (P022): production of lubricant additives through blending using 50 blending tanks. Volatile organic compound (VOC) emissions from the blend tanks are controlled by a carbon adsorber (W-1 CDrum) or an incinerator (AC-6/7 Fm Inc's).	OAC rule 3745-21-09(LL) PTI 02-872	See A.I.2.a. through A.I.2.d. below.
	Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000	SO2: 20.0 lbs/hr, See A.I.2.e. below.
SO2 emissions will result from the combustion of sulfur-containing organic compounds at the fume incinerator system.		

2. **Additional Terms and Conditions**

a. The VOC emissions shall be controlled by an incinerator that meets the requirements of paragraph OAC rule 3745-21-09(LL)(1)(a), unless otherwise exempted by OAC rule 3745-21-09(LL)(3).

b. Total VOC emissions not controlled by an incinerator shall not exceed five tons per rolling twelve-month period, pursuant to OAC rule 3745-21-09(LL)(3)(a). The total VOC emissions not controlled by an incinerator shall be based on the emissions from all process vent streams.

c. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the incinerator shall be designed and operated as follows:

i. The incinerator shall reduce the VOC emissions vented to it with an efficiency of at least ninety-eight percent by weight or shall emit VOC at a concentration not exceeding twenty parts per million by volume (dry basis), either of which is determined under OAC rule 3745-21-10(C); or

ii. The incinerator shall provide a minimum residence time of 0.75 second at a minimum temperature of sixteen hundred degrees Fahrenheit.

d. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

e. The total hourly and annual SO2 emissions from emissions units P011, P012, P013, P014, P022 and P030, combined, shall not exceed 247.4 lbs per hour and 100 tons per year.

The total allowable SO2 emissions for the fume incinerator system for any hour shall be the sum of the individual allowable SO2 emissions limitations for those emissions units that are in operation during any part of that hour. The total allowable SO2 emission rate for the fume incinerator system for any rolling, three-hour period shall be the average of the three, one-hour allowables comprising the three-hour period.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon

final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

a. the company identification of each final product generated;

b. the quantity of each final product generated, in tons;

c. the number of batches run for each final product generated;

d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

e. the VOC emission rate for each final product generated that was not controlled by the incinerator(s) or carbon adsorber, in tons, using the following equation:

E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run)

f. the VOC emission rate for each final product generated that was controlled by the carbon adsorber, in tons, using the following equation:

E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

Where: CE = control efficiency of the carbon adsorber, as demonstrated during the most recent emissions test;

g. the total VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) (in tons, determined by adding the values from A.III.3.e. and A.III.3.f. for all final products generated); and

h. the rolling, twelve-month summation of the monthly VOC emissions, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. The permittee shall operate and maintain equipment to continuously monitor and record the average combustion temperature within the thermal incinerator during operation of this emissions unit, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

a. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than the average combustion temperature specified below or less than the average combustion temperature specified by the manufacturer; and

b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

Whenever the monitored value for the average combustion temperature deviates from the average combustion temperature specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment above the acceptable value specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (minutes) during which there was a deviation, the average combustion temperature immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The acceptable average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, is not less than 1,600 degrees Fahrenheit, or shall meet the manufacturer's design specifications for temperature.

This temperature level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the temperature level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the temperature level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. The carbon adsorption system shall be continuously maintained to ensure that the existing carbon is replaced with fresh carbon immediately when breakthrough is indicated.

If the control efficiency of the carbon adsorber is always assumed to be zero, and compliance with the emission limitation of 5 tons per rolling, 12-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the carbon adsorber, as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of 5 tons per rolling, 12-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

Unless the control efficiency of the carbon adsorption system is assumed to be zero, the permittee shall monitor and record the concentration level of the organic compounds in the carbon adsorption system's exhaust stream daily, or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater.

The permittee shall monitor and record all periods when carbon breakthrough is detected. Existing carbon shall be replaced with fresh carbon immediately upon carbon breakthrough. As an alternative, the permittee shall replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval, as determined by the maximum design flow rate and the organic concentration in the gas stream.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

6. The permittee shall maintain hourly records of the following information:

a. the actual SO2 emission rate from the fume incinerator system, in pounds per hour;

b. the rolling, three-hour average, actual SO2 emission rate from the fume incinerator system, in pounds per hour;

c. the total allowable SO2 emission rate, in pounds per hour, for all the emissions units (P011, P012, P013, P014, P022 and P030) in operation during the hour; and

d. the rolling, three-hour average, allowable SO2 emission rate, in pounds per hour.

The permittee shall maintain records that document which emissions units (P011, P012, P013, P014, P022 and P030) were in operation during each hour. If an emissions unit is in operation during any portion of an hour, it is considered to be in operation for the entire hour for purposes of determining compliance with the total allowable SO2 emission rate for all the emissions units in operation during any hour. Compliance shall be determined by comparing the rolling, three-hour average, actual and allowable, SO2 emission rates for each hour.

The total allowable SO2 emissions for the fume incinerator system for any hour shall be the sum of the individual allowable SO2 emissions limitations for those emissions units that are in operation during any part of that hour. The total allowable SO2 emission rate for the fume incinerator system for any rolling, three-hour period shall be the average of the three, one-hour allowables comprising the three-hour period.

[Authority for term: OAC rule 3745-77-07(C)(1) and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

7. The permittee shall maintain daily records of the actual SO2 emission rate from the fume incinerator system, in pounds per day.

[Authority for term: OAC rule 3745-77-07(C)(1)]

8. The permittee shall operate and maintain existing equipment to continuously monitor and record SO2 from this emissions unit in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13(d)(1), (e)(2) and (h), respectively. The permittee may request alternative monitoring procedures or requirements and alternative relative accuracy test procedures, in accordance with the relevant provisions of 40 CFR Parts 60.13(i) and (j), by submitting a written request to the Director. Any alternative monitoring and/or testing acceptable to the Director shall be approved by the U.S. EPA as a revision to the State Implementation Plan (SIP) prior to the implementation of the alternative monitoring and/or testing.

A statement of certification of the existing continuous SO2 monitoring system shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 6. Proof of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

The permittee shall maintain records of all data obtained by the continuous SO2 monitoring system including, but not limited to, parts per million SO2 on an instantaneous (one-minute) basis, emissions of SO2 in units of lbs/hr and lbs/hr rolling, three-hour average, and in the appropriate averaging period (e.g.,

hourly and hourly rolling of consecutive three-hour periods), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

[Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR Part 60.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

9. The permittee shall implement a quality assurance/quality control plan for the continuous SO2 monitoring system designed to ensure continuous valid and representative readings of SO2 emission concentrations and exhaust gas flow rates. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and include provisions for conducting a relative accuracy test following each monitor probe replacement. The relative accuracy test shall be performed, and the monitoring system operated, in accordance with the procedures specified in Performance Specification Tests 2 and 3, 40 CFR Part 60, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous SO2 monitoring system must be kept on site and available for inspection during regular office hours. Each record of any monitoring data, testing data, and support information required shall be retained for a period of five years from the date the record was created. Support information shall include, but not limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation.

[Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR Part 60.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.g. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit quarterly reports, for the preceding calendar quarter, that specifies the total SO2 emissions from emissions units P011, P012, P013, P014, P022 and P030 (as determined by record keeping required under A.III. of these terms and conditions).

[Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

4. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. each period of time when the average combustion temperature within the thermal incinerator was less than 1600 degrees Fahrenheit or less than the average combustion temperature specified by the manufacturer;

b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the average combustion temperature within the thermal incinerator into compliance with the acceptable value, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

5. The permittee shall submit quarterly summaries that include a log of the downtime for the thermal incinerator when the associated emissions unit was in operation.

[Authority for term: OAC rule 3745-77-07(C)(1)]

6. Unless the control efficiency of the carbon adsorption system is assumed to be zero, the permittee shall submit deviation (excursion) reports that identify all periods during which the existing carbon is not replaced with fresh carbon immediately when breakthrough is indicated. These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

7. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit quarterly deviation reports that identify all rolling, three-hour periods during which the average SO2 emission rate exceeded the corresponding total allowable SO2 emission rate for the fume incinerator system.

The permittee shall submit quarterly reports documenting any downtime of the SO2 continuous emission rate monitoring system and/or control equipment while any of the emissions units were on line. The permittee shall provide the date, time, duration, reason (if known), an estimate of excess emissions, and any any corrective action(s) taken for each such incident. Normal downtimes for daily calibration and zero checks or periods where monitoring is maintained by a backup analyzer when the primary analyzer malfunctions shall not be reportable.
If no deviations occurred during a calendar year, the permittee shall submit a quarterly report that states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter. These reports shall also contain the total SO2 emissions for the calender quarter (in tons).

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-35-02, OAC rule 3745-77-07(C)(1), 40 CFR Part 60.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

8. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams not controlled by the incinerator(s).

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation: 20.0 lbs of SO2 per hour

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping of the total hourly emission rate, as required in Section A.III. of these terms and conditions.

[Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

c. Emission Limitation: The total hourly emissions from emissions units P011, P012, P013, P014, P022 and P030, combined, shall not exceed 247.4 lbs of SO2 per hour.

Applicable Compliance Method: Compliance shall be demonstrated by the records of data obtained by the continuous SO2 monitoring system, as required in Section A.III of these terms and conditions, and, if required, by emissions testing of the fume incinerator system using the procedures specified in OAC rule 3745-18-04(A) and test Method 6 or 6C of 40 CFR, Part 60, Appendix A.

Emissions testing and the relative accuracy test on the continuous SO2 monitor may be conducted at the same time while operating emissions units P011, P012, P013, P014, P022 and P030 at worst case emission conditions.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-18-04(A), OAC rule 3745-77-07(C)(1), 40 CFR, Part 63.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

d. Emission Limitation: The total annual emissions from emissions units P011, P012, P013, P014, P022 and P030, combined, shall not exceed 100 tons of SO2 per year.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions and by records of data obtained by the continuous SO2 monitoring system.

[Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. the emission testing shall be conducted within 2 years of issuance of the permit and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to determine the control efficiency of the carbon adsorber (unless assumed to be zero);

c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of the carbon adsorber shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

d. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

e. the emission testing shall be conducted over an entire batch cycle.
Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10, and OAC rule 3745-77-07(C)(1)]

3. Compliance for fume incinerators AC-7 and AC-6 shall be demonstrated by the testing conducted for emissions units P051 and P052. No additional testing shall be required for this emissions unit to comply with this emission limitation.

[Authority for term: OAC rule 3745-15-04(A) and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P022 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Issuance type: Title V Final Permit

Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: P024 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process Y (P024): the handling and storage of lime using a fabric filter baghouse (Y-1 Filter) to control particulate emissions.	OAC rule 3745-17-07(A)(1)	See A.I.2.a. below.
	OAC rule 3745-17-11(B)	PE: 3.53 lbs/hr

2. **Additional Terms and Conditions**

a. Visible particulate emissions shall not exceed 20 percent opacity, as a six-minute average, except as provided by the rule.

b. All particulate emissions from this emissions unit shall be vented to the baghouse.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall perform checks for any visible particulate emissions that may result from the unloading of lime. The presence or absence of any visible emissions shall be noted in an operations log each time lime is unloaded into the storage silo. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. whether the emissions are representative of normal operations;
   b. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   c. the total duration of any visible emission incident; and
   d. any corrective actions taken to eliminate the visible emissions.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly written reports that (a) identify all times during which any visible particulate emissions were observed from this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the appropriate Ohio EPA District Office by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

2. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation: Visible particulate emissions shall not exceed 20 percent opacity, as a six-minute average, except as provided by the rule.

      Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

      [Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-17-03(B)(1), and OAC rule 3745-77-07(C)(1)]

   b. Emission Limitation: Particulate emissions shall not exceed 3.53 lbs per hour.

      Applicable Compliance Method: If required, the permittee shall demonstrate compliance with this emission limitation by stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

      [Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-17-03(B)(10), and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P024 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: P025 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

Process A (P025): production of lubricant additives through neutralization with an inorganic base using four reactor systems. Each reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks. Volatile organic compound (VOC) emissions from the four reactor systems are controlled by a wet scrubber using oil as the scrubbing solution (A-21 OScrb) followed by a condenser (A-22 RCond).	OAC rule 3745-21-09(LL)	See A.I.2.a. and A.I.2.b. below.

2. **Additional Terms and Conditions**

   a. The total VOC emissions not controlled by an incinerator or flare shall not exceed five tons per rolling twelve-month period. The total VOC emissions not controlled by an incinerator or flare shall be based on the emissions from all process vent streams.

   b. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

   The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

   If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

   a. the company identification of each final product generated;

   b. the quantity of each final product generated, in tons;

   c. the number of batches run for each final product generated;

   d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

   e. the VOC emission rate for each final product generated that was not controlled by the wet scrubber and condenser, in tons, using the following equation:

   E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run)

   f. the VOC emission rate for each final product generated that was controlled by the wet scrubber and condenser, in tons, using the following equation:

   E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

   Where: CE = control efficiency of the wet scrubber and condenser, as demonstrated during the most recent emissions test;

g. the total VOC emission rate for all final products generated (in tons, determined by adding the values from A.III.3.e. and A.III.3.f. for all final products generated); and

h. the rolling, twelve-month summation of the monthly VOC emissions for all final products generated (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. The permittee shall properly operate and maintain equipment to continuously monitor and record the scrubber oil flow rate for the wet scrubber, in gallons per minute, during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the flow rate on a continuous basis.

Whenever the monitored value for the flow rate falls below the level specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the scrubber oil flow rate above the minimum level specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the flow rate readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.
The acceptable level for the scrubber oil flow rate for the scrubber is not less than 2 gallons per minute.

This acceptable level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

If the control efficiency of the wet scrubber is always assumed to be zero, and compliance with the emission limitation of five tons per rolling twelve-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the wet scrubber as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of five tons per rolling twelve-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

5. The permittee shall properly operate and maintain equipment to continuously monitor and record the temperature of the exhaust gases of the condenser during operation of this emissions unit, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within + 1 percent of the temperature being measured or + 5 degrees Fahrenheit, whichever is greater. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer''s recommendations, instructions, and operating manual(s).

Unless the control efficiency of the condenser is assumed to be zero, the permittee shall collect and record the following information each day:

a. the average temperature of the exhaust gases from the condenser during each of the 8 3-hour blocks of time during the day; and

b. a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

Whenever the monitored value for the temperature of the exhaust gases of the condenser exceeds the level specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the temperature of the exhaust gases of the condenser below the maximum level specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the temperature readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph does not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The acceptable average temperature of the exhaust gases from the condenser, for any 3-hour block of time, is not more than 11 degrees Fahrenheit above the average temperature, as specified by the manufacturer.

If the control efficiency of the condenser is always assumed to be zero, and compliance with the emission limitation of 5 tons per rolling, 12-month period from all process vent streams is demonstrated by the record keeping required in section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the condenser, as required under A.II, A.III and A.IV.
The provisions of this term shall not be applicable if the emission limitation of 5 tons per rolling, 12-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

This temperature level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the temperature level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the temperature level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.g. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. Unless the control efficiency of oil scrubber A-21 OScrb is assumed to be zero, the permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the scrubber oil flow rate was below the acceptable level;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the scrubber water flow rate into compliance with the acceptable level, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

4. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the temperature of the exhaust gases of the condenser was below the required level;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the temperature level of the exhaust gases of the condenser into compliance with the acceptable level, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

5. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. the emission testing shall be conducted within 2 years of issuance of the permit, or within 3 months of startup (if temporarily shutdown at the time of permit issuance), and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to determine the control efficiency of the oil wet scrubber and condenser (unless assumed to be zero);

c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of the oil wet scrubber and condenser shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

d. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

e. the emission testing shall be conducted over an entire batch cycle.
Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10, and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P025 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: P026 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process B (P026): production of lubricant additives through neutralization of aromatic	OAC rule 3745-21-09(LL)	See A.I.2.a. and A.I.2.b. below.

acids using four reactor systems. Each reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks. Volatile organic compound (VOC) emissions from the four reactor systems are controlled by a wet scrubber using oil as the scrubbing solution (B-10 OScrb) followed by a caustic wet scrubber (B-11 CScrb) and an ozone generator (B-12 O3 Gen).	OAC rule 3745-18-06(E)	SO2: 29.62 lbs/hour

2. **Additional Terms and Conditions**

   a. The total VOC emissions not controlled by an incinerator or flare shall not exceed five tons per rolling twelve-month period. The total VOC emissions not controlled by an incinerator or flare shall be based on the emissions from all process vent streams.

   b. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

   The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

   If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

   a. the company identification of each final product generated;

   b. the quantity of each final product generated, in tons;

   c. the number of batches run for each final product generated;

   d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

   e. the VOC emission rate for each final product generated that was not controlled by the wet scrubbers, in tons, using the following equation:

   E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run)

   f. the VOC emission rate for each final product generated that was controlled by wet scrubbers B-10 and B-11, in tons, using the following equation:

   E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

   Where: CE = control efficiency of wet scrubber B-10 and B-11, as demonstrated during the most recent emissions test;

   g. the total VOC emission rate for all final products generated (in tons, determined by adding the values

from A.III.3.e. and A.III.3.f. for all final products generated); and

h. the rolling, twelve-month summation of the monthly VOC emissions for all final products generated (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. The permittee shall develop emission factors for the amount of SO2 emitted from the ozone generator, either for each final product generated or for each batch run in this emissions unit. The emission factors shall be in units of pounds of SO2 emitted per ton of final product generated, or pounds of SO2 emitted per batch.

The permittee shall submit SO2 emission factors for the amount of SO2 emitted from the ozone generator. The specific methodology used to calculate the SO2 emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all SO2 emission factors shall be kept on site and available for Ohio EPA review.

If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. The permittee shall collect and record the following information monthly for each batch:

a. the company identification of each final product generated;

b. the quantity of each final product generated per batch in kg;

c. the processing time for each batch in hours;

d. the emission factor for sulfur compound emissions used to determine the amount of SO2 emitted from the process for each final product generated (in pounds/kg of final product generated or pounds/batch run);

e. the SO2 emission rate for each batch of final product generated after control or combustion devices, in pounds, using the following equation:

E=(quantity of product in kg or number of batches run) x (sulfur compound emission factor in lbs/kg or lbs/batch) x (conversion factor for lbs SO2/lb sulfur compound) x (1-CE/100))

Where:

CE= control efficiency of the control device removing sulfur compounds based on the most recent stack test data;

f. the total SO2 emission rate to the atmosphere for all final products generated, in pounds;

g. the number of hours per batch; and

h. the average hourly SO2 emission rate for each batch, in pounds per hour, and the maximum lb/hr SO2 emission rate accounting for the possibility of multiple batches being made simultaneously.

[Authority for term: OAC rule 3745-77-07(C)(1)]

6. The permittee shall properly operate and maintain equipment to continuously monitor and record the scrubber oil flow rate for oil scrubber B-10 (B-10 OScrb), in gallons per minute, during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the flow rate on a continuous basis.

Whenever the monitored value for the flow rate falls below the level specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the scrubber oil flow rate above the minimum level specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the flow rate readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.
The acceptable level for the scrubber oil flow rate for oil scrubber B-10 is not less than 2 gallons per minute.

This acceptable level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

If the control efficiency of the wet scrubber is always assumed to be zero, and compliance with the emission

limitation of five tons per rolling twelve-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the wet scrubber as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of five tons per rolling twelve-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

7. The permittee shall properly operate and maintain equipment to monitor the free Na2S and NaOH concentrations of the scrubber liquor and properly operate and maintain equipment to continuously monitor the scrubber liquor flow rate of caustic scrubber B-11 (B-11 CScrb) while the emissions unit is in operation, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s).

Unless the control efficiency of the wet scrubber is assumed to be zero, the permittee shall collect and record the following information each day:

a. the free Na2S and NaOH concentrations (percent) of the scrubber liquor (the permittee shall record the percent free Na2S and NaOH concentrations before and after each batch reaction);

b. the scrubber liquor flow rates, in gallons per minute, at the start of each batch; and

c. the operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

Whenever the monitored values for the Na2S or NaOH concentrations or flow rate fall below the levels specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the Na2S or NaOH concentrations or flow rate above the minimum levels specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the NaOH concentration and/or flow rate readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The acceptable level for the Na2S and NaOH concentrations of the scrubber liquor shall be not less than zero (0) percent (%).

The acceptable level for the scrubber liquor flow rate for this scrubber is not less than 2 gallons per minute. These levels are effective for the duration of this permit. Any changes in the acceptable levels must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the levels based upon information obtained during future SO2 emission tests that demonstrate compliance with the allowable SO2 emission rate for this emissions unit. In addition, approved revisions to the levels will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

If the control efficiency of the wet scrubber is always assumed to be zero, and compliance with the emission limitation of five tons per rolling twelve-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the wet scrubber, as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of five tons per rolling twelve-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.g. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit deviation (excursion) reports that identify all exceedances of the pound per hour emission limitation for SO2.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

4. Unless the control efficiency of oil scrubber B-10 is assumed to be zero, the permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the scrubber oil flow rate was below the acceptable level;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the scrubber water flow rate into compliance with the acceptable level, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

5. Unless the control efficiency of caustic scrubber B-11 is assumed to be zero, the permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the free Na2S or NaOH concentrations (percent) of the scrubber liquor or the scrubber liquor flow rate was below the respective acceptable levels;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the free Na2S or NaOH concentrations (percent) of the scrubber liquor and scrubber liquor flow rate into compliance with the acceptable levels, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

6. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams.

      Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

      [Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

   b. Emission Limitation: 29.62 lbs of SO2 per hour

      Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, compliance shall be demonstrated by emissions testing of the ozone generator using the procedures specified in OAC rule 3745-18-04(A) and test Method 6 or 6C of 40 CFR, Part 60, Appendix A.

      [Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-18-04(A), and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission testing shall be conducted within 2 years of issuance of the permit, or within 3 months of

startup (if temporarily shutdown at the time of permit issuance), and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to determine the control efficiency of oil scrubber B-10 and caustic scrubber B-11 (unless assumed to be zero);

c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of oil scrubber B-10 and caustic scrubber B-11 shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

d. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

e. the emission testing shall be conducted over an entire batch cycle.
Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10, and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P027 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process AB (P027): production of lubricant additives through neutralization with an inorganic base using four reactor systems. Each reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks. Volatile organic compound (VOC) emissions from the four reactor systems are controlled by a wet scrubber using water as the scrubbing solution (AB-11 WScrb) or an incinerator (AC-6/7 Fm Inc's) followed by an emergency flare (S-4 Flare) as backup.	OAC rule 3745-21-09(LL)	See A.I.2.a. through A.I.2.d. below.

2. **Additional Terms and Conditions**

a. The VOC emissions shall be controlled by an incinerator that meets the requirements of paragraph OAC rule 3745-21-09(LL)(1)(a), unless otherwise exempted by OAC rule 3745-21-09(LL)(3).

b. Total VOC emissions not controlled by an incinerator or a flare shall not exceed five tons per rolling twelve-month period, pursuant to OAC rule 3745-21-09(LL)(3)(a). The total VOC emissions not controlled by an incinerator or a flare shall be based on the emissions from all process vent streams.

c. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the incinerator shall be designed and operated as follows:

i. The incinerator shall reduce the VOC emissions vented to it with an efficiency of at least ninety-eight percent by weight or shall emit VOC at a concentration not exceeding twenty parts per million by volume (dry basis), either of which is determined under OAC rule 3745-21-10(C); or

ii. The incinerator shall provide a minimum residence time of 0.75 second at a minimum temperature of sixteen hundred degrees Fahrenheit.

d. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

   The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

   If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

   a. the company identification of each final product generated;

   b. the quantity of each final product generated, in tons;

   c. the number of batches run for each final product generated;

   d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

   e. the VOC emission rate for each final product generated that was not controlled by the incinerator(s) or wet scrubber, in tons, using the following equation:

   E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run)

   f. the VOC emission rate for each final product generated that was controlled by the wet scrubber, in tons, using the following equation:

   E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

   Where: CE = control efficiency of the wet scrubber, as demonstrated during the most recent emissions test;

   g. the total VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) (in tons, determined by adding the values from A.III.3.e. and A.III.3.f. for all final products generated); and

   h. the rolling, twelve-month summation of the monthly VOC emissions, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. The permittee shall operate and maintain equipment to continuously monitor and record the average

combustion temperature within the thermal incinerator during operation of this emissions unit, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

a. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than the average combustion temperature specified below or less than the average combustion temperature specified by the manufacturer; and

b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

Whenever the monitored value for the average combustion temperature deviates from the average combustion temperature specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment above the acceptable value specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (minutes) during which there was a deviation, the average combustion temperature immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The acceptable average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, is not less than 1,600 degrees Fahrenheit, or shall meet the manufacturer's design specifications for temperature.

This temperature level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the temperature level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the temperature level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. The permittee shall properly operate and maintain equipment to continuously monitor and record the scrubber water flow rate for the wet scrubber, in gallons per minute, during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the flow rate on a continuous basis.

Whenever the monitored value for the flow rate falls below the level specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the scrubber water flow rate above the minimum level specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the flow rate readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.
The acceptable level for the scrubber water flow rate for the scrubber is not less than 2 gallons per minute.

This acceptable level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

If the control efficiency of the wet scrubber is always assumed to be zero, and compliance with the emission limitation of five tons per rolling twelve-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the wet scrubber as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of five tons per rolling twelve-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.g. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the average combustion temperature within the thermal incinerator was less than 1600 degrees Fahrenheit or less than the average combustion temperature specified by the manufacturer;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the average combustion temperature within the thermal incinerator into compliance with the acceptable value, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

4. The permittee shall submit quarterly summaries that include a log of the downtime for the thermal incinerator when the associated emissions unit was in operation.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

5. Unless the control efficiency of the wet scrubber is assumed to be zero, the permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the scrubber water flow rate was below the acceptable level;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the scrubber water flow rate into compliance with the acceptable level, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

6. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams not controlled by the incinerator(s).

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. the emission testing shall be conducted within 2 years of issuance of the permit, or within 3 months of startup (if temporarily shutdown at the time of permit issuance), and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to determine the control efficiency of the wet scrubber (unless assumed to be zero);

c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of the wet scrubber shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

d. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

e. the emission testing shall be conducted over an entire batch cycle.
Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10, and OAC rule 3745-77-07(C)(1)]

3. Compliance for fume incinerators AC-7 and AC-6 shall be demonstrated by the testing conducted for emissions units P051 and P052. No additional testing shall be required for this emissions unit to comply with this emission limitation.

[Authority for term: OAC rule 3745-15-04(A) and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P027 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P028 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process AA (P028): production of lubricant additives through alkylation using two reactor systems. Each reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks.	OAC rule 3745-21-09(LL)	See A.I.2.a. through A.I.2.d. below.

Volatile organic compound (VOC) emissions from the two reactor systems are controlled by a carbon adsorber (AA-9) or an incinerator (AC-6 or AC-7) followed by an emergency flare (S-4 Flare) as backup.

2. **Additional Terms and Conditions**

a. The VOC emissions shall be controlled by an incinerator that meets the requirements of paragraph OAC rule 3745-21-09(LL)(1)(a), unless otherwise exempted by OAC rule 3745-21-09(LL)(3).

b. Total VOC emissions not controlled by an incinerator or a flare shall not exceed five tons per rolling twelve-month period, pursuant to OAC rule 3745-21-09(LL)(3)(a). The total VOC emissions not controlled by an incinerator or a flare shall be based on the emissions from all process vent streams.

c. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the incinerator shall be designed and operated as follows:

i. The incinerator shall reduce the VOC emissions vented to it with an efficiency of at least ninety-eight percent by weight or shall emit VOC at a concentration not exceeding twenty parts per million by volume (dry basis), either of which is determined under OAC rule 3745-21-10(C); or

ii. The incinerator shall provide a minimum residence time of 0.75 second at a minimum temperature of sixteen hundred degrees Fahrenheit.

d. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

a. the company identification of each final product generated;

b. the quantity of each final product generated, in tons;

c. the number of batches run for each final product generated;

d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

e. the VOC emission rate for each final product generated that was not controlled by the incinerator(s) or carbon adsorber, in tons, using the following equation:

E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run)

f. the VOC emission rate for each final product generated that was controlled by the carbon adsorber, in tons, using the following equation:

E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

Where: CE = control efficiency of the carbon adsorber, as demonstrated during the most recent emissions test;

g. the total VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) (in tons, determined by adding the values from A.III.3.e. and A.III.3.f. for all final products generated); and

h. the rolling, twelve-month summation of the monthly VOC emissions, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. The permittee shall operate and maintain equipment to continuously monitor and record the average combustion temperature within the thermal incinerator during operation of this emissions unit, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

a. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than the average combustion temperature specified below or less than the average combustion temperature specified by the manufacturer; and

b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

Whenever the monitored value for the average combustion temperature deviates from the average combustion temperature specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment above the acceptable value specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (minutes) during which there was a deviation, the average combustion temperature immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The acceptable average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, is not less than 1,600 degrees Fahrenheit, or shall meet the manufacturer's design specifications for temperature.

This temperature level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the temperature level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the temperature level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. The carbon adsorption system shall be continuously maintained to ensure that the existing carbon is replaced with fresh carbon immediately when breakthrough is indicated.

If the control efficiency of the carbon adsorber is always assumed to be zero, and compliance with the emission limitation of 5 tons per rolling, 12-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the carbon adsorber, as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of 5 tons per rolling, 12-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

Unless the control efficiency of the carbon adsorption system is assumed to be zero, the permittee shall monitor and record the concentration level of the organic compounds in the carbon adsorption system's exhaust stream daily, or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater.

The permittee shall monitor and record all periods when carbon breakthrough is detected. Existing carbon shall be replaced with fresh carbon immediately upon carbon breakthrough. As an alternative, the permittee shall replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval, as determined by the maximum design flow rate

and the organic concentration in the gas stream.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.g. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the average combustion temperature within the thermal incinerator was less than 1600 degrees Fahrenheit or less than the average combustion temperature specified by the manufacturer;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the average combustion temperature within the thermal incinerator into compliance with the acceptable value, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

4. The permittee shall submit quarterly summaries that include a log of the downtime for the thermal incinerator when the associated emissions unit was in operation.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

5. Unless the control efficiency of the carbon adsorption system is assumed to be zero, the permittee shall submit deviation (excursion) reports that identify all periods during which the existing carbon is not replaced with fresh carbon immediately when breakthrough is indicated. These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

6. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams not controlled by the incinerator(s).

      Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

      [Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission testing shall be conducted within 2 years of issuance of the permit, or within 3 months of startup (if temporarily shutdown at the time of permit issuance), and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to determine the control efficiency of the carbon adsorber (unless assumed to be zero);

c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of the carbon adsorber shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

d. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

e. the emission testing shall be conducted over an entire batch cycle.
Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10, and OAC rule 3745-77-07(C)(1)]

3. Compliance for fume incinerators AC-7 and AC-6 shall be demonstrated by the testing conducted for emissions units P051 and P052. No additional testing shall be required for this emissions unit to comply with this emission limitation.

[Authority for term: OAC rule 3745-15-04(A) and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P028 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P029 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process Z (P029): production of lubricant additives through thiophosphorylation using three reactor systems. A reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks. Volatile organic compound (VOC) emissions from the three reactor systems are controlled by either a caustic wet scrubber (Z-1 CScrb) or a flare (Z-10 Flare). SO2 emissions will result from the combustion of sulfur-containing organic compounds at the flare.	OAC rule 3745-21-09(LL)	See A.I.2.a. through A.I.2.d. below.
	OAC rule 3745-18-06(E)	SO2: 68.8 lbs/hr

2. **Additional Terms and Conditions**

a. The VOC emissions shall be controlled by a flare that meets the requirements of paragraph OAC rule

3745-21-09(DD)(10)(d), unless otherwise exempted by OAC rule 3745-21-09(LL)(3).

b. Total VOC emissions not controlled by a flare shall not exceed five tons per rolling twelve-month period, pursuant to OAC rule 3745-21-09(LL)(3)(a). The total VOC emissions not controlled by a flare shall be based on the emissions from all process vent streams.

c. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the flare shall be designed and operated as follows:

i. The flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of five minutes during any two consecutive hours.

ii. The flare shall be operated with either an electric arc ignition system or a pilot flame. If a pilot flame is employed, the flame shall be present at all times and shall be monitored with a thermocouple or any other equivalent device to detect the presence of the pilot flame. If an electric arc ignition system is employed, the arcing shall pulse continually and shall be monitored to detect any failure.

iii. The flare shall be steam-assisted, air-assisted or non-assisted.

iv. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be three hundred Btu/scf or greater if the flare is steam-assisted or air-assisted, or shall be two hundred Btu/scf or greater if the flare is non-assisted.

v. Except as provided in paragraph A.I.2.c.vi. of this permit, the flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, of less than sixty feet per second if the flare is steam-assisted or non-assisted, or less than the maximum permitted velocity, as determined in paragraph (P)(4) of rule 3745-21-10 of the Administrative Code, if the flare is air-assisted.

c. vi. Excluded from the requirements of paragraph A.I.2.c.v. of this permit is any steam-assisted or non-assisted flare that meets both of the following requirements:

a. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be greater than one thousand Btu/scf.

b. The flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, less than four hundred feet per second.

d. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

   The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

   If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

a. the company identification of each final product generated;

b. the quantity of each final product generated, in tons;

c. the number of batches run for each final product generated;

d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

e. the VOC emission rate for each final product generated that was not controlled by the flare or the wet scrubber, in tons, using the following equation:

E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run)

f. the VOC emission rate for each final product generated that was controlled by the wet scrubber, in tons, using the following equation:

E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

Where: CE = control efficiency of the wet scrubber, as demonstrated during the most recent emissions test;

g. the total VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the flare (in tons, determined by adding the values from A.III.3.e. and A.III.3.f. for all final products generated); and

h. the rolling, twelve-month summation of the monthly VOC emissions, for all final products generated, in which the VOC emissions were not controlled by the flare (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. The permittee shall develop emission factors for the amount of SO2 emitted from the flare, either for each final product generated or for each batch run in this emissions unit. The emission factors shall be in units of pounds of SO2 emitted per ton of final product generated, or pounds of SO2 emitted per batch.

The permittee shall submit SO2 emission factors for all products containing sulfur. The specific methodology used to calculate the SO2 emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all SO2 emission factors shall be kept on site and available for Ohio EPA review.

If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. The permittee shall collect and record the following information monthly for each batch:

a. the company identification of each final product generated;

b. the quantity of each final product generated per batch in kg;

c. the processing time for each batch in hours;

d. the emission factor for sulfur compound emissions used to determine the amount of SO2 emitted from the process for each final product generated (in pounds/kg of final product generated or pounds/batch run);

e. the SO2 emission rate for each batch of final product generated after control or combustion devices, in pounds, using the following equation:

E=(quantity of product in kg or number of batches run) x (sulfur compound emission factor in lbs/kg or lbs/batch) x (conversion factor for lbs SO2/lb sulfur compound) x (1-CE/100))

Where:

CE= control efficiency of the control device removing sulfur compounds based on the most recent stack test data;

f. the total SO2 emission rate to the atmosphere for all final products generated, in pounds;

g. the number of hours per batch; and

h. the average hourly SO2 emission rate for each batch, in pounds per hour, and the maximum lb/hr SO2 emission rate accounting for the possibility of multiple batches being made simultaneously.

[Authority for term: OAC rule 3745-77-07(C)(1)]

6. A pilot flame shall be maintained in the flare's pilot light burner at all times the process vent stream is vented to the flare.

The permittee shall properly operate, and maintain equipment to continuously monitor and record the presence of a pilot flame during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer''s recommendations, instructions, and operating manual(s).

The permittee shall record the following information each day:

a. all periods during which there was no pilot flame; and

b. the operating times for the flare, monitoring equipment, and the associated emissions unit.

Whenever the monitoring indicates that there is no pilot flame while the emissions unit is in operation, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable operating scenario, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the results of monitoring immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

7. The permittee shall properly operate and maintain equipment to monitor the free Na2S and NaOH concentrations of the scrubber liquor and properly operate and maintain equipment to continuously monitor the scrubber liquor flow rate of the caustic scrubber while the emissions unit is in operation, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s).

Unless the control efficiency of the wet scrubber is assumed to be zero, the permittee shall collect and record the following information each day:

a. the free Na2S and NaOH concentrations (percent) of the scrubber liquor (the permittee shall record the percent free Na2S and NaOH concentrations before and after each batch reaction);

b. the scrubber liquor flow rates, in gallons per minute, at the start of each batch; and

c. the operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

Whenever the monitored values for the Na2S or NaOH concentrations or flow rate fall below the levels specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the Na2S or NaOH concentrations or flow rate above the minimum levels specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the NaOH concentration and/or flow rate readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The acceptable level for the Na2S and NaOH concentrations of the scrubber liquor shall be not less than zero (0) percent (%).

The acceptable level for the scrubber liquor flow rate for this scrubber is not less than 2 gallons per minute.

These levels are effective for the duration of this permit. Any changes in the acceptable levels must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the levels based upon information obtained during future SO2 emission tests that demonstrate compliance with the allowable SO2 emission rate for this emissions unit. In addition, approved revisions to the levels will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.
If the control efficiency of the wet scrubber is always assumed to be zero, and compliance with the emission limitation of five tons per rolling twelve-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the wet scrubber, as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of five tons per rolling twelve-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

8. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the flare. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to eliminate the visible emissions.

At any time the permittee observes visible emissions from the flare, the permittee shall monitor the visible emissions for a minimum period of 10 minutes in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 and record the results in an operations log.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.g. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit deviation (excursion) reports that identify all exceedances of the pound per hour emission limitation for SO2.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

4. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the pilot light was not lit while the emissions unit was in operation;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the operation of the flare into compliance with the acceptable operating criteria, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

5. Unless the control efficiency of the caustic scrubber is assumed to be zero, the permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the free Na2S or NaOH concentrations (percent) of the scrubber liquor or the scrubber liquor flow rate was below the respective acceptable levels;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the free Na2S or NaOH concentrations (percent) of the scrubber liquor and scrubber liquor flow rate into compliance with the acceptable levels, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

6. The permittee shall submit quarterly reports that (a) identify all days during which any visible particulate emissions were observed from the flare, (b) describe any corrective actions taken to eliminate the visible particulate emissions, and (c) include all visible emission readings conducted pursuant to the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 as a result of the presence of visible emissions from the flare. These quarterly reports shall be submitted to the appropriate Ohio EPA District

Office by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

7. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams not controlled by the flare.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation: 68.8 lbs of SO2 per hour

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, compliance shall be demonstrated by testing the amount of sulfur produced by this emissions unit prior to the flare using a U.S. EPA approved test method subject to the review and approval of the Ohio EPA Northeast District Office.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-18-04(A), and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. the emission testing shall be conducted within 2 years of issuance of the permit and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to determine the control efficiency of the caustic wet scrubber (unless assumed to be zero);

c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of the caustic wet scrubber shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

d. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

e. the emission testing shall be conducted over an entire batch cycle.
Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10, and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P030 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process AC (P030): production of lubricant additives through a sulfurized olefin process using one reactor system. A reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks. Volatile organic compound (VOC) emissions from the reactor system are controlled by an incinerator (AC-6/7 Fm Inc's) followed by an emergency flare (AC-2 Flare) as backup. SO2 emissions will result from the combustion of sulfur-containing organic compounds at the fume incinerator system.	OAC rule 3745-21-09 (LL) PTI 02-388	See A.I.2.a. through A.I.2.e. below.
	Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000	SO2: 30.0 lbs/hr, See A.I.2.f. below.

2. **Additional Terms and Conditions**

a. The VOC emissions shall be controlled by an incinerator that meets the requirements of paragraph OAC rule 3745-21-09(LL)(1)(a), or a flare that meets the requirements of paragraph OAC rule 3745-21-09 (DD)(10)(d), unless otherwise exempted by OAC rule 3745-21-09(LL)(3).

b. Total VOC emissions not controlled by an incinerator or a flare shall not exceed five tons per rolling twelve-month period, pursuant to OAC rule 3745-21-09(LL)(3)(a). The total VOC emissions not controlled by an incinerator or a flare shall be based on the emissions from all process vent streams.

c. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the incinerator shall be designed and operated as follows:

i. The incinerator shall reduce the VOC emissions vented to it with an efficiency of at least ninety-eight percent by weight or shall emit VOC at a concentration not exceeding twenty parts per million by volume (dry basis), either of which is determined under OAC rule 3745-21-10(C); or

ii. The incinerator shall provide a minimum residence time of 0.75 second at a minimum temperature of sixteen hundred degrees Fahrenheit.

d. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the flare shall be designed and operated as follows:

i. The flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of five minutes during any two consecutive hours.

ii. The flare shall be operated with either an electric arc ignition system or a pilot flame. If a pilot flame is employed, the flame shall be present at all times and shall be monitored with a thermocouple or any other equivalent device to detect the presence of the pilot flame. If an electric arc ignition system is employed, the arcing shall pulse continually and shall be monitored to detect any failure.

iii. The flare shall be steam-assisted, air-assisted or non-assisted.

iv. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be three hundred Btu/scf or greater if the flare is steam-assisted or air-assisted, or shall be two hundred Btu/scf or greater if the flare is non-assisted.

v. Except as provided in paragraph A.I.2.c.vi. of this permit, the flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, of less than sixty feet per second if the flare is steam-assisted or non-assisted, or less than the maximum permitted velocity, as determined in paragraph (P)(4) of rule 3745-21-10 of the Administrative Code, if the flare is air-assisted.

d. vi. Excluded from the requirements of paragraph A.I.2.c.v. of this permit is any steam-assisted or non-assisted flare that meets both of the following requirements:

a. The net heating value of the gas being combusted in the flare, as determined by the method

specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be greater than one thousand Btu/scf.

b. The flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, less than four hundred feet per second.

e. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals which minimize the amount of VOC exposed to the ambient air.

f. The total hourly and annual SO2 emissions from emissions units P011, P012, P013, P014, P022 and P030, combined, shall not exceed 247.4 lbs per hour and 100 tons per year.

The total allowable SO2 emissions for the fume incinerator system for any hour shall be the sum of the individual allowable SO2 emissions limitations for those emissions units that are in operation during any part of that hour. The total allowable SO2 emission rate for the fume incinerator system for any rolling, three-hour period shall be the average of the three, one-hour allowables comprising the three-hour period.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

   The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

   If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

   a. the company identification of each final product generated;

   b. the quantity of each final product generated, in tons;

   c. the number of batches run for each final product generated;

   d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

   e. the VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) or flare, in tons, using the following equation:

   E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run);

   f. the total VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the flare(s), in tons; and

   g. the rolling, twelve-month summation of the monthly VOC emissions, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) or flare (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. The permittee shall operate and maintain equipment to continuously monitor and record the average combustion temperature within the thermal incinerator during operation of this emissions unit, including

periods of startup and shutdown. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

a. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than the average combustion temperature specified below or less than the average combustion temperature specified by the manufacturer; and

b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

Whenever the monitored value for the average combustion temperature deviates from the average combustion temperature specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment above the acceptable value specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (minutes) during which there was a deviation, the average combustion temperature immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The acceptable average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, is not less than 1,600 degrees Fahrenheit, or shall meet the manufacturer's design specifications for temperature.

This temperature level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the temperature level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the temperature level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. A pilot flame shall be maintained in the flare's pilot light burner at all times the process vent stream is vented to the flare.

The permittee shall properly operate, and maintain equipment to continuously monitor and record the presence of a pilot flame during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer''s recommendations, instructions, and operating manual(s).

The permittee shall record the following information each day:

a. all periods during which there was no pilot flame; and

b. the operating times for the flare, monitoring equipment, and the associated emissions unit.

Whenever the monitoring indicates that there is no pilot flame while the emissions unit is in operation, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable operating scenario, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the results of monitoring immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

6. The permittee shall maintain hourly records of the following information:

a. the actual SO2 emission rate from the fume incinerator system, in pounds per hour;

b. the rolling, three-hour average, actual SO2 emission rate from the fume incinerator system, in pounds per hour;

c. the total allowable SO2 emission rate, in pounds per hour, for all the emissions units (P011, P012, P013, P014, P022 and P030) in operation during the hour; and

d. the rolling, three-hour average, allowable SO2 emission rate, in pounds per hour.

The permittee shall maintain records that document which emissions units (P011, P012, P013, P014, P022 and P030) were in operation during each hour. If an emissions unit is in operation during any portion of an hour, it is considered to be in operation for the entire hour for purposes of determining compliance with the total allowable SO2 emission rate for all the emissions units in operation during any hour. Compliance shall be determined by comparing the rolling, three-hour average, actual and allowable, SO2 emission rates for each hour.

The total allowable SO2 emissions for the fume incinerator system for any hour shall be the sum of the individual allowable SO2 emissions limitations for those emissions units that are in operation during any part of that hour. The total allowable SO2 emission rate for the fume incinerator system for any rolling, three-hour period shall be the average of the three, one-hour allowables comprising the three-hour period.

[Authority for term: OAC rule 3745-77-07(C)(1) and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

7. The permittee shall maintain daily records of the actual SO2 emission rate from the fume incinerator system, in pounds per day.

[Authority for term: OAC rule 3745-77-07(C)(1)]

8. The permittee shall operate and maintain existing equipment to continuously monitor and record SO2 from this emissions unit in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13(d)(1), (e)(2) and (h), respectively. The permittee may request alternative monitoring procedures or requirements and alternative relative accuracy test procedures, in accordance with the relevant provisions of 40 CFR Parts 60.13(i) and (j), by submitting a written request to the Director. Any alternative monitoring and/or testing acceptable to the Director shall be approved by the U.S. EPA as a revision to the State Implementation Plan (SIP) prior to the implementation of the alternative monitoring and/or testing.

A statement of certification of the existing continuous SO2 monitoring system shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 6. Proof of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

The permittee shall maintain records of all data obtained by the continuous SO2 monitoring system including, but not limited to, parts per million SO2 on an instantaneous (one-minute) basis, emissions of SO2 in units of lbs/hr and lbs/hr rolling, three-hour average, and in the appropriate averaging period (e.g., hourly and hourly rolling of consecutive three-hour periods), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

[Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR Part 60.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

9. The permittee shall implement a quality assurance/quality control plan for the continuous SO2 monitoring system designed to ensure continuous valid and representative readings of SO2 emission concentrations and exhaust gas flow rates. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and include provisions for conducting a relative accuracy test following each monitor probe replacement. The relative accuracy test shall be performed, and the monitoring system operated, in accordance with the procedures specified in Performance Specification Tests 2 and 3, 40 CFR Part 60, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous SO2 monitoring system must be kept on site and available for inspection during regular office hours. Each record of any monitoring data, testing data, and support information required shall be retained for a period of five years from the date the record was created. Support information shall include, but not limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation.

[Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR Part 60.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

10. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the flare. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to eliminate the visible emissions.

At any time the permittee observes visible emissions from the flare, the permittee shall monitor the visible emissions for a minimum period of 10 minutes in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 and record the results in an operations log.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.f. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit quarterly reports, for the preceding calendar quarter, that specifies the total SO2 emissions from emissions units P011, P012, P013, P014, P022 and P030 (as determined by record keeping required under A.III. of these terms and conditions).

   [Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

4. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the average combustion temperature within the thermal incinerator was less than 1600 degrees Fahrenheit or less than the average combustion temperature specified by the manufacturer;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the average combustion temperature within the thermal incinerator into compliance with the acceptable value, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

5. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the pilot light was not lit while the emissions unit was in operation;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the operation of the flare into compliance with the acceptable operating criteria, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

6. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit quarterly deviation reports that identify all rolling, three-hour periods during which the average SO2 emission rate exceeded the corresponding total allowable SO2 emission rate for the fume incinerator system.

   The permittee shall submit quarterly reports documenting any downtime of the SO2 continuous emission rate monitoring system and/or control equipment while any of the emissions units were on line. The permittee shall provide the date, time, duration, reason (if known), an estimate of excess emissions, and any any corrective action(s) taken for each such incident. Normal downtimes for daily calibration and zero checks or periods where monitoring is maintained by a backup analyzer when the primary analyzer malfunctions shall not be reportable.
   If no deviations occurred during a calendar year, the permittee shall submit a quarterly report that states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter. These reports shall also contain the total SO2 emissions for the calender quarter (in tons).

   [Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-35-02, OAC rule 3745-77-07(C)(1), 40 CFR Part 60.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

7. The permittee shall submit quarterly reports that (a) identify all days during which any visible particulate emissions were observed from the flare, (b) describe any corrective actions taken to eliminate the visible

particulate emissions, and (c) include all visible emission readings conducted pursuant to the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 as a result of the presence of visible emissions from the flare. These quarterly reports shall be submitted to the appropriate Ohio EPA District Office by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

8. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams not controlled by the incinerator(s) or flare.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation: 30.0 lbs of SO2 per hour

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping of the total hourly emission rate, as required in Section A.III. of these terms and conditions.

[Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

c. Emission Limitation: The total hourly emissions from emissions units P011, P012, P013, P014, P022 and P030, combined, shall not exceed 247.4 lbs of SO2 per hour.

Applicable Compliance Method: Compliance shall be demonstrated by the records of data obtained by the continuous SO2 monitoring system, as required in Section A.III of these terms and conditions, and, if required, by emissions testing of the fume incinerator system using the procedures specified in OAC rule 3745-18-04(A) and test Method 6 or 6C of 40 CFR, Part 60, Appendix A.

Emissions testing and the relative accuracy test on the continuous SO2 monitor may be conducted at the same time while operating emissions units P011, P012, P013, P014, P022 and P030 at worst case emission conditions.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-18-04(A), OAC rule 3745-77-07(C)(1), 40 CFR, Part 63.13, and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

d. Emission Limitation: The total annual emissions from emissions units P011, P012, P013, P014, P022 and P030, combined, shall not exceed 100 tons of SO2 per year.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions and by records of data obtained by the continuous SO2 monitoring system.

[Authority for term: OAC rule 3745-77-07(C)(1), and Director's Final Findings and Orders for alternative SO2 emission control strategy, November 9, 2000]

e. Compliance for fume incinerators AC-7 and AC-6 shall be demonstrated by the testing conducted for emissions units P051 and P052. No additional testing shall be required for this emissions unit to comply with this emission limitation.

[Authority for term: OAC rule 3745-15-04(A) and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P030 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P033 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process AF (P033): production of lubricant additives through alkylation using five reactor systems. Each reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks. Volatile organic compound (VOC) emissions from the five reactor systems are controlled by a wet scrubber using water as the scrubbing solution (C-1 WScrb) or a flare (C-5 Flare).	OAC rule 3745-21-09(LL) PTI 02-790	See A.I.2.a. through A.I.2.d. below.

2. **Additional Terms and Conditions**

a. The VOC emissions shall be controlled by a flare that meets the requirements of paragraph OAC rule 3745-21-09(DD)(10)(d), unless otherwise exempted by OAC rule 3745-21-09(LL)(3).

b. Total VOC emissions not controlled by a flare shall not exceed five tons per rolling twelve-month period, pursuant to OAC rule 3745-21-09(LL)(3)(a). The total VOC emissions not controlled by a flare shall be based on the emissions from all process vent streams.

c. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the flare shall be designed and operated as follows:

i. The flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of five minutes during any two consecutive hours.

ii. The flare shall be operated with either an electric arc ignition system or a pilot flame. If a pilot flame is employed, the flame shall be present at all times and shall be monitored with a thermocouple or any other equivalent device to detect the presence of the pilot flame. If an electric arc ignition system is employed, the arcing shall pulse continually and shall be monitored to detect any failure.

iii. The flare shall be steam-assisted, air-assisted or non-assisted.

iv. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be three hundred Btu/scf or greater if the flare is steam-assisted or air-assisted, or shall be two hundred Btu/scf or greater if the flare is non-assisted.

v. Except as provided in paragraph A.I.2.c.vi. of this permit, the flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, of less than sixty feet per second if the flare is steam-assisted or non-assisted, or less than the maximum permitted velocity, as determined in paragraph (P)(4) of rule 3745-21-10 of the Administrative Code, if the flare is air-assisted.

c. vi. Excluded from the requirements of paragraph A.I.2.c.v. of this permit is any steam-assisted or non-assisted flare that meets both of the following requirements:

a. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be greater than one thousand Btu/scf.

b. The flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, less than four hundred feet per second.

d. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

   The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

   If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

   a. the company identification of each final product generated;

   b. the quantity of each final product generated, in tons;

   c. the number of batches run for each final product generated;

   d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

   e. the VOC emission rate for each final product generated that was not controlled by the flare or the wet scrubber, in tons, using the following equation:

   E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run)

   f. the VOC emission rate for each final product generated that was controlled by the wet scrubber, in tons, using the following equation:

   E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

   Where: CE = control efficiency of the wet scrubber, as demonstrated during the most recent emissions test;

   g. the total VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the flare (in tons, determined by adding the values from A.III.3.e. and A.III.3.f. for all final products generated); and

   h. the rolling, twelve-month summation of the monthly VOC emissions, for all final products generated, in which the VOC emissions were not controlled by the flare (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. A pilot flame shall be maintained in the flare's pilot light burner at all times the process vent stream is vented to the flare.

   The permittee shall properly operate, and maintain equipment to continuously monitor and record the presence of a pilot flame during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer''s recommendations, instructions, and operating manual(s).

   The permittee shall record the following information each day:

   a. all periods during which there was no pilot flame; and

   b. the operating times for the flare, monitoring equipment, and the associated emissions unit.

   Whenever the monitoring indicates that there is no pilot flame while the emissions unit is in operation, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the

following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable operating scenario, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the results of monitoring immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

5. The permittee shall properly operate and maintain equipment to continuously monitor and record the scrubber water flow rate for the wet scrubber, in gallons per minute, during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the flow rate on a continuous basis.

Whenever the monitored value for the flow rate falls below the level specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the scrubber water flow rate above the minimum level specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the flow rate readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.
The acceptable level for the scrubber water flow rate for the scrubber is not less than 2 gallons per minute.

This acceptable level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

If the control efficiency of the wet scrubber is always assumed to be zero, and compliance with the emission limitation of five tons per rolling twelve-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the wet scrubber as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of five tons per rolling twelve-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

6. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the flare. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to eliminate the visible emissions.

At any time the permittee observes visible emissions from the flare, the permittee shall monitor the visible emissions for a minimum period of 10 minutes in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 and record the results in an operations log.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.g. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the pilot light was not lit while the emissions unit was in operation;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the operation of the flare into compliance with the acceptable operating criteria, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

4. Unless the control efficiency of the wet scrubber is assumed to be zero, the permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the scrubber water flow rate was below the acceptable level;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the scrubber water flow rate into compliance with the acceptable level, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

5. The permittee shall submit quarterly reports that (a) identify all days during which any visible particulate emissions were observed from the flare, (b) describe any corrective actions taken to eliminate the visible particulate emissions, and (c) include all visible emission readings conducted pursuant to the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 as a result of the presence of visible emissions from the flare. These quarterly reports shall be submitted to the appropriate Ohio EPA District Office by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

6. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams not controlled by the flare.

      Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

      [Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)

(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. the emission testing shall be conducted within 2 years of issuance of the permit, or within 3 months of startup (if temporarily shutdown at the time of permit issuance), and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to determine the control efficiency of the wet scrubber (unless assumed to be zero);

c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of the wet scrubber shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

d. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

e. the emission testing shall be conducted over an entire batch cycle.
Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10, and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P033 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P034 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process AG (P034): production of specialty additives through gelation using two reactor systems. Each reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks. Volatile organic compound (VOC) emissions from the two reactor systems are controlled by a condenser (AG-5 RCond) followed by an incinerator (AC-6/7 Fm Inc's) followed by an emergency flare (S-4 Flare) as backup.	OAC rule 3745-21-09(LL)	See A.I.2.a. through A.I.2.d. below.

2. **Additional Terms and Conditions**

a. The VOC emissions shall be controlled by an incinerator that meets the requirements of paragraph OAC rule 3745-21-09(LL)(1)(a), unless otherwise exempted by OAC rule 3745-21-09(LL)(3).

b. Total VOC emissions not controlled by an incinerator or a flare shall not exceed five tons per rolling

twelve-month period, pursuant to OAC rule 3745-21-09(LL)(3)(a). The total VOC emissions not controlled by an incinerator or a flare shall be based on the emissions from all process vent streams.

c. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the incinerator shall be designed and operated as follows:

i. The incinerator shall reduce the VOC emissions vented to it with an efficiency of at least ninety-eight percent by weight or shall emit VOC at a concentration not exceeding twenty parts per million by volume (dry basis), either of which is determined under OAC rule 3745-21-10(C); or

ii. The incinerator shall provide a minimum residence time of 0.75 second at a minimum temperature of sixteen hundred degrees Fahrenheit.

d. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

   The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

   If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

   a. the company identification of each final product generated;

   b. the quantity of each final product generated, in tons;

   c. the number of batches run for each final product generated;

   d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

   e. the VOC emission rate for each final product generated that was not controlled by the condenser, carbon adsorber or incinerator(s), in tons, using the following equation:

   E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run)

   f. the VOC emission rate for each final product generated that was controlled by the condenser and carbon adsorber, in tons, using the following equation:

   E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

   Where: CE = control efficiency of the condenser and carbon adsorber, as demonstrated during the most recent emissions test;

   g. the total VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) (in tons, determined by adding the values from A.III.3.e. and A.III.3.f. for all final products generated); and

   h. the rolling, twelve-month summation of the monthly VOC emissions, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) (calculated by summing the monthly

VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. The permittee shall operate and maintain equipment to continuously monitor and record the average combustion temperature within the thermal incinerator during operation of this emissions unit, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

a. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than the average combustion temperature specified below or less than the average combustion temperature specified by the manufacturer; and

b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

Whenever the monitored value for the average combustion temperature deviates from the average combustion temperature specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment above the acceptable value specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (minutes) during which there was a deviation, the average combustion temperature immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The acceptable average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, is not less than 1,600 degrees Fahrenheit, or shall meet the manufacturer's design specifications for temperature.

This temperature level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the temperature level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the temperature level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. The permittee shall properly operate and maintain equipment to continuously monitor and record the temperature of the exhaust gases of the condenser during operation of this emissions unit, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within + 1 percent of the temperature being measured or + 5 degrees Fahrenheit, whichever is greater. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer''s recommendations, instructions, and operating manual(s).

Unless the control efficiency of the condenser is assumed to be zero, the permittee shall collect and record the following information each day:

a. the average temperature of the exhaust gases from the condenser during each of the 8 3-hour blocks of time during the day; and

b. a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

Whenever the monitored value for the temperature of the exhaust gases of the condenser exceeds the level specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the temperature of the exhaust gases of the condenser below the maximum level specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the temperature readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph does not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The acceptable average temperature of the exhaust gases from the condenser, for any 3-hour block of time, is not more than 11 degrees Fahrenheit above the average temperature, as specified by the

manufacturer.

If the control efficiency of the condenser is always assumed to be zero, and compliance with the emission limitation of 5 tons per rolling, 12-month period from all process vent streams is demonstrated by the record keeping required in section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the condenser, as required under A.II, A.III and A.IV.
The provisions of this term shall not be applicable if the emission limitation of 5 tons per rolling, 12-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

This temperature level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the temperature level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the temperature level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.g. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the average combustion temperature within the thermal incinerator was less than 1600 degrees Fahrenheit or less than the average combustion temperature specified by the manufacturer;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the average combustion temperature within the thermal incinerator into compliance with the acceptable value, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

4. The permittee shall submit quarterly summaries that include a log of the downtime for the thermal incinerator when the associated emissions unit was in operation.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

5. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the temperature of the exhaust gases of the condenser was below the required level;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the temperature level of the exhaust gases of the condenser into compliance with the acceptable level, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

6. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams not controlled by the incinerator(s).

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. the emission testing shall be conducted within 2 years of issuance of the permit and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to determine the control efficiency of the condenser (unless assumed to be zero);

c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of the condenser shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

d. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

e. the emission testing shall be conducted over an entire batch cycle.
Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10, and OAC rule 3745-77-07(C)(1)]

3. Compliance for fume incinerators AC-7 and AC-6 shall be demonstrated by the testing conducted for emissions units P051 and P052. No additional testing shall be required for this emissions unit to comply with this emission limitation.

[Authority for term: OAC rule 3745-15-04(A) and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P034 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P035 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process AH (P035): production of lubricant additives through water-based blending using six reactor systems. Each reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks. Volatile organic compound (VOC) emissions from the six reactor systems are controlled by a wet scrubber using water as the scrubbing solution (P-2 WScrb).	OAC rule 3745-21-09(LL)	See A.I.2.a. and A.I.2.b. below.

2. **Additional Terms and Conditions**

   a. The total VOC emissions not controlled by an incinerator or flare shall not exceed five tons per rolling twelve-month period. The total VOC emissions not controlled by an incinerator or flare shall be based on the emissions from all process vent streams.

   b. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

   The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

   If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

   a. the company identification of each final product generated;

   b. the quantity of each final product generated, in tons;

   c. the number of batches run for each final product generated;

   d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

   e. the VOC emission rate for each final product generated that was not controlled by the wet scrubber, in tons, using the following equation:

   E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run)

   f. the VOC emission rate for each final product generated that was controlled by the wet scrubber, in tons,

using the following equation:

E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

Where: CE = control efficiency of the wet scrubber, as demonstrated during the most recent emissions test;

g. the total VOC emission rate for all final products generated (in tons, determined by adding the values from A.III.3.e. and A.III.3.f. for all final products generated); and

h. the rolling, twelve-month summation of the monthly VOC emissions for all final products generated (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. The permittee shall properly operate and maintain equipment to continuously monitor and record the scrubber water flow rate for the wet scrubber, in gallons per minute, during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the flow rate on a continuous basis.

Whenever the monitored value for the flow rate falls below the level specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the scrubber water flow rate above the minimum level specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the flow rate readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.
The acceptable level for the scrubber water flow rate for the scrubber is not less than 2 gallons per minute.

This acceptable level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

If the control efficiency of the wet scrubber is always assumed to be zero, and compliance with the emission limitation of five tons per rolling twelve-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the wet scrubber as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of five tons per rolling twelve-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.g. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. Unless the control efficiency of the wet scrubber is assumed to be zero, the permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. each period of time when the scrubber water flow rate was below the acceptable level;

b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the scrubber water flow rate into compliance with the acceptable level, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

4. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. the emission testing shall be conducted within 2 years of issuance of the permit and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to determine the control efficiency of the wet scrubber (unless assumed to be zero);

c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of the wet scrubber shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

d. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

e. the emission testing shall be conducted over an entire batch cycle.
Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10, and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P035 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P036 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process AI (P036): production of lubricant additives through corrosive inorganic and organic reactions using three reactor systems. Each reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks. Volatile organic compound (VOC) emissions from the three reactor systems are controlled by either a carbon adsorber (O-1 or P-3 CDrum) or an incinerator (AC-6/7 Fm Inc's) followed by an emergency flare (S-4 Flare) as backup.	OAC rule 3745-21-09(LL)	See A.I.2.a. through A.I.2.d. below.

2. **Additional Terms and Conditions**

a. The VOC emissions shall be controlled by an incinerator that meets the requirements of paragraph OAC rule 3745-21-09(LL)(1)(a), unless otherwise exempted by OAC rule 3745-21-09(LL)(3).

b. Total VOC emissions not controlled by an incinerator or a flare shall not exceed five tons per rolling twelve-month period, pursuant to OAC rule 3745-21-09(LL)(3)(a). The total VOC emissions not controlled by an incinerator or a flare shall be based on the emissions from all process vent streams.

c. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the incinerator shall be designed and operated as follows:

i. The incinerator shall reduce the VOC emissions vented to it with an efficiency of at least ninety-eight percent by weight or shall emit VOC at a concentration not exceeding twenty parts per million by volume (dry basis), either of which is determined under OAC rule 3745-21-10(C); or

ii. The incinerator shall provide a minimum residence time of 0.75 second at a minimum temperature of sixteen hundred degrees Fahrenheit.

d. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

   a. the company identification of each final product generated;

   b. the quantity of each final product generated, in tons;

   c. the number of batches run for each final product generated;

   d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

   e. the VOC emission rate for each final product generated that was not controlled by the incinerator(s) or carbon adsorber(s), in tons, using the following equation:

   E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run)

   f. the VOC emission rate for each final product generated that was controlled by the carbon adsorber(s), in tons, using the following equation:

   E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

   Where: CE = control efficiency of either carbon adsorber O-1 or P-3, whichever is associated with that particular vent stream, as demonstrated during the most recent emissions test;

   g. the total VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) (in tons, determined by adding the values from A.III.3.e. and A.III.3.f. for all final products generated); and

   h. the rolling, twelve-month summation of the monthly VOC emissions, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. The permittee shall operate and maintain equipment to continuously monitor and record the average combustion temperature within the thermal incinerator during operation of this emissions unit, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

   The permittee shall collect and record the following information for each day:

   a. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than the average combustion temperature specified below or less than the average combustion temperature specified by the manufacturer; and

   b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

   Whenever the monitored value for the average combustion temperature deviates from the average combustion temperature specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
   In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment above the acceptable value specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (minutes) during which there was a deviation, the average combustion temperature immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

   The acceptable average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, is not less than 1,600 degrees Fahrenheit, or shall meet the manufacturer's design specifications for temperature.

   This temperature level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the temperature level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the temperature level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

5. The carbon adsorption system shall be continuously maintained to ensure that the existing carbon is replaced with fresh carbon immediately when breakthrough is indicated.

   If the control efficiency of the carbon adsorber is always assumed to be zero, and compliance with the emission limitation of 5 tons per rolling, 12-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the carbon adsorber, as required under A.II, A.III and A.IV.

   The provisions of this term shall not be applicable if the emission limitation of 5 tons per rolling, 12-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

   Unless the control efficiency of the carbon adsorption system is assumed to be zero, the permittee shall monitor and record the concentration level of the organic compounds in the carbon adsorption system's exhaust stream daily, or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater.

   The permittee shall monitor and record all periods when carbon breakthrough is detected. Existing carbon shall be replaced with fresh carbon immediately upon carbon breakthrough. As an alternative, the permittee shall replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval, as determined by the maximum design flow rate and the organic concentration in the gas stream.

   [Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.g. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the average combustion temperature within the thermal incinerator was less than 1600 degrees Fahrenheit or less than the average combustion temperature specified by the manufacturer;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the average combustion temperature within the thermal incinerator into compliance with the acceptable value, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

4. The permittee shall submit quarterly summaries that include a log of the downtime for the thermal incinerator when the associated emissions unit was in operation.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

5. Unless the control efficiency of the carbon adsorption system is assumed to be zero, the permittee shall submit deviation (excursion) reports that identify all periods during which the existing carbon is not replaced with fresh carbon immediately when breakthrough is indicated. These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

6. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams not controlled by the incinerator(s).

      Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

      [Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission testing shall be conducted within 2 years of issuance of the permit and within 1 year prior to permit expiration;

   b. the emission testing shall be conducted to determine the control efficiency of carbon adsorber O-1 and P-3 (unless assumed to be zero);

   c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of carbon adsorber O-1 and P-3 shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

   d. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

   e. the emission testing shall be conducted over an entire batch cycle.
   Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

   Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

   A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

   [Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10, and OAC rule 3745-77-07(C)(1)]

3. Compliance for fume incinerators AC-7 and AC-6 shall be demonstrated by the testing conducted for emissions units P051 and P052. No additional testing shall be required for this emissions unit to comply with this emission limitation.

   [Authority for term: OAC rule 3745-15-04(A) and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P036 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P038 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Loading rack A/B 8 (P038): loading of lubricant additives to tank cars.	OAC rule 3745-31-05(A)(3) PTI 02-09105	See A.I.2.a. through A.I.2.d. below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(E). See A.II.1. below.
	OAC rule 3745-21-07(E)	

2. **Additional Terms and Conditions**

a. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

b. Volatile organic compound (VOC) emissions shall not exceed 23.0 pounds per hour. This short-term emission limitation for VOC was established to reflect the potential to emit; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

c. VOC emissions shall not exceed 5.3 tons per year from emissions unit P038. This long-term emission limitation for VOC is based on the maximum operating rate of this emissions unit; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

d. VOC emissions shall not exceed 39.95 tons per rolling, 12-month period from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

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II. **Operational Restrictions**

1. The permittee shall not load more than 40,000 gallons of any volatile photochemically reactive material (as defined in OAC rule 3745-21-01) at this loading rack during any one day.

[Authority for term: PTI 02-09105, OAC rule 3745-21-07(E) and OAC rule 3745-77-07(A)(1)]

2. The maximum annual throughput in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, shall not exceed the following, based on a rolling, 12-month summation of the monthly throughputs:

a. anglamols - 15 million gallons;
b. gasoline additives - 15 million gallons;
c. lubricant additives - 30 million gallons; and
d. waste and recovered materials - 5 million gallons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

3. The maximum loading losses for materials loaded in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049 shall not exceed:

a. anglamols - 1.01 lbs VOC/ 1000 gallons loaded;
b. gasoline additives - 2.63 lbs VOC/ 1000 gallons loaded;
c. lubricant additives - 0.626 lbs VOC/ 1000 gallons loaded; and
d. waste and recovered material - 1.29 lbs VOC/1000 gallons loaded.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of any volatile photochemically reactive materials that are loaded at this rack.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall collect and record each month the following information for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

a. the throughput of each type of liquid containing VOC, in gallons;

b. the loading method for each type of liquid loaded;

c. the method of VOC destruction used for each type of liquid loaded and the estimated overall VOC control efficiency (if applicable), in percent;

d. the true vapor pressure of the liquid, in psia;

e. the molecular weight of vapors, in lb/lb-mol;

f. the bulk temperature of liquid loaded, in degrees Rankin; and

g. the throughput of each type of liquid for the previous 12-month period, in gallons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The permittee shall record every month the sum of VOC emissions (MVOC) from each liquid loaded in emissions unit P038, P039, P040, P041, P041, P042, P043, P044, P045, P046, P048 and P049, according to the following equation:

MVOC = the sum, from i=1 to i=n, of (MTL/1000)(1-C)(LL)(ton/2000 lbs)

where:

i= each individual type of liquid loaded;
n= the total number of types of liquid loaded;
MTL= throughput of each type of liquid, in gal/month;
C= overall control efficiency of the emissions control system (if applicable); and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation:

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

4. The permittee shall record every month the rolling, 12-month summation of the VOC emissions from emission units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, for the previous, 12-month period, in tons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify:

a. an identification of each day during which the daily volatile photochemically reactive material loaded exceeded 40,000 gallons and the actual gallons loaded during each such day;

b. all exceedances of the rolling, 12-month VOC emission limitation for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined;

c. all exceedances of the rolling, 12-month throughput limits for each type of liquid; and

d. any monthly record showing that the loading loss for any liquid exceeded the maximum loading losses specified in A.II.3.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall also submit annual reports that summarize the following information for emission units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

a. the annual throughput of each type of liquid, in gallons per year; and

b. the total VOC emissions, in tons per year.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 23.0 pounds of VOC emissions per hour

Applicable Compliance Method: Compliance with the hourly VOC emissions limit (HRVOC) shall be determined by the following equation:

HR VOC= (HRTL/1000)(1-C)(LL)

where:

HRTL= maximum throughput of the worst case liquid, in gal/hr;
C= overall control efficiency of the emissions control system (if applicable); and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation from AP-42, Section 5.2 (1/95):

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

If required, compliance shall be demonstrated by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA approved test method.

[Authority for term: PTI 02-09105, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

b. Emissions Limitation: 5.3 tons of VOC emissions per year from P038

Applicable Compliance Method: Compliance with the emissions limit (YR VOC) shall be determined by the following equation:

YR VOC = (46,000 gal/d)*(365 d/yr)*(0.626 lb/1000 gal loaded)*(ton/2000 lbs)

where:

46,000 is the maximum gallons of liquid loaded per day at this loading rack; and 0.626 lb/1000 gal loaded is the loading loss of the worst case liquid loaded and is calculated according to the following equation from AP-42, Section 5.2 (1/95):

LL= (12.46 SPM / T)

where:

S= 1.45, saturation factor for splash filling from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= 0.16, true vapor pressure of the liquid, in psia;
M= 130, molecular weight of vapors, in lb/lb-mol; and
T= 600, bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

c. Emissions Limitation: 39.95 tons of VOC emissions per rolling, 12-month period from emission units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

Applicable Compliance Method: Compliance with this emissions limit shall be determined by the monthly emission rates calculated in A.III.4. based on the record keeping specified in A.III.2 and A.III.3.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P038 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P039 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Loading rack A 11 (P039): loading of lubricant additive to tank cars.	OAC Rule 3745-31-05(A)(3) PTI 02-09105	See A.I.2.a. through A.I.2.d. below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(E). See A.II.1. below.
	OAC Rule 3745-21-07(E)	

2. **Additional Terms and Conditions**

a. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

b. Volatile organic compound (VOC) emissions shall not exceed 12.0 pounds per hour. This short-term emission limitation for VOC was established to reflect the potential to emit; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

c. VOC emissions shall not exceed 2.7 tons per year from emissions unit P039. This long-term emission limitation for VOC is based on the maximum operating rate of this emissions unit; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

d. VOC emissions shall not exceed 39.95 tons per rolling, 12-month period from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

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II. **Operational Restrictions**

1. The permittee shall not load more than 40,000 gallons of any volatile photochemically reactive material (as defined in OAC rule 3745-21-01) at this loading rack during any one day.

[Authority for term: PTI 02-09105, OAC rule 3745-21-07(E) and OAC rule 3745-77-07(A)(1)]

2. The maximum annual throughput in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, shall not exceed the following, based on a rolling, 12-month summation of the monthly throughputs:

a. anglamols - 15 million gallons;
b. gasoline additives - 15 million gallons;
c. lubricant additives - 30 million gallons; and
d. waste and recovered materials - 5 million gallons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

3. The maximum loading losses for materials loaded in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049 shall not exceed:

a. anglamols - 1.01 lbs VOC/ 1000 gallons loaded;
b. gasoline additives - 2.63 lbs VOC/ 1000 gallons loaded;
c. lubricant additives - 0.626 lbs VOC/ 1000 gallons loaded; and
d. waste and recovered material - 1.29 lbs VOC/1000 gallons loaded.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of any volatile photochemically reactive materials that are loaded at this rack.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall collect and record each month the following information for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

a. the throughput of each type of liquid containing VOC, in gallons;

b. the loading method for each type of liquid loaded;

c. the method of VOC destruction used for each type of liquid loaded and the estimated overall VOC control efficiency (if applicable), in percent;

d. the true vapor pressure of the liquid, in psia;

e. the molecular weight of vapors, in lb/lb-mol;

f. the bulk temperature of liquid loaded, in degrees Rankin; and

g. the throughput of each type of liquid for the previous 12-month period, in gallons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The permittee shall record every month the sum of VOC emissions (MVOC) from each liquid loaded at emissions units P038, P039, P040, P041, P041, P042, P043, P044, P045, P046, P048 and P049, according to the following equation:

MVOC = the sum, from i=1 to i=n, of (MTL/1000)(1-C)(LL)(ton/2000 lbs)

where:

i= each individual type of liquid loaded;
n= the total number of types of liquid loaded;
MTL= throughput of each type of liquid, in gal/month;
C= overall control efficiency of the emissions control system (if applicable); and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation:

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

4. The permittee shall record every month the rolling, 12-month summation of the VOC emissions from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, for the previous, 12-month period, in tons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify:

a. an identification of each day during which the daily volatile photochemically reactive material loaded exceeded 40,000 gallons and the actual gallons loaded during each such day;

b. all exceedances of the rolling, 12-month VOC emission limitation for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined;

c. all exceedances of the rolling, 12-month throughput limits for each type of liquid; and

d. any monthly record showing that the loading loss for any liquid exceeded the maximum loading losses specified in A.II.3.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall also submit annual reports that summarize the following information for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

a. the annual throughput of each type of liquid, in gallons per year; and

b. the total VOC emissions, in tons per year.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation: 12.0 pounds of VOC emissions per hour

Applicable Compliance Method: Compliance with the hourly VOC emissions limit (HRVOC) shall be determined by the following equation:

HR VOC= (HRTL/1000)(1-C)(LL)

where:

HRTL= maximum throughput of each type of the worst case liquid, in gal/hr;
C= overall control efficiency of the emissions control system (if applicable); and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation from AP-42, Section 5.2 (1/95):

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

If required, compliance shall be demonstrated by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA approved test method.

[Authority for term: PTI 02-09105, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

b. Emissions Limitation: 2.7 tons of VOC emissions per year from P039

Applicable Compliance Method: Compliance with the emissions limit (YR VOC) shall be determined by the following equation:

YR VOC = (23,000 gal/d)*(365 d/yr)*(0.626 lb/1000 gal loaded)*(ton/2000 lbs)

where:

23,000 is the maximum gallons of liquid loaded per day at this loading rack; and 0.626 lb/1000 gal loaded is the loading loss of the worst case liquid loaded and is calculated according to the following equation From AP-42, Section 5.2 (1/95):

LL= (12.46 SPM / T)

where:

S= 1.45, saturation factor for splash filling from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= 0.16, true vapor pressure of the liquid, in psia;
M= 130, molecular weight of vapors, in lb/lb-mol; and
T= 600, bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

c. Emissions limitation: 39.95 tons of VOC emissions per rolling, 12-month period from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

Applicable Compliance Method: Compliance with this emissions limit shall be determined by the monthly emission rates calculated in A.III.4. based on the record keeping specified in A.III.2 and A.III.3.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P039 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P040 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Loading rack C/D 8-9-10 (P040): loading of lubricant additive, anglamol and gasoline additive to tank cars, controlled by a carbon adsorber (R CDrum 1).	OAC rule 3745-31-05(A)(3) PTI 02-09105	See A.I.2.a. through A.I.2.e. below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(E). See A.II.1. below.
	OAC rule 3745-21-07(E)	

2. **Additional Terms and Conditions**

a. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

b. Volatile organic compound (VOC) emissions shall not exceed 170.0 pounds per hour. This short term emission limitation for VOC was established to reflect the potential to emit; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

c. VOC emissions shall not exceed 39.95 tons per rolling, 12-month period from emissions unit P040 and 39.95 tons per rolling, 12-month period from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

d. All loading of anglamols shall be accomplished in such a manner that displaced vapors and gases shall be vented to a carbon adsorption system. The carbon adsorption system shall be operated with sufficient volumetric flow at the point(s) of capture to minimize or eliminate odor emissions. Upon detection of any break through of odors from the carbon adsorption system, the permittee shall immediately recharge/replace the system with fresh carbon.

e. All loading of gasoline additives shall be accomplished either through a submerged fill loading line or shall be bottom loaded.

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II. **Operational Restrictions**

1. The permittee shall not load more than 40,000 gallons of any volatile photochemically reactive material (as defined in OAC rule 3745-21-01) in this loading rack during any one day.

[Authority for term: PTI 02-09105, OAC rule 3745-21-07(E) and OAC rule 3745-77-07(A)(1)]

2. The maximum annual throughput in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, shall not exceed the following, based on a rolling, 12-month summation of the monthly throughputs:

a. anglamols - 15 million gallons;
b. gasoline additives - 15 million gallons;
c. lubricant additives - 30 million gallons; and
d. waste and recovered materials - 5 million gallons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

3. The maximum loading losses for materials loaded in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049 shall not exceed:

a. anglamols - 1.01 lbs VOC/ 1000 gallons loaded;
b. gasoline additives - 2.63 lbs VOC/ 1000 gallons loaded;
c. lubricant additives - 0.626 lbs VOC/ 1000 gallons loaded; and
d. waste and recovered material - 1.29 lbs VOC/1000 gallons loaded.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of any volatile photochemically reactive material that are loaded in this rack.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall collect and record each month the following information for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

a. the throughput of each type of liquid containing VOC, in gallons;

b. the loading method for each type of liquid loaded;

c. the method of VOC destruction used for each type of liquid loaded and the estimated overall VOC control efficiency (if applicable), in percent;

d. the true vapor pressure of the liquid, in psia;

e. the molecular weight of vapors, in lb/lb-mol;

f. the bulk temperature of liquid loaded, in degrees Rankin; and

g. the throughput of each type of liquid for the previous 12-month period, in gallons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The permittee shall record every month the sum of VOC emissions (MVOC) from each liquid loaded at emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, according to the following equation:

MVOC = the sum, from i=1 to i=n, of (LL)(MTL / 1000)(1-C)(ton/2000 lbs)

where:

i= each individual type of liquid loaded;
n= the total number of types of liquid loaded;
MTL= throughput of each type of liquid, in gal/month;
C= overall control efficiency of the emissions control system (if applicable); and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation:

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

4. The permittee shall record every month the rolling, 12-month summation of the VOC emissions from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, for the previous, 12-month period, in tons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

5. The permittee shall record daily any time period that displaced vapors and gases were not vented to the carbon adsorption system while loading anglamols.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

6. The permittee shall record daily any time period that loading of gasoline additives was accomplished in a manner other than through a submerged fill loading line or a bottom loading point.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify:

a. an identification of each day during which the daily volatile photochemically reactive material loaded exceeded 40,000 gallons and the actual gallons loaded during each such day;

b. all exceedances of the rolling, 12-month VOC emission limitation for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined;

c. all exceedances of the rolling, 12-month throughput limits for each type of liquid;

d. an identification of each time period that loading of gasoline additives was accomplished in a manner other than through a submerged fill loading line or a bottom loading point;

e. an identification of any time period that anglamols were loaded and the carbon adsorption system was not used to control the emissions; and

f. any monthly record showing that the loading loss for any liquid exceeded the maximum loading losses specified in A.II.3.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall also submit annual reports that summarize the following information for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

a. the annual throughput of each type of liquid, in gallons per year; and

b. the total VOC emissions, in tons per year.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 170.0 pounds of VOC emissions per hour

Applicable Compliance Method: Compliance with the hourly VOC emissions limit (HRVOC) shall be determined by the following equation:

HR VOC= (HRTL/1000)(1-C)(LL)

where:

HRTL= maximum throughput of each type of the worst case liquid, in gal/hr;
C= overall control efficiency of the emissions control system (if applicable); and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation from AP-42, Section 5.2 (1/95):

LL= (12.46 SPM / T)

where:

S= saturation factor for splash fill from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

If required, compliance shall be demonstrated by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA approved test method.

[Authority for term: PTI 02-09105, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

b. Emissions Limitation: 39.95 tons of VOC emissions per rolling, 12-month period from emissions unit P040, and 39.95 tons of VOC emissions per rolling, 12-month period from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

Applicable Compliance Method: Compliance with this emissions limit shall be determined by the monthly emission rates calculated in A.III.4. based on the record keeping specified in A.III.2 and A.III.3.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P040 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P041 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

Loading rack C/D 11, bays C11, D11 (P041): loading of lubricant additives, anglamol and gasoline additives to tank cars, tank trucks and iso containers, controlled by a carbon absorber (R CDrum 1).	OAC rule 3745-31-05(A)(3) PTI 02-09105	See A.I.2.a. through A.I.2.f. below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(E). See A.II.1. below.
	OAC rule 3745-21-07(E)	

2. **Additional Terms and Conditions**

a. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

b. Volatile organic compound (VOC) emissions shall not exceed 90.0 pounds per hour. This short term emission limitation for VOC was established to reflect the potential to emit; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

c. VOC emissions shall not exceed 21.0 tons per year from emissions unit P041. This long-term emission limitation for VOC is based on the maximum operating rate of this emissions unit without the use of air pollution control equipment; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

d. VOC emissions shall not exceed 39.95 tons per rolling, 12-month period from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

e. All loading of anglamols shall be accomplished in such a manner that displaced vapors and gases shall be vented to a carbon adsorption system. The carbon adsorption system shall be operated with sufficient volumetric flow at the point(s) of capture to minimize or eliminate odor emissions. Upon detection of any break through of odors from the carbon adsorption system, the permittee shall expediently recharge/replace the system with fresh carbon.

f. All loading of gasoline additives shall be accomplished either through a submerged fill loading line or shall be bottom loaded.

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II. **Operational Restrictions**

1. The permittee shall not load more than 40,000 gallons of any volatile photochemically reactive material (as defined in OAC rule 3745-21-01) in this loading rack during any one day.

[Authority for term: PTI 02-09105, OAC rule 3745-21-07(E) and OAC rule 3745-77-07(A)(1)]

2. The maximum annual throughput in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, shall not exceed the following, based on a rolling, 12-month summation of the monthly throughputs:

a. anglamols - 15 million gallons;
b. gasoline additives - 15 million gallons;
c. lubricant additives - 30 million gallons; and
d. waste and recovered materials - 5 million gallons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

3. The maximum loading losses for materials loaded in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049 shall not exceed:

a. anglamols - 1.01 lbs VOC/ 1000 gallons loaded;
b. gasoline additives - 2.63 lbs VOC/ 1000 gallons loaded;
c. lubricant additives - 0.626 lbs VOC/ 1000 gallons loaded; and
d. waste and recovered material - 1.29 lbs VOC/1000 gallons loaded.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of any volatile photochemically reactive material that are loaded in this rack.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall collect and record each month the following information for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

a. the throughput of each type of liquid containing VOC, in gallons;

b. the loading method for each type of liquid loaded;

c. the method of VOC destruction used for each type of liquid loaded and the estimated overall VOC control efficiency (if applicable), in percent;

d. the true vapor pressure of the liquid, in psia;

e. the molecular weight of vapors, in lb/lb-mol;

f. the bulk temperature of liquid loaded, in degrees Rankin; and

g. the throughput of each type of liquid for the previous 12-month period, in gallons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The permittee shall record every month the sum of VOC emissions (MVOC) from each liquid loaded in emissions units P038, P039, P040, P041, P041, P042, P043, P044, P045, P046, P048 and P049, according to the following equation:

MVOC = the sum, from i=1 to i=n, of (MTL/1000)(1-C)(LL)(ton/2000 lbs)

where:

i= each individual type of liquid loaded;
n= the total number of types of liquid loaded;
MTL= throughput of each type of liquid, in gal/month;
C= overall control efficiency of the emissions control system (if applicable); and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation:

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

4. The permittee shall record every month the rolling, 12-month summation of the VOC emissions from P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, for the previous, 12-month period, in tons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

5. The permittee shall record daily any time period that displaced vapors and gases were not vented to the carbon adsorption system while loading anglamols.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

6. The permittee shall record daily any time period that loading of gasoline additives was accomplished either through a submerged fill loading line or a bottom loading point.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify:

a. an identification of each day during which the daily volatile photochemically reactive material loaded exceeded 40,000 gallons and the actual gallons loaded during each such day;

b. all exceedances of the rolling, 12-month VOC emission limitation for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined;

c. all exceedances of the rolling, 12-month throughput limits for each type of liquid.

d. an identification of each time that displaced vapors and gases were not vented to the carbon adsorption system while loading anglamols;

e. an identification of each time period that loading of gasoline additives was accomplished in a manner other than through a submerged fill loading line or a bottom loading point; and

f. any monthly record showing that the loading loss for any liquid exceeded the maximum loading losses specified in A.II.3.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall also submit annual reports that summarize the following information for P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

a. the annual throughput of each type of liquid, in gallons per year; and

b. the total VOC emissions, in tons per year.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emissions limitations in Section A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation: 90.0 pounds of VOC emissions per hour

Applicable Compliance Method: Compliance with the hourly VOC emissions limit (HRVOC) shall be determined by the following equation:

HR VOC= (HRTL/1000)(1-C)(LL)

where:

HRTL= maximum throughput of each type of the worst case liquid, in gal/hr;
C= overall control efficiency of the emissions control system (if applicable); and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation from AP-42, Section 5.2 (1/95):

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

If required, compliance shall be demonstrated by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA approved test method.

[Authority for term: PTI 02-09105, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

b. Emissions Limitation 21.0 tons of VOC emissions per year from P041

Applicable Compliance Method: Compliance with the emissions limit (YR VOC) shall be determined by the following equation:

YR VOC = [(23,000 gal/d)*(365 d/yr)*(2.63 lb/1000 gal loaded)*(ton/2000 lbs)] + [(23,000 gal/d)*(365 d/yr)*(2.36 lb/1000 gal loaded)*(ton/2000 lbs)]

where:

23,000 is the maximum gallons of liquid loaded per day at each bay in this loading rack; and 2.63 lbs/1000 gal loaded is the loading loss of the worst case liquid loaded and is calculated according to the following equation From AP-42, Section 5.2 (1/95):

LL= (12.46 SPM / T)

where:

S= 0.5, saturation factor for submerged fill from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= 3.62, true vapor pressure of the liquid, in psia;
M= 74, molecular weight of vapors, in lb/lb-mol;
T= 635, bulk temperature of liquid loaded, in degrees Rankin;

and:

2.36 lbs/1000 gal loaded is the loading loss of the second worst case liquid loaded and is calculated according to the following equation From AP-42, Section 5.2 (1/95):

LL= (12.46 SPM / T)

where:

S= 0.5, saturation factor for submerged fill from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= 2.24, true vapor pressure of the liquid, in psia;
M= 120, molecular weight of vapors, in lb/lb-mol; and
T= 710, bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

c. Emissions limitation: 39.95 tons of VOC emissions per rolling, 12-month period from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

Applicable Compliance Method: Compliance with this emissions limit shall be determined by the monthly emission rates calculated in A.III.4. based on the record keeping specified in A.III.2 and A.III.3.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P041 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P042 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Loading rack C/D 12, bays C12 and D12 (P042): loading of recovered materials, waste materials and lubricant additives to tank cars. Bay C12 is controlled by a fume incinerator (AC-6 or AC-7 Fm Inc's).	OAC rule 3745-31-05(A)(3) PTI 02-09105	See A.I.2.a. through A.I.2.e. below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(E). See A.II.1. below.
	OAC rule 3745-21-07(E)	

2. **Additional Terms and Conditions**

a. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

b. Volatile organic compound (VOC) emissions shall not exceed 47.0 pounds per hour. This short term emission limitation for VOC was established to reflect the potential to emit; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

c. VOC emissions shall not exceed 8.3 tons per year from emissions unit P042. This long-term emission limitation for VOC is based on the maximum operating rate of this emissions unit without the use of air pollution control equipment; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

d. VOC emissions shall not exceed 39.95 tons per rolling, 12-month period from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

e. Loading of sodium hydro sulfide (a recovered material) at bay C12 of loading rack C/D 12 shall be accomplished in such a manner that all displaced vapors and gases shall be vented to a caustic scrubber which discharges to fume incinerator AC-6 or AC-7.

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II. **Operational Restrictions**

1. The permittee shall not load more than 40,000 gallons of any volatile photochemically reactive material (as defined in OAC rule 3745-21-01) in this loading rack during any one day.

   [Authority for term: PTI 02-09105, OAC rule 3745-21-07(E) and OAC rule 3745-77-07(A)(1)]

2. The maximum annual throughput in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, shall not exceed the following, based on a rolling, 12-month summation of the monthly throughputs:

   a. anglamols - 15 million gallons;
   b. gasoline additives - 15 million gallons;
   c. lubricant additives - 30 million gallons; and
   d. waste and recovered materials - 5 million gallons.

   [Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

3. The maximum loading losses for materials loaded in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049 shall not exceed:

   a. anglamols - 1.01 lbs VOC/ 1000 gallons loaded;
   b. gasoline additives - 2.63 lbs VOC/ 1000 gallons loaded;
   c. lubricant additives - 0.626 lbs VOC/ 1000 gallons loaded; and
   d. waste and recovered material - 1.29 lbs VOC/1000 gallons loaded.

   [Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of any volatile photochemically reactive material that are loaded in this rack.

   [Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall collect and record each month the following information for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

   a. the throughput of each type of liquid containing VOC, in gallons;

   b. the loading method for each type of liquid loaded;

   c. the method of VOC destruction used for each type of liquid loaded and the estimated overall VOC control efficiency (if applicable), in percent;

   d. the true vapor pressure of the liquid, in psia;

   e. the molecular weight of vapors, in lb/lb-mol;

   f. the bulk temperature of liquid loaded, in degrees Rankin; and

   g. the throughput of each type of liquid for the previous 12-month period, in gallons.

   [Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The permittee shall record every month the sum of VOC emissions (MVOC) from each liquid loaded at emissions units P038, P039, P040, P041, P041, P042, P043, P044, P045, P046, P048 and P049, according to the following equation:

   MVOC = the sum, from i=1 to i=n, of (MTL / 1000)(1-C)(LL)(ton/ 2000 lbs)

   where:

   i= each individual type of liquid loaded;
   n= the total number of types of liquid loaded;
   MTL= throughput of each type of liquid, in gal/month;
   C= overall control efficiency of the emissions control system (if applicable); and
   LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation:

   LL= (12.46 SPM / T)

   where:

   S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
   P= true vapor pressure of the liquid, in psia;
   M= molecular weight of vapors, in lb/lb-mol; and
   T= bulk temperature of liquid loaded, in degrees Rankin.

   [Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

4. The permittee shall record every month the rolling, 12-month summation of the VOC emissions from P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, for the previous, 12-month period, in tons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

5. Fume incinerator AC-6 and AC-7 shall be operated and maintained in accordance with the design specifications, including:

a. monitoring and recording the temperature and percent oxygen in AC-6 incinerator continuously; and

b. continuously monitoring the temperature in AC-7 incinerator.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

6. The permittee shall record daily any time period that all displaced vapors and gases were not vented to the caustic scrubber and then to fume incinerator AC-6 or AC-7 while loading of sodium hydro sulfide.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify:

a. an identification of each day during which the daily volatile photochemically reactive material loaded exceeded 40,000 gallons and the actual gallons loaded during each such day;

b. all exceedances of the rolling, 12-month VOC emission limitation for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined;

c. all exceedances of the rolling, 12-month throughput limits for each type of liquid;

d. an identification of each time period that all displaced vapors and gases were not vented to the caustic scrubber and then to fume incinerator AC-6 or AC-7 while loading of sodium hydro sulfide; and

e. any monthly record showing that the loading loss for any liquid exceeded the maximum loading losses specified in A.II.3.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall also submit annual reports that summarize the following information for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

a. the annual throughput of each type of liquid, in gallons per year; and

b. the total VOC emissions, in tons per year.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emissions limitations in Section A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation: 47.0 pounds of VOC emissions per hour

Applicable Compliance Method: Compliance with the hourly VOC emissions limit (HRVOC) shall be determined by the following equation:

HR VOC= (HRTL/1000)(1-C)(LL)

where:

HRTL= maximum throughput of each type of the worst case liquid, in gal/hr;
C= overall control efficiency of the emissions control system (if applicable); and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation from AP-42, Section 5.2 (1/95):

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

If required, compliance shall be demonstrated by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA approved test method.

[Authority for term: PTI 02-09105, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

b. Emissions Limitation: 8.3 tons of VOC emissions per year from emissions unit P042

Applicable Compliance Method: Compliance with the rolling, 12-month emissions limit (YR VOC) shall be determined by the following equation:

YR VOC = (23,000 gal/d)*(365 d/yr)*(0.626 lb/1000 gal loaded)*(ton/2000 lbs) + (20,000 gal/d)*(365 d/yr) *(1.29 lbs/1000 gal loaded)*(ton/2000 lbs)

where:

23,000 is the maximum gallons of liquid loaded per day at each bay of this loading rack; and 0.626 lb/1000 gal loaded is the loading loss of the worst case lubricant additive loaded and 1.29 lbs/1000 gal loaded is the loading loss of the worst case waste material loaded and are calculated according to the following equation From AP-42, Section 5.2 (1/95):

LL= (12.46 SPM / T)

where:

for lubricant additive:
S= 1.45, splash fill saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= 0.16, true vapor pressure of the liquid, in psia;
M= 130, molecular weight of vapors, in lb/lb-mol; and
T= 600, bulk temperature of liquid loaded, in degrees Rankin.

for waste material:
S= 1.45, splash fill saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= 0.358, true vapor pressure of the liquid, in psia;
M= 106, molecular weight of vapors, in lb/lb-mol; and
T= 530, bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

c. Emissions limitation: 39.95 tons of VOC emissions per rolling, 12-month period from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

Applicable Compliance Method: Compliance with this emissions limit shall be determined by the monthly emission rates calculated in A.III.4. based on the record keeping specified in A.III.2 and A.III.3.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P042 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P043 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Loading rack C/D 15, bays C15 and D15 (P043): loading of lubricant additives to tank cars, controlled by a flare (AE-7 Flare).	OAC rule 3745-31-05(A)(3) PTI 02-09105	See A.I.2.a. through A.I.2.g. below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(E). See A.II.1. below.

OAC rule 3745-21-07(E)

2. **Additional Terms and Conditions**

a. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

b. Volatile organic compound (VOC) emissions shall not exceed 23.0 pounds per hour. This short term emission limitation for VOC was established to reflect the potential to emit; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

c. VOC emissions shall not exceed 5.3 tons per year from emissions unit P043. This long-term emission limitation for VOC is based on the maximum operating rate of this emissions unit without the use of air pollution control equipment; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

d. VOC emissions shall not exceed 39.95 tons per rolling, 12-month period from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

e. Hydrogen chloride (HCl) emissions shall not exceed 8.30 pounds per hour.

f. HCl emission shall not exceed 5.0 tons per year from emissions unit P043.

g. All loading of the lubricant additive currently stored in storage tank 801 (emissions unit T048) in loading rack D 15 (emissions unit P043) shall be accomplished in such a manner that all displaced vapors and gases shall be vented to a water scrubber which discharges to elevated flare AE-7. This flare is used as a control device for existing emissions unit P032. If, at any time, the material currently stored in storage tank 801 is moved to a different storage tank, the emission control system described above must continue to be used while loading from the new storage tank.

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II. **Operational Restrictions**

1. The permittee shall not load more than 40,000 gallons of any volatile photochemically reactive material (as defined in OAC rule 3745-21-01) in this loading rack during any one day.

[Authority for term: PTI 02-09105, OAC rule 3745-21-07(E) and OAC rule 3745-77-07(A)(1)]

2. The maximum annual throughput in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, shall not exceed the following, based on a rolling, 12-month summation of the monthly throughputs:

a. anglamols - 15 million gallons;
b. gasoline additives - 15 million gallons;
c. lubricant additives - 30 million gallons; and
d. waste and recovered materials - 5 million gallons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

3. The maximum loading losses for materials loaded in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049 shall not exceed:

a. anglamols - 1.01 lbs VOC/ 1000 gallons loaded;
b. gasoline additives - 2.63 lbs VOC/ 1000 gallons loaded;
c. lubricant additives - 0.626 lbs VOC/ 1000 gallons loaded; and
d. waste and recovered material - 1.29 lbs VOC/1000 gallons loaded.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

4. The flare shall be operated and maintained in accordance with design specifications, including:

a. operate the flare in a smokeless condition;

b. monitoring the pilot light continuously for flame out; and

c. maintaining a manual re-ignition system for the pilot light.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of any volatile photochemically reactive materials that are loaded at this rack.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall collect and record each month the following information for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

a. the throughput of each type of liquid containing VOC, in gallons;

b. the loading method for each type of liquid loaded;

c. the method of VOC destruction used for each type of liquid loaded and the estimated overall VOC control efficiency (if applicable), in percent;

d. the true vapor pressure of the liquid, in psia;

e. the molecular weight of vapors, in lb/lb-mol;

f. the bulk temperature of liquid loaded, in degrees Rankin; and

g. the throughput of each type of liquid for the previous 12-month period, in gallons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The permittee shall record every month the sum of VOC emissions (MVOC) from each liquid loaded in emissions units P038, P039, P040, P041, P041, P042, P043, P044, P045, P046, P048 and P049, according to the following equation:

MVOC = the sum, from i=1 to i=n, of (MTL/1000)(1-C)(LL)(ton/2000 lbs)

where:

i= each individual type of liquid loaded;
n= the total number of types of liquid loaded;
MTL= throughput of each type of liquid, in gal/month;
C= overall control efficiency of the emissions control system (if applicable); and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation:

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

4. The permittee shall record every month the rolling, 12-month summation of the VOC emissions from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, for the previous, 12-month period, in tons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

5. The permittee shall collect and record each month the following information for emissions units P043:

a. the throughput of each type of liquid containing HCl, in gallons;

b. the loading method for each type of liquid loaded;

c. the method of fume destruction used for each type of liquid loaded and the estimated overall control efficiency, in percent;

d. the true vapor pressure of the liquid, in psia;

e. the molecular weight of vapors, in lb/lb-mol; and

f. the bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

6. The permittee shall record every month the HCl emissions (MHCl) from each liquid loaded in emissions unit P043, according to the following equation:

MHCl = the sum, from i=1 to i=n, of (MTL/1000)(1-C)(LL);

where:

i= each individual type of liquid loaded;
n= the total number of types of liquid loaded;
MTL= throughput of each type of liquid, in gal/month;
C= overall control efficiency of the emissions control system; and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation from AP-42, Section 5.2:

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

7. The permittee shall record daily any time period that displaced vapors and gases were not vented to the water scrubber and then to the elevated flare AE-7 while loading lubricant additive from tank 801 (emission unit T048).

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

8. The permittee shall properly operate and maintain a device to continuously monitor the pilot flame when the emissions unit is in operation. The monitoring device and any recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals, with any modifications deemed necessary by the permittee.

The permittee shall record the following information each day:

a. all periods during which the pilot flame was out;

b. the operating times for the flare, monitoring equipment, and the associated emissions unit when in operation and venting gases; and

c. the number of reactor processes vented to the flare.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

9. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stacks serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to eliminate the visible emissions.

At any time the permittee observes visible emissions from the flare, the permittee shall monitor the visible emissions for a minimum period of 30 minutes in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 and record the results in an operations log.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify:

a. an identification of each day during which the daily volatile photochemically reactive material loaded exceeded 40,000 gallons and the actual gallons loaded during each such day;

b. all exceedances of the rolling, 12-month VOC emission limitation for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined;

c. all exceedances of the rolling, 12-month throughput limits for each type of liquid;

d. an identification of each time period that displaced vapors and gases were not vented to the water scrubber and then to the elevated flare AE-7 while loading lubricant additive from tank 801 (emission unit T048); and

e. any monthly record showing that the loading loss for any liquid exceeded the maximum loading losses specified in A.II.3.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit annual reports that summarize the following information for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

a. the annual throughput of each type of liquid, in gallons per year; and

b. the total VOC emissions, in tons per year.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The permittee shall also submit annual reports that summarize the following information for P043:

a. the annual throughput of each type of liquid containing HCl, in gallons per year; and

b. the HCl emissions, in tons per year.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

4. The permittee shall submit deviation (excursion) reports that identify all periods during which the flare pilot flame was not functioning properly. The reports shall include the date, time, and duration of each such period, as well as the cause of each deviation.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

5. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stacks serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the appropriate Ohio EPA District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

6. The permittee shall submit quarterly reports which include all visible emission readings conducted pursuant to the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 as a result of the presence of visible emissions from the flare. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

7. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emissions limitations in Section A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation: 23.0 pounds of VOC emissions per hour

Applicable Compliance Method: Compliance with the hourly VOC emissions limit (HRVOC) shall be determined by the following equation:

HR VOC= (HRTL/1000)(1-C)(LL)

HRTL= throughput of each type of the worst case liquid, in gal/hr;
C= overall control efficiency of the emissions control system (if applicable); and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation:

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

If required, compliance shall be demonstrated by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA approved test method.

[Authority for term: PTI 02-09105, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

b. Emissions Limitation: 5.3 tons of VOC emissions per year from P043

Applicable Compliance Method: Compliance with the rolling, 12-month emissions limitation (YR VOC) shall be determined by the following equation:

YR VOC = (46,000 gal/d)*(365 d/yr)*(0.626 lb/1000 gal loaded)*(ton/2000 lbs)

where:

46,000 is the maximum gallons of liquid loaded per day at this loading rack; and 0.626 lb/1000 gal loaded is the loading loss of the worst case lubricant additive loaded and is calculated according to the following equation From AP-42, Section 5.2 (1/95):

LL= (12.46 SPM / T)

where:

for lubricant additive:
S= 1.45, splash fill saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= 0.16, true vapor pressure of the liquid, in psia;
M= 130, molecular weight of vapors, in lb/lb-mol; and
T= 600, bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

c. Emissions Limitation: 39.95 tons of VOC emissions per rolling, 12-month period from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

Applicable Compliance Method: Compliance with this emissions limit shall be determined by the monthly value calculated in A.III.4. based on the record keeping specified in A.III.2 and A.III.3.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

d. Emissions Limitation: 8.30 pounds of HCl emissions per hour

Applicable Compliance Method: Compliance with the hourly HCl emissions limit (HRHCl) shall be determined by the following equation:

HR HCl= (HRTL/1000)(1-C)(LL)

where:

HRTL= throughput of each type of liquid, in gal/hr;
C= overall control efficiency of the emissions control system; and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation:

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

e. Emissions Limitation: 5.0 tons of HCl emissions per year from emissions unit P043

Applicable Compliance Method: Compliance with this emissions limit shall be determined by the sum of the monthly emission rate as recorded according to A.III.5 and A.III.6 for the calendar year.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P043 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P044 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Loading rack at the 200 Tank Farm West (P044): loading of lubricant additives to tank	OAC rule 3745-31-05(A)(3) PTI 02-09105	See A.I.2.a. through A.I.2.d. below.

trucks and iso containers.	The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(E). See A.II.1. below.

OAC rule 3745-21-07(E)

2. **Additional Terms and Conditions**

a. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

b. Volatile organic compound (VOC) emissions shall not exceed 12.0 pounds per hour. This short term emission limitation for VOC was established to reflect the potential to emit; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

c. VOC emissions shall not exceed 6.9 tons per year from emissions unit P044. This long-term emission limitation for VOC is based on the maximum operating rate of this emissions unit; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

d. VOC emissions shall not exceed 39.95 tons per rolling, 12-month period from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

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II. **Operational Restrictions**

1. The permittee shall not load more than 40,000 gallons of any volatile photochemically reactive material (as defined in OAC rule 3745-21-01) in this loading rack during any one day.

[Authority for term: PTI 02-09105, OAC rule 3745-21-07(E) and OAC rule 3745-77-07(A)(1)]

2. The maximum annual throughput in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, shall not exceed the following, based on a rolling, 12-month summation of the monthly throughputs:

a. anglamols - 15 million gallons;
b. gasoline additives - 15 million gallons;
c. lubricant additives - 30 million gallons; and
d. waste and recovered materials - 5 million gallons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

3. The maximum loading losses for materials loaded in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049 shall not exceed:

a. anglamols - 1.01 lbs VOC/ 1000 gallons loaded;
b. gasoline additives - 2.63 lbs VOC/ 1000 gallons loaded;
c. lubricant additives - 0.626 lbs VOC/ 1000 gallons loaded; and
d. waste and recovered material - 1.29 lbs VOC/1000 gallons loaded.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of any volatile photochemically reactive material that are loaded at this rack.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall collect and record each month the following information for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

a. the throughput of each type of liquid containing VOC, in gallons;

b. the loading method for each type of liquid loaded;

c. the method of VOC destruction used for each type of liquid loaded and the estimated overall VOC control efficiency (if applicable), in percent;

d. the true vapor pressure of the liquid, in psia;

e. the molecular weight of vapors, in lb/lb-mol;

f. the bulk temperature of liquid loaded, in degrees Rankin; and

g. the throughput of each type of liquid for the previous 12-month period, in gallons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The permittee shall record every month the sum of VOC emissions (MVOC) from each liquid loaded in emissions units P038, P039, P040, P041, P041, P042, P043, P044, P045, P046, P048 and P049, according to the following equation:

MVOC = the sum, from i=1 to i=n, of (MTL / 1000)(1-C)(LL)(ton/2000 lbs)

where:

i= each individual type of liquid loaded;
n= the total number of types of liquid loaded;
MTL= throughput of each type of liquid, in gal/month;
C= overall control efficiency of the emissions control system (if applicable); and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation:

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

4. The permittee shall record every month the rolling, 12-month summation of the VOC emissions from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, for the previous, 12-month period, in tons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify:

a. an identification of each day during which the daily volatile photochemically reactive material loaded exceeded 40,000 gallons and the actual gallons loaded during each such day;

b. all exceedances of the rolling, 12-month VOC emission limitation for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined;

c. all exceedances of the rolling, 12-month throughput limits for each type of liquid; and

d. any monthly record showing that the loading loss for any liquid exceeded the maximum loading losses specified in A.II.3.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall also submit annual reports that summarize the following information for P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

a. the annual throughput of each type of liquid, in gallons per year; and

b. the total VOC emissions, in tons per year.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emissions limitations in Section A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation: 12.0 pounds of VOC emissions per hour

Applicable Compliance Method: Compliance with the hourly VOC emissions limit (HRVOC) shall be determined by the following equation:

HR VOC= (HRTL / 1000)(1-C)(LL)

where:

HRTL= maximum throughput of each type of the worst case liquid, in gal/hr;
C= overall control efficiency of the emissions control system (if applicable); and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation from AP-42, Section 5.2 (1/95):

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

If required, compliance shall be demonstrated by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA approved test method.

[Authority for term: PTI 02-09105, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

b. Emissions Limitation: 6.9 tons of VOC emissions per year from P044

Applicable Compliance Method: Compliance with the emissions limitation (YR VOC) shall be determined by the following equation:

YR VOC = (60,000 gal/d)*(365 d/yr)*(0.626 lb/1000 gal loaded)*(ton/2000 lbs)

where:

60,000 is the maximum gallons of liquid loaded per day at this loading rack; and 0.626 lb/1000 gal loaded is the loading loss of the worst case lubricant additive loaded and are calculated according to the following equation From AP-42, Section 5.2 (1/95):

LL= (12.46 SPM / T)

where:

for lubricant additive:
S= 1.45, splash fill saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= 0.16, true vapor pressure of the liquid, in psia;
M= 130, molecular weight of vapors, in lb/lb-mol; and
T= 600, bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

c. Emissions limitation: 39.95 tons of VOC emissions per rolling, 12-month period from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

Applicable Compliance Method: Compliance with this emissions limit shall be determined by the monthly emission rate calculated in A.III.4. based on the record keeping specified in A.III.2 and A.III.3.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P044 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P045 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Loading rack at the 500 Tank Farm East	OAC rule 3745-31-05(A)(3)	See A.I.2.a. through A.I.2.e. below.

(P045): loading of lubricant additives to tank trucks and iso containers, controlled by a fume incinerator (AC-6 or AC-7 Fm Inc.'s).	PTI 02-09105	The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(E). See A.II.1. below.
	OAC rule 3745-21-07(E)	

2. **Additional Terms and Conditions**

a. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

b. Volatile organic compound (VOC) emissions shall not exceed 22.0 pounds per hour. This short term emission limitation for VOC was established to reflect the potential to emit; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

c. VOC emissions shall not exceed 13.0 tons per year from emissions unit P045. This long-term emission limitation for VOC is based on the maximum operating rate of this emissions unit without the use of air pollution control equipment; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

d. VOC emissions shall not exceed 39.95 tons per rolling, 12-month period from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

e. There are two (2) loading arms at this loading rack. One loading arm is only used for loading of the lubricant additives currently stored in storage tanks 573, 594, 595, 596, 597, 598 and 599, (emissions units T201, T206, T207, T171, T208-210). Loading with this arm shall be accomplished in such manner that all displaced vapors and gases shall be vented to a caustic scrubber (Z-13) which discharges to the atmosphere. If at any time the material currently stored in storage tanks 573, 594, 595, 596, 597, 598, or 599 is moved to a different storage tank, the emission control system described above must continue to be used while loading from the new storage tank.

The other loading arm is for the loading of lubricant additives currently stored in storage tanks 555, 557, 558, 574, 577, 618, and 639 (emissions units T129, T199, T200, T202, T203, T058 and T071) which are loaded with a standard splash fill loading arm and vented to the atmosphere.

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II. **Operational Restrictions**

1. The permittee shall not load more than 40,000 gallons of any volatile photochemically reactive material (as defined in OAC rule 3745-21-01) in this loading rack during any one day.

[Authority for term: PTI 02-09105, OAC rule 3745-21-07(E) and OAC rule 3745-77-07(A)(1)]

2. The maximum annual throughput in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, shall not exceed the following, based on a rolling, 12-month summation of the monthly throughputs:

a. anglamols - 15 million gallons;
b. gasoline additives - 15 million gallons;
c. lubricant additives - 30 million gallons; and
d. waste and recovered materials - 5 million gallons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

3. The maximum loading losses for materials loaded in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049 shall not exceed:

a. anglamols - 1.01 lbs VOC/ 1000 gallons loaded;
b. gasoline additives - 2.63 lbs VOC/ 1000 gallons loaded;
c. lubricant additives - 0.626 lbs VOC/ 1000 gallons loaded; and
d. waste and recovered material - 1.29 lbs VOC/1000 gallons loaded.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of any volatile photochemically reactive material that are loaded at this rack.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall collect and record each month the following information for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

a. the throughput of each type of liquid containing VOC, in gallons;

b. the loading method for each type of liquid loaded;

c. the method of VOC destruction used for each type of liquid loaded and the estimated overall VOC control efficiency (if applicable), in percent;

d. the true vapor pressure of the liquid, in psia;

e. the molecular weight of vapors, in lb/lb-mol;

f. the bulk temperature of liquid loaded, in degrees Rankin; and

g. the throughput of each type of liquid for the previous 12-month period, in gallons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The permittee shall record every month the sum of VOC emissions (MVOC) from each liquid loaded in emissions units P038, P039, P040, P041, P041, P042, P043, P044, P045, P046, P048 and P049, according to the following equation:

MVOC = the sum, from i=1 to i=n, of (MTL / 1000)(1-C)(LL)(ton/2000 lbs)

where:

i= each individual type of liquid loaded;
n= the total number of types of liquid loaded;
MTL= throughput of each type of liquid, in gal/month;
C= overall control efficiency of the emissions control system (if applicable); and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation:

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

4. The permittee shall record every month the rolling, 12-month summation of the VOC emissions from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, for the previous, 12-month period, in tons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

5. The permittee shall record daily any time period that displaced vapors and gases were not vented to the caustic scrubber (Z-13) while loading material from storage tanks 573, 594, 595, 596, 597, 598, and 599 (emissions units T201, T206, T207, T171, T208-210).

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify:

a. an identification of each day during which the daily volatile photochemically reactive material loaded exceeded 40,000 gallons and the actual gallons loaded during each such day;

b. all exceedances of the rolling, 12-month VOC emission limitation for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined;

c. all exceedances of the rolling, 12-month throughput limits for each type of liquid;

d. an identification of each time period that displaced vapors and gases were not vented to the caustic scrubber (Z-13) while loading material from storage tanks 573, 594, 595, 596, 597, 598, and 599 (emissions units T201, T206, T207, T171, T208-210); and

e. any monthly record showing that the loading loss for any liquid exceeded the maximum loading losses specified in A.II.3.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall also submit annual reports that summarize the following information for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

a. the annual throughput of each type of liquid, in gallons per year; and

b. the total VOC emissions, in tons per year.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emissions limitations in Section A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation: 22.0 pounds of VOC emissions per hour

Applicable Compliance Method: Compliance with the hourly VOC emissions limit (HRVOC) shall be determined by the following equation:

HR VOC= (HRTL/1000)(1-C)(LL)

where:

HRTL= maximum throughput of each type of the worst case liquid, in gal/hr;
C= overall control efficiency of the emissions control system (if applicable); and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation:

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

If required, compliance shall be demonstrated by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA approved test method.

[Authority for term: PTI 02-09105, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

b. Emissions Limitation: 13.0 tons of VOC emissions per year from P045

Applicable Compliance Method: Compliance with the emissions limitation (YR VOC) shall be determined by the following equation:

YR VOC = (60,000 gal/d)*(365 d/yr)*(1.18 lbs/1000 gal loaded)*(tons/2000 lbs)

where:

60,000 is the maximum gallons of liquid loaded per day at this loading rack; and 1.18 lbs/1000 gal loaded is the loading loss of the worst case lubricant additive loaded and is calculated according to the following equation From AP-42, Section 5.2 (1/95):

LL= (12.46 SPM / T)

where:

for lubricant additive:
S= 1.45, splash fill saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= 0.61, true vapor pressure of the liquid, in psia;
M= 60, molecular weight of vapors, in lb/lb-mol; and
T= 560, bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

c. Emissions Limitation: 39.95 tons of VOC emissions per rolling, 12-month period from P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

Applicable Compliance Method: Compliance with this emissions limit shall be determined by the monthly emission rates calculated in A.III.4. based on the record keeping specified in A.III.2 and A.III.3.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P045 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P046 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Loading rack at 700 Tank Farm East (P046): loading of lubricant additives to tank trucks and iso containers.	OAC rule 3745-31-05(A)(3) PTI 02-09105	See A.I.2.a. through A.I.2.d. below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(E). See A.II.1. below.
	OAC rule 3745-21-07(E)	

2. **Additional Terms and Conditions**

a. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

b. Volatile organic compound (VOC) emissions shall not exceed 12.0 pounds per hour. This short term emission limitation for VOC was established to reflect the potential to emit; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

c. VOC emissions shall not exceed 6.9 tons year from emissions unit P046. This long-term emission limitation for VOC is based on the maximum operating rate of this emissions unit; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

d. VOC emissions shall not exceed 39.95 tons per rolling, 12-month period from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

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II. **Operational Restrictions**

1. The permittee shall not load more than 40,000 gallons of any volatile photochemically reactive material (as defined in OAC rule 3745-21-01) in this loading rack during any one day.

[Authority for term: PTI 02-09105, OAC rule 3745-21-07(E) and OAC rule 3745-77-07(A)(1)]

2. The maximum annual throughput in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, shall not exceed the following, based on a rolling, 12-month summation of the monthly throughputs:

a. anglamols - 15 million gallons;
b. gasoline additives - 15 million gallons;
c. lubricant additives - 30 million gallons; and
d. waste and recovered materials - 5 million gallons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

3. The maximum loading losses for materials loaded in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049 shall not exceed:

a. anglamols - 1.01 lbs VOC/ 1000 gallons loaded;
b. gasoline additives - 2.63 lbs VOC/ 1000 gallons loaded;
c. lubricant additives - 0.626 lbs VOC/ 1000 gallons loaded; and
d. waste and recovered material - 1.29 lbs VOC/1000 gallons loaded.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of any volatile photochemically reactive material that are loaded at this rack.

   [Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall collect and record each month the following information for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

   a. the throughput of each type of liquid containing VOC, in gallons;

   b. the loading method for each type of liquid loaded;

   c. the method of VOC destruction used for each type of liquid loaded and the estimated overall VOC control efficiency (if applicable), in percent;

   d. the true vapor pressure of the liquid, in psia;

   e. the molecular weight of vapors, in lb/lb-mol;

   f. the bulk temperature of liquid loaded, in degrees Rankin; and

   g. the throughput of each type of liquid for the previous 12-month period, in gallons.

   [Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The permittee shall record every month the sum of VOC emissions (MVOC) from each liquid loaded in emissions units P038, P039, P040. P041, P041, P042, P043, P044, P045, P046, P048 and P049, according to the following equation:

   MVOC = the sum, from i=1 to i=n, of (MTL / 1000)(1-C)(LL)(ton/2000 lbs)

   where:

   i= each individual type of liquid loaded;
   n= the total number of types of liquid loaded;
   MTL= throughput of each type of liquid, in gal/month;
   C= overall control efficiency of the emissions control system (if applicable); and
   LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation:

   LL= (12.46 SPM / T)

   where:

   S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
   P= true vapor pressure of the liquid, in psia;
   M= molecular weight of vapors, in lb/lb-mol; and
   T= bulk temperature of liquid loaded, in degrees Rankin.

   [Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

4. The permittee shall record every month the rolling, 12-month summation of the VOC emissions from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, for the previous, 12-month period, in tons.

   [Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

5. The permittee shall record daily any time period that loading of gasoline additives was accomplished in a manner other than through a submerged fill loading line or a bottom loading point.

   [Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify:

   a. an identification of each day during which the daily volatile photochemically reactive material loaded exceeded 40,000 gallons and the actual gallons loaded during each such day;

   b. all exceedances of the rolling, 12-month VOC emission limitation for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined;

   c. all exceedances of the rolling, 12-month throughput limits for each type of liquid; and

   d. any monthly record showing that the loading loss for any liquid exceeded the maximum loading losses specified in A.II.3.

   [Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall also submit annual reports that summarize the following information for emissions units

P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

a. the annual throughput of each type of liquid, in gallons per year; and

b. the total VOC emissions, in tons per year.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emissions limitations in Section A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation: 11.3 pounds of VOC emissions per hour

Applicable Compliance Method: Compliance with the hourly VOC emissions limitation (HRVOC) shall be determined by the following equation:

HR VOC= (HRTL/1000)(1-C)(LL)

where:

HRTL= maximum throughput of each type of the worst case liquid, in gal/hr;
C= overall control efficiency of the emissions control system (if applicable); and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation:

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

If required, compliance shall be demonstrated by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA approved test method.

[Authority for term: PTI 02-09105, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

b. Emissions Limitation: 6.9 tons of VOC emissions per year from emissions unit P046

Applicable Compliance Method: Compliance with the emissions limitation (YR VOC) shall be determined by the following equation:

YR VOC = (60,000 gal/d)*(365 d/yr)*(0.626 lb/1000 gal loaded)*(ton/2000 lbs)

where:

60,000 is the maximum gallons of liquid loaded per day at this loading rack; and 0.626 lb/1000 gal loaded is the loading loss of the worst case lubricant additive loaded and is calculated according to the following equation From AP-42, Section 5.2 (1/95):

LL= (12.46 SPM / T)

where:

S= 1.45, splash fill saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= 0.16, true vapor pressure of the liquid, in psia;
M= 130, molecular weight of vapors, in lb/lb-mol; and
T= 600, bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

c. Emissions Limitation: 39.95 tons of VOC emissions per rolling, 12-month period from P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

Applicable Compliance Method: Compliance with this emissions limitation shall be determined by the monthly emission rates calculated in A.III.4. based on the record keeping specified in A.III.2 and A.III.3.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P046 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P047 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Loading rack at the 700 Tank Farm North (P047): loading of recovered material to tank trucks and iso containers, controlled by a wet scrubber (702/3 Scrb).	OAC rule 3745-31-05(A)(3) PTI 02-09105	See A.I.2.a. through A.I.2.g. below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(E). See A.II.1. below.
	OAC rule 3745-21-07(E)	

2. **Additional Terms and Conditions**

a. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

b. Hydrochloric acid (HCl) emissions shall not exceed 1.40 pounds per hour.

c. HCl emissions shall not exceed 0.9 ton per year.

d. All loading of hydrochloric acid (a recovered material) at this emissions unit shall be accomplished in such a manner that all displaced vapors and gases shall be vented to a water scrubber as a means to control hydrogen chloride vapors.

e. Volatile organic compound (VOC) emissions shall not exceed 12.0 pounds per hour. This short term emission limitation for VOC was established to reflect the potential to emit; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

f. VOC emissions shall not exceed 6.9 tons per year from emissions unit P047. This long-term emission limitation for VOC is based on the maximum operating rate of this emissions unit; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

g. VOC emissions shall not exceed 39.95 tons per rolling, 12-month period from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

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II. **Operational Restrictions**

1. The permittee shall not load more than 40,000 gallons of any volatile photochemically reactive material (as defined in OAC rule 3745-21-01) in this loading rack during any one day.

[Authority for term: PTI 02-09105, OAC rule 3745-21-07(E) and OAC rule 3745-77-07(A)(1)]

2. The pH of the scrubber liquor shall be maintained above 7.5.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

3. The maximum annual throughput in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, shall not exceed the following, based on a rolling, 12-month summation of the monthly throughputs:

a. anglamols - 15 million gallons;

b. gasoline additives - 15 million gallons;
c. lubricant additives - 30 million gallons; and
d. waste and recovered materials - 5 million gallons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

4. The maximum loading losses for materials loaded in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049 shall not exceed:

a. anglamols - 1.01 lbs VOC/ 1000 gallons loaded;
b. gasoline additives - 2.63 lbs VOC/ 1000 gallons loaded;
c. lubricant additives - 0.626 lbs VOC/ 1000 gallons loaded; and
d. waste and recovered material - 1.29 lbs VOC/1000 gallons loaded.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of any volatile photochemically reactive material that are loaded at this rack.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall collect and record each month the following information for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

a. the throughput of each type of liquid containing VOC, in gallons;

b. the loading method for each type of liquid loaded;

c. the method of VOC destruction used for each type of liquid loaded and the estimated overall VOC control efficiency (if applicable), in percent;

d. the true vapor pressure of the liquid, in psia;

e. the molecular weight of vapors, in lb/lb-mol;

f. the bulk temperature of liquid loaded, in degrees Rankin; and

g. the throughput of each type of liquid for the previous 12-month period, in gallons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The permittee shall record every month the sum of VOC emissions (MVOC) from each liquid loaded in emissions units P038, P039, P040. P041, P041, P042, P043, P044, P045, P046, P048 and P049, according to the following equation:

MVOC = the sum, from i=1 to i=n, of (MTL / 1000)(1-C)(LL)(ton/2000 lbs)

where:

i= each individual type of liquid loaded;
n= the total number of types of liquid loaded;
MTL= throughput of each type of liquid, in gal/month;
C= overall control efficiency of the emissions control system (if applicable); and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation:

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

4. The permittee shall record every month the rolling, 12-month summation of the VOC emissions from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, for the previous, 12-month period, in tons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

5. The permittee shall collect and record each month the following information for emissions unit P047:

a. the throughput of each type of liquid containing HCl, in gallons;

b. the loading method for each type of liquid loaded;

c. the method of fume destruction used for each type of liquid loaded and the estimated overall control

efficiency, in percent;

d. the true vapor pressure of the liquid, in psia;

e. the molecular weight of vapors, in lb/lb-mol; and

f. the bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

6. The permittee shall record every month the HCl emissions (MHCl) from each liquid loaded at emissions unit P047, according to the following equation:

MHCl = the sum, from i=1 to i=n, of (MTL/1000)(1-C)(LL);

where:

i= each individual type of liquid loaded;
n= the total number of types of liquid loaded;
MTL= throughput of each type of liquid, in gal/month;
C= overall control efficiency of the emissions control system; and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation from AP-42, Section 5.2:

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

7. The permittee shall collect and record the following information each day:

a. a log or record of the pH of the scrubber liquor; and

b. a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

8. The permittee shall record daily any time period that displaced vapors and gases were not vented to the water scrubber as a means to control hydrogen chloride vapors.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify:

a. an identification of each day during which the daily volatile photochemically reactive material loaded exceeded 40,000 gallons and the actual gallons loaded during each such day;

b. all exceedances of the rolling, 12-month VOC emission limitation for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined;

c. all exceedances of the rolling, 12-month throughput limits for each type of liquid;

d. all periods of time during which the scrubber liquor pH did not comply with the pH requirements specified above; and

e. any monthly record showing that the loading loss for any liquid exceeded the maximum loading losses specified in A.II.3.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit annual reports that summarize the following information for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

a. the annual throughput of each type of liquid, in gallons per year; and

b. the total VOC emissions, in tons per year.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The permittee shall also submit annual reports that summarize the following information for emissions unit P047:

a. the annual throughput of each type of liquid containing HCl, in gallons per year; and

b. the HCl emissions, in tons per year.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

4. The permittee shall submit deviation (excursion) reports that identify all periods of time during which emission vapors and gases were not vented to the water scrubber as a means to control hydrogen chloride vapors.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

5. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emissions limitations in Section A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation: 12.0 pounds of VOC emissions per hour

Applicable Compliance Method:Compliance with the hourly VOC emissions limitation (HRVOC) shall be determined by the following equation:

HR VOC= (HRTL/1000)(1-C)(LL)

where:

HRTL= maximum throughput of each type of the worst case liquid, in gal/hr;
C= overall control efficiency of the emissions control system (if applicable); and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation:

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

If required, compliance shall be demonstrated by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA approved test method.

[Authority for term: PTI 02-09105, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

b. Emissions Limitation: 6.9 tons of VOC emissions per year from emissions unit P047

Applicable Compliance Method: Compliance with the emissions limitation (YR VOC) shall be determined by the following equation:

YR VOC = (60,000 gal/d)*(365 d/yr)*(0.626 lb/1000 gal loaded)*(ton/2000 lbs)

where:

60,000 is the maximum gallons of liquid loaded per day at this loading rack; and 0.626 lb/1000 gal loaded is the loading loss of the worst case lubricant additive loaded and is calculated according to the following equation From AP-42, Section 5.2 (1/95):

LL= (12.46 SPM / T)

where:

for lubricant additive:
S= 1.45, splash fill saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= 0.16, true vapor pressure of the liquid, in psia;
M= 130, molecular weight of vapors, in lb/lb-mol; and
T= 600, bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

c. Emissions Limitation: 39.95 tons of VOC emissions per rolling, 12-month period from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

Applicable Compliance Method: Compliance with this emissions limit shall be determined by the monthly value calculated in A.III.4. based on the record keeping specified in A.III.2 and A.III.3.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

d. Emissions Limitation: 1.40 pounds of HCl emissions per hour

Applicable Compliance Method: Compliance with the hourly HCl emissions limitation (HRHCl) shall be determined by the following equation:

HR HCl= (HRTL/1000)(1-C)(LL)

where:

HRTL= throughput of each type of liquid, in gal/hr;
C= overall control efficiency of the emissions control system; and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation:

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

e. Emissions Limitation: 0.9 ton of HCl emissions per year from emissions unit P047.

Applicable Compliance Method: Compliance with this emission limit shall be determined by summing the monthly emission rates as recorded according to A.III.5 and A.III.6 for the calendar year.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P047 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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Facility ID: 0243000024 Emissions Unit ID: P048 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Loading rack at 800 Tank Farm South (P048): loading of lubricant additives to tank trucks and iso containers.	OAC rule 3745-31-05(A)(3) PTI 02-09105	See A.I.2.a. through A.I.2.d. below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(E). See A.II.1. below.
	OAC rule 3745-21-07(E)	

2. **Additional Terms and Conditions**

a. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

b. Volatile organic compound (VOC) emissions shall not exceed 12.0 pounds per hour. This short term emission limitation for VOC was established to reflect the potential to emit; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

c. VOC emissions shall not exceed 6.9 tons per year from emissions unit P048. This long-term emission limitation for VOC is based on the maximum operating rate of this emissions unit; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

d. VOC emissions shall not exceed 39.95 tons per rolling, 12-month period from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

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II. **Operational Restrictions**

1. The permittee shall not load more than 40,000 gallons of any volatile photochemically reactive material (as defined in OAC rule 3745-21-01) at this loading rack during any one day.

   [Authority for term: PTI 02-09105, OAC rule 3745-21-07(E) and OAC rule 3745-77-07(A)(1)]

2. The maximum annual throughput in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, shall not exceed the following, based on a rolling, 12-month summation of the monthly throughputs:

   a. anglamols - 15 million gallons;
   b. gasoline additives - 15 million gallons;
   c. lubricant additives - 30 million gallons; and
   d. waste and recovered materials - 5 million gallons.

   [Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

3. The maximum loading losses for materials loaded in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049 shall not exceed:

   a. anglamols - 1.01 lbs VOC/ 1000 gallons loaded;
   b. gasoline additives - 2.63 lbs VOC/ 1000 gallons loaded;
   c. lubricant additives - 0.626 lbs VOC/ 1000 gallons loaded; and
   d. waste and recovered material - 1.29 lbs VOC/1000 gallons loaded.

   [Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of any volatile photochemically reactive material that are loaded at this rack.

   [Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall collect and record each month the following information for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

   a. the throughput of each type of liquid containing VOC, in gallons;

   b. the loading method for each type of liquid loaded;

   c. the method of VOC destruction used for each type of liquid loaded and the estimated overall VOC control efficiency (if applicable), in percent;

   d. the true vapor pressure of the liquid, in psia;

   e. the molecular weight of vapors, in lb/lb-mol;

   f. the bulk temperature of liquid loaded, in degrees Rankin; and

   g. the throughput of each type of liquid for the previous 12-month period, in gallons.

   [Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The permittee shall record every month the sum of VOC emissions (MVOC) from each liquid loaded in emissions units P038, P039, P040, P041, P041, P042, P043, P044, P045, P046, P048 and P049, according to the following equation:

   MVOC = the sum, from i=1 to i=n, of (MTL / 1000)(1-C)(LL)(ton/2000 lbs)

   where:

   i= each individual type of liquid loaded;
   n= the total number of types of liquid loaded;
   MTL= throughput of each type of liquid, in gal/month;
   C= overall control efficiency of the emissions control system (if applicable); and
   LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation:

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

4. The permittee shall record every month the rolling, 12-month summation of the VOC emissions from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, for the previous, 12-month period, in tons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify:

a. an identification of each day during which the daily volatile photochemically reactive material loaded exceeded 40,000 gallons and the actual gallons loaded during each such day;

b. all exceedances of the rolling, 12-month VOC emissions limitation for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined;

c. all exceedances of the rolling, 12-month throughput limits for each type of liquid; and

d. any monthly record showing that the loading loss for any liquid exceeded the maximum loading losses specified in A.II.3.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall also submit annual reports that summarize the following information for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

a. the annual throughput of each type of liquid, in gallons per year; and

b. the total VOC emissions, in tons per year.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emissions limitations in Section A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation: 12.0 pounds of VOC emissions per hour

Applicable Compliance Method: Compliance with the hourly VOC emissions limitation (HRVOC) shall be determined by the following equation:

HR VOC= (HRTL/1000)(1-C)(LL)

where:

HRTL= maximum throughput of each type of the worst case liquid, in gal/hr;
C= overall control efficiency of the emissions control system (if applicable); and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation from AP-42, Section 5.2 (1/95):

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

If required, compliance shall be demonstrated by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA approved test method.

[Authority for term: PTI 02-09105, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

b. Emissions Limitation: 6.9 tons of VOC emissions per year from emissions unit P048

Applicable Compliance Method Compliance with the emissions limitation (YR VOC) shall be determined by the following equation:

YR VOC = (60,000 gal/d)*(365 d/yr)*(0.626 lb/1000 gal loaded)*(ton/2000 lbs)

where:

60,000 is the maximum gallons of liquid loaded per day at this loading rack; and 0.626 lb/1000 gal loaded is the loading loss of the worst case lubricant additive loaded and is calculated according to the following equation From AP-42, Section 5.2 (1/95):

LL= (12.46 SPM / T)

where:

for lubricant additive:
S= 1.45, splash fill saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= 0.16, true vapor pressure of the liquid, in psia;
M= 130, molecular weight of vapors, in lb/lb-mol; and
T= 600, bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

c. Emissions Limitation: 39.95 tons of VOC emissions per rolling, 12-month period from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

Applicable Compliance Method: Compliance with this emissions limitation shall be determined by the monthly emission rates calculated in A.III.4. based on the record keeping specified in A.III.2 and A.III.3.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P048 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P049 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Loading rack at Gen III (P049): loading of lubricant additives and gasoline additives to tank trucks and iso containers.	OAC rule 3745-31-05(A)(3) PTI 02-09105	See A.I.2.a. through A.I.2.e. below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(E). See A.II.1. below.
	OAC rule 3745-21-07(E)	

2. **Additional Terms and Conditions**

a. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

b. Volatile organic compound (VOC) emissions shall not exceed 12.0 pounds per hour. This short term emission limitation for VOC was established to reflect the potential to emit; therefore, it is not

necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

c. VOC emissions shall not exceed 6.9 tons per year from emissions unit P049. This long-term emission limitation for VOC is based on the maximum operating rate of this emissions unit; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

d. VOC emissions shall not exceed 39.95 tons per rolling, 12-month period from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

e. All loading of gasoline additives shall be accomplished either through a submerged fill loading line or shall be bottom loaded.

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II. **Operational Restrictions**

1. The permittee shall not load more than 40,000 gallons of any volatile photochemically reactive material (as defined in OAC rule 3745-21-01) at this loading rack during any one day.

   [Authority for term: PTI 02-09105, OAC rule 3745-21-07(E) and OAC rule 3745-77-07(A)(1)]

2. The maximum annual throughput in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, shall not exceed the following, based on a rolling, 12-month summation of the monthly throughputs:

   a. anglamols - 15 million gallons;
   b. gasoline additives - 15 million gallons;
   c. lubricant additives - 30 million gallons; and
   d. waste and recovered materials - 5 million gallons.

   [Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

3. The maximum loading losses for materials loaded in P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049 shall not exceed:

   a. anglamols - 1.01 lbs VOC/ 1000 gallons loaded;
   b. gasoline additives - 2.63 lbs VOC/ 1000 gallons loaded;
   c. lubricant additives - 0.626 lbs VOC/ 1000 gallons loaded; and
   d. waste and recovered material - 1.29 lbs VOC/1000 gallons loaded.

   [Authority for term: PTI 02-09105 and OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of any volatile photochemically reactive material that are loaded at this rack.

   [Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall collect and record each month the following information for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

   a. the throughput of each type of liquid containing VOC, in gallons;

   b. the loading method for each type of liquid loaded;

   c. the method of VOC destruction used for each type of liquid loaded and the estimated overall VOC control efficiency (if applicable), in percent;

   d. the true vapor pressure of the liquid, in psia;

   e. the molecular weight of vapors, in lb/lb-mol;

   f. the bulk temperature of liquid loaded, in degrees Rankin; and

   g. the throughput of each type of liquid for the previous 12-month period, in gallons.

   [Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The permittee shall record every month the sum of VOC emissions (MVOC) from each liquid loaded at emissions units P038, P039, P040, P041, P041, P042, P043, P044, P045, P046, P047, P048 and P049, according to the following equation:

   MVOC = the sum, from i=1 to i=n, of (MTL / 1000)(1-C)(LL)(ton/2000 lbs)

   where:

i= each individual type of liquid loaded;
n= the total number of types of liquid loaded;
MTL= throughput of each type of liquid, in gal/month;
C= overall control efficiency of the emissions control system (if applicable); and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation:

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

4. The permittee shall record every month the rolling, 12-month summation of the VOC emissions from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined, for the previous, 12-month period, in tons.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

5. The permittee shall record daily any time period that loading of gasoline additives was accomplished in a manner other than either through a submerged fill loading line or a bottom loading point.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify:

a. an identification of each day during which the daily volatile photochemically reactive material loaded exceeded 40,000 gallons and the actual gallons loaded during each such day;

b. all exceedances of the rolling, 12-month VOC emission limitation for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P037, P048 and P049, combined;

c. all exceedances of the rolling, 12-month throughput limits for each type of liquid;

d. any time period that loading of gasoline additives was accomplished in a manner other than through a submerged fill loading line or a bottom loading point;

e. all periods of time during which the scrubber liquor pH did not comply with the pH requirements specified above; and

f. any monthly record showing that the loading loss for any liquid exceeded the maximum loading losses specified in A.II.3.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall also submit annual reports that summarize the following information for emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined:

a. the annual throughput of each type of liquid, in gallons per year; and

b. the total VOC emissions, in tons per year.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

3. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emissions limitations in Section A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation: 12.0 pounds of VOC emissions per hour

Applicable Compliance Method: Compliance with the hourly VOC emissions limit (HRVOC) shall be determined by the following equation:

HR VOC= (HRTL/1000)(1-C)(LL)

where:

HRTL= maximum throughput of each type of the worst case liquid, in gal/hr;
C= overall control efficiency of the emissions control system (if applicable); and
LL = the loading loss, in lb/103 gal of liquid loaded, and is calculated according to the following equation:

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

If required, compliance shall be demonstrated by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA approved test method.

[Authority for term: PTI 02-09105, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

b. Emissions Limitation: 6.9 tons of VOC emissions per year from P049

Applicable Compliance Method: Compliance with the emissions limitation (YR VOC) shall be determined by the following equation:

YR VOC = (60,000 gal/d)*(365 d/yr)*(0.626 lb/1000 gal loaded)*(tons/2000 lbs)

where:

60,000 is the maximum gallons of liquid loaded per day at this loading rack; and 0.626 lb/1000 gal loaded is the loading loss of the worst case lubricant additive loaded and is calculated according to the following equation From AP-42, Section 5.2 (1/95):

LL= (12.46 SPM / T)

where:

S= 1.45, splash fill saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;
P= 0.16, true vapor pressure of the liquid, in psia;
M= 130, molecular weight of vapors, in lb/lb-mol; and
T= 600, bulk temperature of liquid loaded, in degrees Rankin.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

c. Emissions Limitation: 39.95 tons of VOC emissions per rolling, 12-month period from emissions units P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048 and P049, combined.

Applicable Compliance Method: Compliance with this emissions limit shall be determined by the monthly emission rates calculated in A.III.4. based on the record keeping specified in A.III.2 and A.III.3.

[Authority for term: PTI 02-09105 and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P049 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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Facility ID: 0243000024 Emissions Unit ID: P050 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process AK (P050): production of chemical additives for lubricating oils using a reactor, filter and finish and receiver tanks. Volatile organic compound (VOC) emissions are controlled by one of two wet scrubbers using water as the scrubbing solution (AK-1 and AB-11 WScrb).	OAC rule 3745-31-05(A)(3) PTI 02-11590	VOC: 1.1 lbs/hr HCl: 0.86 lb/hr and 3.8 tons/yr The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(LL)(3)(a).
HCl emissions are controlled by wet scrubber AK-1.	OAC rule 3745-21-09(LL)(3)(a)	VOC: 5 tons/rolling 12-month period

2. **Additional Terms and Conditions**

   a. Emissions of HCl shall be controlled by a packed column scrubber (AK-1).

   b. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

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II. **Operational Restrictions**

1. The maximum hourly production rate shall not exceed 500 pounds per hour.

   [Authority for term: PTI 02-11590 and OAC rule 3745-77-07(A)(1)]

2. The scrubber liquor of wet scrubber AK-1 (AK-1 WScrb) shall be maintained such that the solution will not exceed 13.0 percent weight hydrochloric acid. This is equivalent to a specific gravity of 1.064 at 15.6 degrees Celsius. Therefore, the operational range of the solution will be from a specific gravity of 1.000 to 1.064. Alternatively, the operating range shall be established during an emissions test that demonstrated that the emissions unit was in compliance with the HCl limit.

   The scrubber liquor flow rate shall be continuously maintained at a value of not less than two gallons per minute at all times the process vent stream is vented to the wet scrubber.

   If the control efficiency of the wet scrubber is always assumed to be zero, and compliance with the emission limitation of five tons per rolling twelve-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the wet scrubber, as required under A.II, A.III and A.IV.

   The provisions of this term shall not be applicable if the emission limitation of five tons per rolling twelve-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirments specified in the terms and conditions for this emissions unit.

   [Authority for term: PTI 02-11590, OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(A)(1)]

3. The scrubber water flow rate of wet scrubber AB-11 (AB-11 WScrb) shall be continuously maintained at a value of not less than two gallons per minute at all times the process vent stream is vented to the scrubber.

   If the control efficiency of the wet scrubber is always assumed to be zero, and compliance with the emission limitation of five tons per rolling twelve-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the wet scrubber, as required under A.II, A.III and A.IV.

   The provisions of this term shall not be applicable if the emission limitation of five tons per rolling twelve-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirments specified in the terms and conditions for this emissions unit.

   [Authority for term: PTI 02-11590, OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install #02-11590, issued on April 8, 1998: A.III.2. through A.III.7. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

   [Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

2. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final

product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of pounds (lbs) of VOC emitted per ton of final product generated, or pounds (lbs) of VOC emitted per batch run.

The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

[Authority for term: PTI 02-11590, OAC rule 3745-21-09(LL), and OAC rule 3745-77-07(C)(1)]

3. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

[Authority for term: PTI 02-11590 and OAC rule 3745-77-07(C)(1)]

4. The permittee shall collect and record the following information for each month:

a. the company identification of each final product generated;

b. the quantity of each final product generated, in tons;

c. the number of batches run for each final product generated;

d. the emission factors used to determine the amount of VOC emitted for each final product generated (in lbs of VOC/ton of final product generated or lbs of VOC/batch run);

e. the actual number of hours the emissions unit was in operation during the generation of each final product or during each batch run;

f. the VOC emission rate for each final product generated that was not controlled by the wet scrubber(s), in lbs per hour, using the following equation:

E (Uncontrolled) = [(quantity of final product, in tons, or number of batches run) x (emission factor, in lbs of VOC/ton of final product generated or lbs of VOC/batch run)] / (hours of operation)

g. the VOC emission rate for each final product generated that was controlled by either wet scrubber AK-1 or AB-11, in lbs per hour, using the following equation:

E (Controlled) = (uncontrolled VOC emission rate, in lbs/hour) x (1 - (CE/100))

Where: CE = control efficiency of either wet scrubber AK-1 and AB-11, whichever is associated with that particular vent stream, as demonstrated during the most recent emissions test;

h. the total VOC emission rate for all final products generated (in lbs/hour, determined by adding the values from A.III.3.e. and A.III.3.f. for all final products generated); and

i. the rolling, twelve-month summation of the monthly VOC emissions for all final products generated (in tons, calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

[Authority for term: PTI 02-11590, OAC rule 3745-21-09(LL), and OAC rule 3745-77-07(C)(1)]

5. The permittee shall properly operate and maintain equipment to continuously monitor and record the specific gravity of the scrubber liquor and the scrubber water flow rate of wet scrubber AK-1 while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals, with any modifications deemed necessary by the permittee.

Unless the control efficiency of the wet scrubber is assumed to be zero, the permittee shall collect and record the following information each day:

a. the specific gravity of the scrubber liquor, on a daily basis;

b. the scrubber water flow rate, in gallons per minute, on a daily basis; and

c. a log or record of operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

[Authority for term: PTI 02-11590 and OAC rule 3745-77-07(C)(1)]

6. The permittee shall properly operate and maintain equipment to continuously monitor the scrubber water flow rate of wet scrubber AB-11 while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals, with any modifications deemed necessary by the permittee.

Unless the control efficiency of the wet scrubber is assumed to be zero, the permittee shall collect and record the following information each day:

a. the scrubber water flow rate, in gallons per minute, on a daily basis; and

b. the operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

[Authority for term: PTI 02-11590 and OAC rule 3745-77-07(C)(1)]

7. The permittee shall record daily any time period that emissions of HCl were not vented to wet scrubber AK-1.

[Authority for term: PTI 02-11590 and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #02-11590, issued on April 8, 1998: A.IV.4. through A.IV.6. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

2. The permittee shall submit deviation (excursion) reports that identify any exceedances of the hourly production rate limitation.

[Authority for term: PTI 02-11590 and OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

[Authority for term: PTI 02-11590, OAC rule 3745-21-09(LL), and OAC rule 3745-77-07(C)(1)]

4. Unless the control efficiency of wet scrubber AK-1 is assumed to be zero, the permittee shall submit specific gravity deviation (excursion) reports that identify all periods of time during which the specific gravity of the scrubber liquor and the scrubber liquor flow rate did not comply with the required levels specified above while the process vent stream was vented to the wet scrubber.

[Authority for term: PTI 02-11590 and OAC rule 3745-77-07(C)(1)]

5. Unless the control efficiency of wet scrubber AB-11 is assumed to be zero, the permittee shall submit deviation (excursion) reports that identify all periods of time during which the scrubber water flow rate was not maintained at or above the required levels while the process vent stream was vented to the wet scrubber.

[Authority for term: PTI 02-11590 and OAC rule 3745-77-07(C)(1)]

6. The permittee shall submit deviation (excursion) reports that identify all periods of time during which emissions of HCl were not vented to wet scrubber AK-1.

[Authority for term: PTI 02-11590 and OAC rule 3745-77-07(C)(1)]

7. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 1.1 lbs of VOC per hour from all process vent streams.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

[Authority for term: PTI 02-11590, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions.

[Authority for term: PTI 02-11590, OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

c. Emission Limitation: 0.86 lb of HCl per hour

Applicable Compliance Method: If required, compliance shall be demonstrated by emissions testing using U.S. EPA reference Methods 26 or 26A, or with prior approval from the Ohio EPA, an alternative U.S. EPA approved test method. Previous testing demonstrated that the emission rate was less than one percent of the allowable emission rate. No further testing is required at this time.

[Authority for term: PTI 02-11590, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

d. Emission Limitation: 3.8 tons of HCl per year

Applicable Compliance Method: Compliance with the annual emission limitation above shall be determined by multiplying the maximum hourly HCl rate by 8,760 hours and dividing by 2,000 lbs/ton.

[Authority for term: PTI 02-11590, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P050 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P051 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process AL (P051): production of speciality chemicals using three oxidation reactors and receiver tanks and a condenser. Volatile organic compound (VOC) emissions from each reactor and receiver tank are controlled by an incinerator (AC-6 or AC-7 Fm Inc's) followed by an emergency flare (S-4 Flare) as backup. The condenser is an integral part of the process and is identified as recovery equipment and not as control equipment.	OAC rule 3745-31-05(A)(3) PTI 02-14125 OAC rule 3745-21-09(LL)	VOC: 31.08 lbs/batch and 11.34 tons/year; See A.I.2.a. below. The requirements of this rule also include the requirements of OAC rule 3745-21-09(LL). See A.I.2.b. and A.I.2.c. below.

2. **Additional Terms and Conditions**

a. VOC emissions from the three oxidation reactors and receiver tanks shall be controlled at all times by an incinerator or a flare. VOC emissions from the receiver tanks shall be controlled at all times by an incinerator or a flare.

b. The incinerator shall reduce VOC emissions by at least 98% by weight at all times, as determined by paragraph OAC rule 3745-21-10(C).

c. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

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II. **Operational Restrictions**

1. The average combustion temperature within the thermal incinerator shall not be less than 1600 degrees Fahrenheit at all times the emissions unit is in operation.

[Authority for term: PTI 02-14125 and OAC rule 3745-77-07(A)(1)]

2. The exhaust gas temperature on each of the condensers shall be connected to a high temperature shutdown switch which will stop air flow to the oxidation reactor(s) when activated.

[Authority for term: PTI 02-14125 and OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install #02-14125, issued on August 15, 2000: A.III.2. through A.III.4., and A.III.7. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

   [Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

2. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted from the three oxidation reactors and receiver tanks, for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of pounds (lbs) of VOC emitted per batch run.

   The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

   If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

   [Authority for term: PTI 02-14125, OAC rule 3745-21-09(LL), and OAC rule 3745-77-07(C)(1)]

3. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

   [Authority for term: PTI 02-14125 and OAC rule 3745-77-07(C)(1)]

4. The permittee shall collect and record the following information for each month:

   a. the company identification of each final product generated;

   b. the emission factors used to determine the amount of VOC emitted from the three oxidation reactors and receiver tanks for each batch run (in lbs of VOC/batch run);

   c. the VOC emission rate from the three oxidation reactors, for each batch controlled by the condenser and incinerator(s), in lbs of VOC per batch run, using the following equation:

   E (Controlled) = (emission factor, in lbs of VOC/each batch) x (1 - (CE/100))

   Where: CE = control efficiency of the condenser and incinerator(s) as demonstrated during the most recent emissions test; and

   d. the total VOC emission rate from the reactors and receiving tanks, for all batches run (in lbs of VOC/each batch).

   [Authority for term: PTI 02-14125, OAC rule 3745-21-09(LL), and OAC rule 3745-77-07(C)(1)]

5. The permittee shall collect and record the following information for each month:

   a. the name of each hazardous air pollutant (HAP) used in the emissions unit;

   b. the amount of each HAP used in the emissions unit, in tons;

   c. the HAP emissions for each HAP, from all materials employed, controlled by the incinerator(s), in tons per month, using the following equation:

   E (Controlled) = (uncontrolled HAP emission rate, in tons/month) x (1 - (CE/100))

   Where: CE = control efficiency of the incinerator(s) as demonstrated during the most recent emissions test;

   d. the rolling, twelve-month summation of the monthly HAP emissions for all materials employed (in tons, calculated by summing the monthly HAP emissions for the preceding 11 months plus the VOC emissions for the current month); and

   e. the total combined HAP emissions from all materials employed, in tons per month and tons per rolling 12-month period (the sum of each HAP emitted as determined in paragraphs A.III.4.c. and A.III.4.d).

   A listing of the Hazardous Air Pollutants (HAPs) can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA field office or local air agency contact.

   [Authority for term: PTI 02-14125 and OAC rule 3745-77-07(C)(1)]

6. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of

accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

a. All periods of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than 1600 degrees Fahrenheit; and

b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

[Authority for term: PTI 02-14125 and OAC rule 3745-77-07(C)(1)]

7. The permittee shall record daily any time period that emissions of VOC from the three oxidation reactors and receiver tanks were not controlled by an incinerator.

[Authority for term: PTI 02-14125 and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #02-14125, issued on August 15, 2000: A.IV.2., A.IV.3. and A.IV.5. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

2. The permittee shall submit deviation (excursion) reports that identify any exceedances of the lbs/batch VOC emission rate limitation.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.e. of these terms and conditions and the number of batches run per year). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

[Authority for term: OAC rule 3745-77-07(C)(1)]

4. The permittee shall submit deviation (excursion) reports that identify all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator did not comply with the temperature limitation specified above.

[Authority for term: PTI 02-14125 and OAC rule 3745-77-07(C)(1)]

5. The permittee shall submit deviation (excursion) reports that identify all periods of time during which emissions of VOC from the three oxidation reactors and receiver tanks were not controlled by an incinerator.

[Authority for term: OAC rule 3745-77-07(C)(1)]

6. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 31.08 pounds VOC per batch.

Applicable Compliance Method: Compliance shall be demonstrated by emissions testing using the procedures specified in OAC rule 3745-21-10(C) and by the record keeping required in Section A.III of these terms and conditions.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C), and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation: 11.34 tons VOC per year.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions (multiply lbs VOC/batch by the number of batches per year and divide by 2000 lbs/ton).

[Authority for term: OAC rule 3745-77-07(C)(1)]

c. Emission Limitation: 98% destruction of VOC by the incinerator.

Applicable Compliance Method: Compliance shall be demonstrated by emissions testing using the procedures specified in OAC rule 3745-21-10(C) for fume incinerator AC-7. Compliance with the 98% destruction efficiency for fume incinerator AC-6 shall be demonstrated by emissions testing conducted in accordance with the terms and conditions for emissions unit P052. No additional testing shall be required for emissions unit P051 to comply with this emissions limitation for fume incinerator AC-6.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C), and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. the emission testing shall be conducted within 2 years of issuance of the permit and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to demonstrate compliance with the destruction efficiency limitation for VOC by the incinerator and the allowable mass emission rate for VOC;

c. the following test methods shall be employed to demonstrate compliance with the allowable mass emission rate for VOC: Methods 1-4, 25 or 25A of 40 CFR Part 60, Appendix A or an alternative U.S. EPA approved test method, with prior approval from the Ohio EPA;

d. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of the incinerator(s) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

e. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

f. the emission testing shall be conducted over an entire batch cycle.
Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C), and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P051 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

   1. None

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II. **Operational Restrictions**

   1. None

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III. **Monitoring and/or Record Keeping Requirements**

   1. None

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IV. **Reporting Requirements**

   1. None

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V. **Testing Requirements**

   1. None

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VI. **Miscellaneous Requirements**

   1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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Facility ID: 0243000024 Emissions Unit ID: P052 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process AM (P052): production of specialty chemicals using eight reactors, eight raw material feed tanks, holding tanks and filters. Volatile organic compound (VOC) emissions from the reactors and holding tanks are controlled by either an incinerator (AC-6 or AC-7 Fm Inc's) or a flare (F-4 Flare). VOC emissions from the feed tanks and filters are not controlled. SO2 emissions are controlled by a wet scrubber using a caustic solution (C-4 CScrb).	OAC rule 3745-31-05(A)(3) (PTI 02-14200)	Volatile organic compounds (VOC) emissions shall not exceed the following: 130.8 lbs/day from reactors, holding tanks, feed tanks and filters 16.14 tons per rolling, 12-month period from reactors and holding tanks 4.29 tons per rolling, 12-month period from feed tanks 4.43 tons per rolling, 12-month period from filters The requirements of this rule also include the requirements of OAC rule 3745-31-05(D) and are less stringent than OAC rule 3745-21-09(LL). The short term emission limitation for VOC was established to reflect the potential to emit; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit. Sulfur dioxide (SO2) emissions shall not exceed 21.05 lbs/hr and 15.6 tons per year.
	OAC rule 3745-31-05(D)	VOC emissions shall not exceed 24.86 tons per rolling, 12-month period from reactors, holding tanks, feed tanks and filters.
	OAC rule 3745-21-09(LL)	See sections A.I.2.a through A.I.2.e below.
	OAC rule 3745-18-06(E)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. **Additional Terms and Conditions**

a. The VOC emissions from the reactors and holding tanks shall be controlled at all times by an incinerator or a flare. VOC emissions from the feed tanks and filters are not controlled.

b. Total VOC emissions not controlled by an incinerator or a flare shall not exceed five tons per rolling twelve-month period, pursuant to OAC rule 3745-21-09(LL)(3)(a). The total VOC emissions not controlled by an incinerator or a flare shall be based on the emissions from all process vent streams.

c. The incinerator shall reduce VOC emissions by at least 98% by weight at all times, as determined by paragraph OAC rule 3745-21-10(C).

d. The flare shall be designed and operated as follows:

i. The flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of five minutes during any two consecutive hours.

ii. The flare shall be operated with either an electric arc ignition system or a pilot flame. If a pilot flame is employed, the flame shall be present at all times and shall be monitored with a thermocouple or any other equivalent device to detect the presence of the pilot flame. If an electric arc ignition system is employed, the arcing shall pulse continually and shall be monitored to detect any failure.

iii. The flare shall be steam-assisted, air-assisted or non-assisted.

iv. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be three hundred Btu/scf or greater if the flare is steam-assisted or air-assisted, or shall be two hundred Btu/scf or greater if the flare is non-assisted.

v. Except as provided in paragraph A.I.2.d.vi. of this permit, the flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, of less than sixty feet per second if the flare is steam-assisted or non-assisted, or less than the maximum permitted velocity, as determined in paragraph (P)(4) of rule 3745-21-10 of the Administrative Code, if the flare is air-assisted.

d. vi. Excluded from the requirements of paragraph A.I.2.d.v. of this permit is any steam-assisted or non-assisted flare that meets both of the following requirements:

(a) The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be greater than one thousand Btu/scf.

(b) The flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, less than four hundred feet per second.

e. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

f. SO2 emissions from all of the reactor tanks generated when processing sulfur-containing raw materials shall be controlled by the scrubber prior to exhausting to the flare.

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II. **Operational Restrictions**

1. The average combustion temperature within the thermal incinerator shall not be less than 1600 degrees Fahrenheit at all times the emissions unit is in operation.

   [Authority for term: PTI 02-14200 and OAC rule 3745-77-07(A)(1)]

2. A pilot flame shall be maintained in the flare's pilot light burner at all times the process vent stream is vented to the flare.

   [Authority for term: PTI 02-14200, OAC rule 3745-21-09(LL), and OAC rule 3745-77-07(A)(1)]

3. This permittee shall operate and maintain the wet scrubber at all times the process vent stream is vented to the scrubber in accordance with the following parameters:

   a. not less than 7.5 pH; and

   b. not less than two gallons per minute caustic scrubber liquor flow rate.

   [Authority for term: PTI 02-14200 and OAC rule 3745-77-07(A)(1)]

4. Methanol batches shall be limited to 730 per year.

   [Authority for term: PTI 02-14200 and OAC rule 3745-77-07(A)(1)]

5. The maximum annual number of "solvent-containing" batches, excluding the methanol batches, shall not exceed 2,867, based upon a rolling, 12-month summation of the production rates ("solvent-containing" batches, except methanol-containing products, contain raw materials whose flash points are less than 170 degrees Fahrenheit).

   [Authority for term: PTI 02-14200 and OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install #02-14200, issued on January 18, 2001: A.III.2 through A.III.6, and A.III.11 through A.III.13. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

   [Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

2. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted from the filters, feed tanks, reactors and holding tanks, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

   The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

   If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

4. The permittee shall collect and record the following information for each month:

a. the company identification of each final product generated;

b. the quantity of each final product generated, in tons;

c. the number of batches run for each final product generated;

d. the emission factors used to determine the amount of VOC emitted from the filters, feed tanks, reactors and holding tanks for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

e. the VOC emission rate from the filters, feed tanks, reactors and holding tanks, for each of the final products generated, in which the VOC emissions were not controlled by the incinerator(s) or flare, in tons, using the following equation:

E = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run);

f. the total VOC emission rate from the filters, for all final products generated (in tons);

g. the total VOC emission rate from the feed tanks, for all final products generated (in tons);

h. the rolling, 12-month summation of the total VOC emissions from the filters, for all final products generated (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month);

i. the rolling, 12-month summation of the total VOC emissions from the feed tanks, for all final products generated (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month);
j. the VOC emission rate from the reactors and holding tanks, for each final product generated, in tons, using the following equation:

E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

where: CE = control efficiency of either the incinerator(s) or flare, whichever is associated with that particular vent stream;

k. the total VOC emission rate from the reactors and holding tanks, for all final products generated (in tons);

l. the rolling, 12-month summation of the total VOC emissions from the reactors and holding tanks for all final products generated (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month); and

m. the rolling, 12-month summation of the total VOC emissions from the filters, feed tanks, reactors and holding tanks, combined, for all final products generated (determined by adding the values from sections A.III.4.h, A.III.4.i and A.III.4.l for all final products generated).

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. The permittee shall develop emission factors for the amount of SO2 emitted from the process, either for each final product generated or for each batch run in this emissions unit. The emission factors shall be in units of pounds of SO2 emitted per ton of final product generated, or pounds of SO2 emitted per batch.

The permittee shall submit SO2 emission factors for all products containing sulfur. The specific methodology used to calculate the SO2 emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all SO2 emission factors shall be kept on site and available for Ohio EPA review.

If necessary, the permittee shall conduct emission testing, at the request of the Ohio EPA Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

[Authority for term: OAC rule 3745-77-07(C)(1)]

6. The permittee shall collect and record the following information monthly for each batch:

a. the company identification of each final product generated;

b. the quantity of each final product generated per batch, in kg;

c. the processing time for each batch, in hours;

d. the emission factor for sulfur compound emissions used to determine the amount of SO2 emitted from the process for each final product generated (in pounds/kg of final product generated or pounds/batch run);

e. the SO2 emission rate for each batch of final product generated after control or combustion devices, in pounds, using the following equation:

E=(quantity of product in kg or number of batches run) x (sulfur compound emission factor in lbs/kg or lbs/batch) x (conversion factor for lbs SO2/lb sulfur compound) x (1-CE/100))

where:

CE= control efficiency of the control device removing sulfur compounds based on the most recent stack test data;

f. the total SO2 emission rate to the atmosphere for all final products generated, in pounds;

g. the number of hours per batch; and

h. the average hourly SO2 emission rate for each batch, in pounds per hour, and the maximum lb/hr SO2 emission rate accounting for the possibility of multiple batches being made simultaneously.

[Authority for term: OAC rule 3745-77-07(C)(1)]

7. The permittee shall maintain monthly records of the following information:

a. the number of "solvent-containing" batches;

b. the number of methanol batches;

c. the total number of batches;

d. beginning after the first 12 calendar months of operation following the issuance of the permit to install, the rolling, 12-month summation of the number of "solvent-containing" batches;

e. the controlled VOC emission rate for "solvent-containing" and "non-solvent-containing" batches (lbs/batch) from the reactors and holding tanks.

[Authority for term: PTI 02-14200 and OAC rule 3745-77-07(C)(1)]

8. The permittee shall collect and record the following information for each month:

a. the name of each Hazardous Air Pollutant (HAP) used in the emissions unit;

b. the amount of each HAP used in the emissions unit, in tons;

c. the HAP emission rate for each HAP, from all materials employed, that was not controlled by the condenser or incinerator(s), in tons per month, using the following equation:

E (Uncontrolled) = (amount of each HAP, in tons)/(month)

d. the HAP emissions for each HAP, from all materials employed, controlled by the condenser and incinerator(s), in tons per month, using the following equation:

E (Controlled) = (uncontrolled HAP emission rate, in tons/month) x (1 - (CE/100))

where: CE = control efficiency of the condenser and incinerator(s) as demonstrated during the most recent emissions test;

e. the total HAP emission rate (in tons of HAP/month, determined by adding the values from A.III.8.c and A.III.8.d from all materials employed);

f. the rolling, 12-month summation of the monthly HAP emissions for all materials employed (in tons, calculated by summing the monthly HAP emissions for the preceding 11 months plus the VOC emissions for the current month); and

g. the total combined HAP emissions from all materials employed, in tons per month and tons per rolling, 12-month period (the sum of each HAP emitted as determined in paragraphs A.III.8.e and A.III.8.f).

A listing of the Hazardous Air Pollutants (HAPs) can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA field office or local air agency contact.

[Authority for term: PTI 02-14200 and OAC rule 3745-77-07(C)(1)]

9. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

a. all periods of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than 1,600 degrees Fahrenheit; and

b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation and venting gases.

[Authority for term: PTI 02-14200 and OAC rule 3745-77-07(C)(1)]

10. The permittee shall properly operate and maintain a device to continuously monitor the pilot flame when the emissions unit is in operation. The monitoring device and any recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals, with any modifications deemed necessary by the permittee.

The permittee shall record the following information each day:

a. all periods during which the pilot flame was out; and

b. the operating times for the flare, monitoring equipment, and the associated emissions unit when in operation and venting gases.

[Authority for term: PTI 02-14200 and OAC rule 3745-77-07(C)(1)]

11. The permittee shall monitor the pH of the scrubber liquor and properly operate and maintain equipment to continuously monitor the scrubber liquor flow rate of the wet scrubber while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information each day:

a. the pH of the scrubber liquor, before and after each batch and once during the batch (if the scrubber liquor is changed after each batch, the pH may be collected and recorded once at the end of each batch run);

b. the scrubber liquor flow rate, in gallons per minute, at the start of each batch; and

c. the operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

[Authority for term: PTI 02-14200 and OAC rule 3745-77-07(C)(1)]

12. A statement of certification of the existing continuous SO2 monitoring system shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 6. Proof of certification shall be made available to the Director and Ohio EPA Northeast District Office upon request.

[Authority for term: PTI 02-14200 and OAC rule 3745-77-07(C)(1)]

13. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the flare serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. the total duration of any visible emission incident; and

c. any corrective actions taken to eliminate the visible emissions.

At any time the permittee observes visible emissions from the flare, the permittee shall monitor the visible emissions for a minimum period of 10 minutes in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 and record the results in an operations log.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #02-14200, issued on January 18, 2001: A.IV.2 through A.IV. 6, A.IV.9, A.IV.11 through A.IV.13. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

2. The permittee shall submit deviation (excursion) reports that identify all exceedances of each of the rolling, 12-month emission limitations for VOC emissions from the filters, feed tanks, and reactors and holding tanks.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for total VOC emissions from the filters, feed tanks, reactors and holding tanks, combined.

[Authority for term: OAC rule 3745-77-07(C)(1)]

4. The permittee shall submit deviation (excursion) reports that identify all exceedances of the five tons per rolling, 12-month emission limitation for VOC emissions not controlled by an incinerator or flare.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. The permittee shall submit deviation (excursion) reports that identify all exceedances of the pound per hour emission limitation for SO2.

[Authority for term: OAC rule 3745-77-07(C)(1)]

6. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC and SO2 emissions, in tons, for this emissions unit (as determined by record keeping required under A.III.4.f, A.III.4.g and A.III.4.k for VOC; A.III.6.f multiplied by the maximum possible

operating days (365 days/yr), and divided by 2000 (lbs/ton) for SO2). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

[Authority for term: OAC rule 3745-77-07(C)(1)]

7. The permittee shall submit deviation (excursion) reports that identify all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator did not comply with the temperature limitation specified above.

[Authority for term: PTI 02-14200 and OAC rule 3745-77-07(C)(1)]

8. The permittee shall submit deviation (excursion) reports that identify all periods during which the flare pilot flame was not functioning properly while the process vent stream was vented to the flare. The reports shall include the date, time, and duration of each such period, as well as the cause of each deviation.

[Authority for term: PTI 02-14200 and OAC rule 3745-77-07(C)(1)]

9. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels while the process vent stream was vented to the caustic scrubber:

a. the pH of the caustic scrubber liquor; and

b. the scrubber liquor flow rate.

[Authority for term: PTI 02-14200 and OAC rule 3745-77-07(C)(1)]

10. The permittee shall submit deviation (excursion) reports that identify all periods during which the scrubber was not operated during the processing of sulfur-containing raw materials.

[Authority for term: PTI 02-14200 and OAC rule 3745-77-07(C)(1)]

11. The permittee shall submit quarterly reports that (a) identify all days during which any visible particulate emissions were observed from the flare serving this emissions unit, (b) describe any corrective actions taken to eliminate the visible particulate emissions, and (c) include all visible emission readings conducted pursuant to the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 as a result of the presence of visible emissions from the flare. These quarterly reports shall be submitted to the Ohio EPA Northeast District Office by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

12. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 130.8 lbs VOC per day from the filters, feed tanks, reactors and holding tanks.

Applicable Compliance Method: The short term emission limitation for VOC established in section A.I.1 above was established to reflect worst case conditions when operating at or near maximum capacity; therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

[Authority for term: PTI 02-14200 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation: 16.14 tons VOC per year from the reactors and holding tanks.

Applicable Compliance Method: Compliance with the stated VOC emission limitation shall be determined by using the results of the emissions testing specified in section A.V.2. and by the record keeping required in section A.III of these terms and conditions.

[Authority for term: PTI 02-14200 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitation: 4.29 tons VOC per year from the feed tanks.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in section A.III of these terms and conditions.

[Authority for term: PTI 02-14200 and OAC rule 3745-77-07(C)(1)]

d. Emission Limitation: 4.43 tons VOC per year from the filters.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in section A.III of these terms and conditions.

[Authority for term: PTI 02-14200 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitation: 98% destruction of VOC by the incinerator.

Applicable Compliance Method: Compliance shall be demonstrated by emissions testing using the procedures specified in OAC rule 3745-21-10(C) for fume incinerator AC-6. Compliance with the 98% destruction efficiency for fume incinerator AC-7 shall be demonstrated by emissions testing conducted in accordance with the terms and conditions for emissions unit P051. No additional testing shall be required for emissions unit P052 to comply with this emissions limitation for fume incinerator AC-7.

[Authority for term: PTI 02-14200, OAC rule 3745-15-04(A), OAC rule 3745-21-10(C), and OAC rule 3745-77-07(C)(1)]

f. Emission Limitation: 24.86 tons VOC per rolling, 12-month period.

Applicable Compliance Method: Compliance with the stated VOC emission limitation shall be determined by using the results of the emissions testing specified in section A.V.2. and by the record keeping required in section A.III of these terms and conditions.

[Authority for term: PTI 02-14200 and OAC rule 3745-77-07(C)(1)]

g. Emission Limitation: 21.5 lbs SO2 per hour.

Applicable Compliance Method: Compliance shall be demonstrated by emissions testing of the flare using the procedures specified in OAC rule 3745-18-04(A) and test Method 6 or 6C of 40 CFR, Part 60, Appendix A and by the record keeping required in section A.III of these terms and conditions.

[Authority for term: PTI 02-14200, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

h. Emission Limitation: 15.6 tons SO2 per year.

Applicable Compliance Method: This limit is based on the allowable hourly emission limit (3.58 lbs/hr) multiplied by the maximum possible operating hours (8760 hr/yr), and divided by 2000 (lbs/ton). Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

[Authority for term: PTI 02-14200 and OAC rule 3745-77-07(C)(1)]

i. mission limitation: The flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of five minutes during any two consecutive hours.

Applicable Compliance Method: If required, Method 22 of 40 CFR, Part 60, Appendix A.

[Authority for term: PTI 02-14200, OAC rule 3745-15-04(A), OAC rule 3745-21-10(C), and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. the emission testing shall be conducted within 2 years of issuance of the permit and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to demonstrate compliance with the destruction efficiency limitation for VOC by the incinerator and the allowable mass emission rates for VOC and SO2; and to determine the control efficiency of the wet scrubber;

c. the following test methods shall be employed to demonstrate compliance with the allowable mass emission rate(s): for VOC: Methods 1-4, 25 or 25A of 40 CFR Part 60, Appendix A or an alternative U.S. EPA approved test method, with prior approval from the Ohio EPA; for SO2, Method 6 or 6C of 40 CFR, Part 60, Appendix A;

d. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of the wet scrubber and incinerator(s) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

e. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

f. the emission testing shall be conducted over an entire batch cycle.
Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date (s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the

emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C), and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P052 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process AM (P052): production of specialty chemicals using eight reactors, eight raw material feed tanks, holding tanks and filters. Volatile organic compound (VOC) emissions from the reactors and holding tanks are controlled by either an incinerator (AC-6 or AC-7 Fm Inc's) or a flare (F-4 Flare). VOC emissions from the feed tanks and filters are not controlled. SO2 emissions are controlled by a wet scrubber using a caustic solution (C-4 CScrb).		See section A.III.1 below.

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permit to install for this emissions unit [P052] was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration

result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70. The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Stoddard solvent (mineral spirits)
TLV (mg/m3): 525
Maximum Hourly Emission Rate (lbs/hr): 137.3
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 10,723
MAGLC (ug/m3): 12,500

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices");

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. documentation of the evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: P053 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process Z1 (P053): production of lubricant additives through the neutralization of thiophosphoryl compounds using four reactor systems. Each reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks. Volatile organic compound (VOC) emissions from the four reactor systems are controlled by an incinerator (AC-6 or AC-7 Fm Inc's) followed by an emergency flare (S-4 Flare) as backup.	OAC rule 3745-21-09(LL)	See A.I.2.a. through A.I.2.d. below.

2. **Additional Terms and Conditions**

a. The VOC emissions from the three reactor systems shall be controlled by an incinerator or a flare that meets the requirements of paragraph OAC rule 3745-21-09(LL)(1)(a), unless otherwise exempted by OAC rule 3745-21-09(LL)(3).

b. Total VOC emissions not controlled by an incinerator or a flare shall not exceed five tons per rolling twelve-month period, pursuant to OAC rule 3745-21-09(LL)(3)(a). The total VOC emissions not controlled by an incinerator or a flare shall be based on the emissions from all process vent streams.

c. Unless exempted by OAC rule 3745-21-09(LL)(3)(b), the incinerator shall be designed and operated as follows:

i. The incinerator shall reduce the VOC emissions vented to it with an efficiency of at least ninety-eight percent by weight or shall emit VOC at a concentration not exceeding twenty parts per million by volume (dry basis), either of which is determined under OAC rule 3745-21-10(C); or

ii. The incinerator shall provide a minimum residence time of 0.75 second at a minimum temperature of sixteen hundred degrees Fahrenheit.

d. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

   a. the company identification of each final product generated;

   b. the quantity of each final product generated, in tons;

   c. the number of batches run for each final product generated;

   d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

   e. the VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s), in tons, using the following equation:

   E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run);

   f. the total VOC emission rate, for all final products generated, in which the VOC emissions were not controlled by the flare(s), in tons; and

   g. the rolling, twelve-month summation of the monthly VOC emissions, for all final products generated, in which the VOC emissions were not controlled by the incinerator(s) (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. The permittee shall operate and maintain equipment to continuously monitor and record the average combustion temperature within the thermal incinerator during operation of this emissions unit, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

   The permittee shall collect and record the following information for each day:

   a. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than the average combustion temperature specified below or less than the average combustion temperature specified by the manufacturer; and

   b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

   Whenever the monitored value for the average combustion temperature deviates from the average combustion temperature specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.
   In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment above the acceptable value specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (minutes) during which there was a deviation, the average combustion temperature immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

   The acceptable average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, is not less than 1,600 degrees Fahrenheit, or shall meet the manufacturer's design specifications for temperature.

   This temperature level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the temperature level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the temperature level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month

emission limitation for VOC.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.f. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. each period of time when the average combustion temperature within the thermal incinerator was less than 1600 degrees Fahrenheit or less than the average combustion temperature specified by the manufacturer;

b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the average combustion temperature within the thermal incinerator into compliance with the acceptable value, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

4. The permittee shall submit quarterly summaries that include a log of the downtime for the thermal incinerator when the associated emissions unit was in operation.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams not controlled by the incinerator(s).

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

b. Compliance for fume incinerators AC-7 and AC-6 shall be demonstrated by the testing conducted for emissions units P051 and P052. No additional testing shall be required for this emissions unit to comply with this emission limitation.

[Authority for term: OAC rule 3745-15-04(A) and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P053 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P054 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process AB1 (P054): production of lubricant additives through neutralization with inorganic bases using two reactor systems. Each reactor system may contain all or some of the following: reactors, filters, filter tanks, holding tanks, charging tanks, drying tanks and neutralization tanks.	OAC rule 3745-21-09(LL)	See A.I.2.a. and A.I.2.b. below.
	OAC rule 3745-17-07(A)(1)	See A.I.2.c. below.
	OAC rule 3745-17-11(B)	PE: 3.07 lbs/hr
Volatile organic compound (VOC) and particulate emissions from the two reactor systems are controlled by a wet scrubber using water as the scrubbing solution (AB-11 WScrb).		

2. **Additional Terms and Conditions**

a. The total VOC emissions not controlled by an incinerator or flare shall not exceed five tons per rolling twelve-month period. The total VOC emissions not controlled by an incinerator or flare shall be based on the emissions from all process vent streams.

b. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

c. Visible particulate emissions shall not exceed 20 percent opacity, as a six-minute average, except as provided by the rule.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted, either for each final product generated or for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of tons of VOC emitted per ton of final product generated, or tons of VOC emitted per batch run.

   The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

   If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

   [Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall collect and record the following information for each month:

   a. the company identification of each final product generated;

   b. the quantity of each final product generated, in tons;

   c. the number of batches run for each final product generated;

   d. the emission factors used to determine the amount of VOC emitted for each final product generated (in tons of VOC/ton of final product generated or tons of VOC/batch run);

e. the VOC emission rate for each final product generated that was not controlled by the wet scrubber, in tons, using the following equation:

E (Uncontrolled) = (quantity of final product, in tons, or number of batches run) x (emission factor, in tons of VOC/ton of final product generated or tons of VOC/batch run)

f. the VOC emission rate for each final product generated that was controlled by the wet scrubber, in tons, using the following equation:

E (Controlled) = (uncontrolled VOC emission rate, in tons) x (1 - (CE/100))

Where: CE = control efficiency of the wet scrubber, as demonstrated during the most recent emissions test;

g. the total VOC emission rate for all final products generated (in tons, determined by adding the values from A.III.3.e. and A.III.3.f. for all final products generated); and

h. the rolling, twelve-month summation of the monthly VOC emissions for all final products generated (calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

4. The permittee shall properly operate and maintain equipment to continuously monitor and record the scrubber water flow rate for the wet scrubber, in gallons per minute, during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the flow rate on a continuous basis.

Whenever the monitored value for the flow rate falls below the level specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the scrubber water flow rate above the minimum level specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the flow rate readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.
The acceptable level for the scrubber water flow rate for the scrubber is not less than 2 gallons per minute.

This acceptable level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

If the control efficiency of the wet scrubber is always assumed to be zero, and compliance with the emission limitation of five tons per rolling twelve-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the wet scrubber as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of five tons per rolling twelve-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitation for VOC.

[Authority for term: OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit an annual report, by April 15 of each year for the preceding calendar year, that specifies the annual VOC emissions for this emissions unit (as determined by record keeping required under A.III.3.g. of these terms and conditions). This reporting obligation may be satisfied by the fee emissions report submitted by the permittee.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. Unless the control efficiency of the wet scrubber is assumed to be zero, the permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the

operation of this emissions unit:

a. each period of time when the scrubber water flow rate was below the acceptable level;

b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the scrubber water flow rate into compliance with the acceptable level, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

4. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factor for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C)(2), and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation: Visible particulate emissions shall not exceed 20 percent opacity, as a six-minute average, except as provided by the rule.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-17-03(B)(1), and OAC rule 3745-77-07(C)(1)]

c. Emission Limitation: Particulate emissions shall not exceed 3.07 lbs per hour

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with this emission limitation by stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

[Authority for term: OAC rule 3745-15-04(A) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. the emission testing shall be conducted within 2 years of issuance of the permit, or within 3 months of startup (if temporarily shutdown at the time of permit issuance), and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to detemine the control efficiency of the wet scrubber (unless assumed to be zero);

c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) of the wet scrubber shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

d. the permittee shall demonstrate that the testing will be performed during the worst case emission conditions; and

e. the emission testing shall be conducted over an entire batch cycle.
Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10, and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P054 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Issuance type: Title V Final Permit

Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: P055 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Loading rack A/B 1-2-3 (P055): loading of lubricant additives and anglamols to tank cars, controlled by a carbon adsorber (R CDrum 2).	OAC rule 3745-21-07(E)	See A.I.2.a. and A.I.2.b. below.

2. **Additional Terms and Conditions**

a. The permittee shall not load more than 40,000 gallons of volatile photochemically reactive materials (as defined in OAC rule 3745-21-01) in this loading rack during any one day unless all displaced vapors and gases are vented to a carbon adsorption system that processes and recovers at least ninety per cent by weight of the vapors and gases.

b. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of all volatile photochemically reactive materials that were loaded in this rack.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

2. The permittee shall record daily any time period that displaced vapors and gases were not vented to the carbon adsorption system while loading more than 40,000 gallons of volatile photochemically reactive materials in this loading rack.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The carbon adsorption system shall be continuously maintained to ensure that the existing carbon is replaced with fresh carbon immediately when breakthrough is indicated.

   The permittee shall monitor and record the presence of any odors in the exhaust stream from the carbon adsorption system daily or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater.

The permitted shall monitor and record all periods when carbon breakthrough is detected. Existing carbon shall be replaced with fresh carbon immediately upon carbon breakthrough. As an alternative, the permittee shall replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval, as determined by the maximum design flow rate and the organic concentration in the gas stream.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day during which the daily amount of volatile photochemically reactive materials loaded exceeded 40,000 gallons and the time period that the carbon adsorption system was not used to control the emissions; and the actual gallons loaded during each such day.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit deviation (excursion) reports that identify all periods during which the existing carbon is not replaced with fresh carbon immediately when breakthrough is indicated. These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation: 90% by weight recovery of all vapor and gases by the carbon adsorber.

      Applicable Compliance Method: Compliance shall be demonstrated by emissions testing using the procedures specified in OAC rule 3745-21-10(C).

      [Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C), and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. in the event that more than 40,000 gallons per day of volatile photochemically reactive materials are loaded in this loading rack, emissions testing shall be conducted within 90 days of the loading and within 1 year prior to permit expiration;

   b. the emission testing shall be conducted to demonstrate compliance with the percent by weight recovery of all vapor and gases by the carbon adsorber;

   c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

   d. testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Northeast District Office of the Ohio EPA; and

   e. the permittee shall demonstrate that the testing will be performed for the worst case emission conditions. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

   Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

   A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C), and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P055 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: P056 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Loading rack A/B 6-7 (P056): loading of lubricant additives to tank cars.	OAC rule 3745-21-07(E)	See A.I.2.a. and A.I.2.b. below.

2. **Additional Terms and Conditions**

a. The permittee shall not load more than 40,000 gallons of volatile photochemically reactive materials (as defined in OAC Rule 3745-21-01) in this loading rack during any one day.

b. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of all volatile photochemically reactive materials that are loaded in this rack.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day during which the daily amount of volatile photochemically reactive materials loaded exceeded 40,000 gallons, and the actual gallons loaded during each such day.

[Authority for term: OAC rule 3745-77-07(C)(1)]

2. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P056 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: P057 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Loading rack C/D 4-5 (P057): loading of lubricant additives to tank cars, controlled by a carbon adsorber (R CDrum 1).	OAC rule 3745-21-07(E)	See A.I.2.a. and A.I.2.b. below.

2. **Additional Terms and Conditions**

a. The permittee shall not load more than 40,000 gallons of volatile photochemically reactive materials (as defined in OAC rule 3745-21-01) in this loading rack during any one day unless all displaced vapors and gases are vented to a carbon adsorption system that processes and recovers at least ninety per cent by weight of the vapors and gases.

b. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of all volatile photochemically reactive materials that were loaded in this rack.

[Authority for term: OAC rule 3745-77-07(C)(1)]

2. The permittee shall record daily any time period that displaced vapors and gases were not vented to the carbon adsorption system while loading more than 40,000 gallons of volatile photochemically reactive materials in this loading rack.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. The carbon adsorption system shall be continuously maintained to ensure that the existing carbon is replaced with fresh carbon immediately when breakthrough is indicated.

The permittee shall monitor and record the presence of any odors in the exhaust stream from the carbon adsorption system daily or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater.

The permitted shall monitor and record all periods when carbon breakthrough is detected. Existing carbon shall be replaced with fresh carbon immediately upon carbon breakthrough. As an alternative, the permittee shall replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval, as determined by the maximum design flow rate and the organic concentration in the gas stream.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day during which the daily amount of volatile photochemically reactive materials loaded exceeded 40,000 gallons and the time period that the carbon adsorption system was not used to control the emissions; and the actual gallons loaded during each such day.

[Authority for term: OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit deviation (excursion) reports that identify all periods during which the existing carbon is not replaced with fresh carbon immediately when breakthrough is indicated. These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 90% by weight recovery of all vapor and gases by the carbon adsorber.

Applicable Compliance Method: Compliance shall be demonstrated by emissions testing using the procedures specified in OAC rule 3745-21-10(C).

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C), and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. in the event that more than 40,000 gallons per day of volatile photochemically reactive materials are loaded in this loading rack, emissions testing shall be conducted within 90 days of the loading and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to demonstrate compliance with the percent by weight recovery of all vapor and gases by the carbon adsorber;

c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

d. testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Northeast District Office of the Ohio EPA; and

e. the permittee shall demonstrate that the testing will be performed for the worst case emission conditions. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C), and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P057 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Issuance type: Title V Final Permit

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Facility ID: 0243000024 Emissions Unit ID: P058 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Loading main rack (P058): loading of lubricant additives, anglamols and gas additives to tank cars, controlled by a carbon adsorber (R CDrum 2).	OAC rule 3745-21-07(E)	See A.I.2.a. and A.I.2.b. below.

2. **Additional Terms and Conditions**

a. The permittee shall not load more than 40,000 gallons of volatile photochemically reactive materials (as defined in OAC rule 3745-21-01) in this loading rack during any one day unless all displaced vapors and gases are vented to a carbon adsorption system that processes and recovers at least ninety per cent by weight of the vapors and gases.

b. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

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II. **Operational Restrictions**

1. All loading of gasoline additives shall be accomplished either through a submerged fill loading line or shall be bottom loaded.

[Authority for term: OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of all volatile photochemically reactive materials that were loaded in this rack.

[Authority for term: OAC rule 3745-77-07(C)(1)]

2. The permittee shall record daily any time period that displaced vapors and gases were not vented to the carbon adsorption system while loading more than 40,000 gallons of volatile photochemically reactive materials in this loading rack.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall record daily any time period that loading of gasoline additives was accomplished in a manner other than through a submerged fill loading line or a bottom loading point.

[Authority for term: OAC rule 3745-77-07(C)(1)]

4. The carbon adsorption system shall be continuously maintained to ensure that the existing carbon is replaced with fresh carbon immediately when breakthrough is indicated.

The permittee shall monitor and record the presence of any odors in the exhaust stream from the carbon adsorption system daily or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater.

The permitted shall monitor and record all periods when carbon breakthrough is detected. Existing carbon shall be replaced with fresh carbon immediately upon carbon breakthrough. As an alternative, the permittee shall replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval, as determined by the maximum design flow rate and the organic concentration in the gas stream.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that include:

a. an identification of each day during which the daily amount of volatile photochemically reactive materials loaded exceeded 40,000 gallons and the time period that the carbon adsorption system was not used to control the emissions; and the actual gallons loaded during each such day; and

b. an identification of each time period that loading of gasoline additives was accomplished in a manner other than through a submerged fill loading line or a bottom loading point.

2. The permittee shall submit deviation (excursion) reports that identify all periods during which the existing

carbon is not replaced with fresh carbon immediately when breakthrough is indicated. These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 90% by weight recovery of all vapor and gases by the carbon adsorber.

Applicable Compliance Method: Compliance shall be demonstrated by emissions testing using the procedures specified in OAC rule 3745-21-10(C).

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C), and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. in the event that more than 40,000 gallons per day of volatile photochemically reactive materials are loaded in this loading rack, emissions testing shall be conducted within 90 days of the loading and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to demonstrate compliance with the percent by weight recovery of all vapor and gases by the carbon adsorber;

c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

d. testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Northeast District Office of the Ohio EPA; and

e. the permittee shall demonstrate that the testing will be performed for the worst case emission conditions. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C), and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P058 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: P059 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the

applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Loading rack G60 (P059): loading of lubricant additives and anglamols to tank cars. Odors from the loading of anglamols shall be controlled by a carbon adsorber (P-3 CDrum).	OAC rule 3745-31-05(A)(3) PTI 02-16177	See A.I.2.a. through A.I.2.c. below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(E). See A.II.1. below.
	OAC rule 3745-21-07(E)	

2. **Additional Terms and Conditions**

a. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

b. Volatile Organic Compound (VOC) emissions shall not exceed 27.36 pounds per day, based on a monthly average.

c. VOC emissions shall not exceed 5.0 tons per year from this emissions unit.

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II. **Operational Restrictions**

1. The permittee shall not load any volatile photochemically reactive material (as defined in OAC rule 3745-21-01) at this loading rack.

[Authority for term: PTI 02-16177 and OAC rule 3745-77-07(A)(1)]

2. The maximum, average daily throughput of lubricant additives and anglamols in this emissions unit, combined, shall not exceed 12,000 gallons.

[Authority for term: PTI 02-16177 and OAC rule 3745-77-07(A)(1)]

3. The maximum loading loss for materials loaded in this emissions unit shall not exceed 2.28 lbs VOC/1000 gallons loaded.

[Authority for term: PTI 02-16177 and OAC rule 3745-77-07(A)(1)]

4. The control efficiency of the carbon adsorber is assumed to be zero; therefore, it is not necessary to develop parametric monitoring, record keeping and reporting requirements to ensure compliance with the emission limitations.

[Authority for term: PTI 02-16177 and OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of any volatile photochemically reactive materials that are loaded at this rack.

[Authority for term: PTI 02-16177 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall collect and record monthly the following information:

a. the throughput of each type of liquid containing VOC, in gallons;

b. the true vapor pressure of the liquid, in psia;

c. the molecular weight of vapors, in lb/lb-mol;

d. the bulk temperature of liquid loaded, in degrees Rankin;

e. the VOC emissions from each liquid loaded in this emissions unit, calculated using the following equation:

VOC emission rate (monthly) = (throughput, in gal/month) x (loading loss, in lbs/1000gal).

The loading loss of each liquid loaded is calculated according to the following equation:

LL= (12.46 SPM / T)

where:

S= saturation factor from AP-42 (1/95) Table 5.2.1, Saturation(s) Factors for Calculating Petroleum Liquid Loading Losses;

P= true vapor pressure of the liquid, in psia;
M= molecular weight of vapors, in lb/lb-mol; and
T= bulk temperature of liquid loaded, in degrees Rankin.

f. the total VOC emissions for all liquids loaded in this emissions unit, in lbs/month;

g. the number of days per month this emissions unit was in operation; and

h. the average daily emission rate (determined by dividing A.III.3.f. by A.III.3.g.).

[Authority for term: PTI 02-16177 and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify:

a. an identification of each day during which volatile photochemically reactive material was loaded at this loading rack and the actual gallons loaded during each such day;

b. all exceedances of the maximum, average daily throughput limit specified in A.II.2;

c. all exceedances of the maximum loading loss specified in A.II.3; and

d. all exceedances of the average daily VOC emission limitation.

[Authority for term: PTI 02-16177 and OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 27.36 pounds of VOC per day

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, compliance shall be demonstrated by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA approved test method.

[Authority for term: PTI 02-16177, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation: 5.0 tons of VOC per year

Applicable Compliance Method: Compliance shall be determined by dividing the sum of the monthly VOC emissions, in lbs, by 2000lbs/ton.

[Authority for term: PTI 02-16177 and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P059 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P060 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Loading rack A/B 5 (P060): loading of lubricant additives to tank cars.	OAC rule 3745-21-07(E)	See A.I.2.a. and A.I.2.b. below.

2. **Additional Terms and Conditions**

a. The permittee shall not load more than 40,000 gallons of volatile photochemically reactive materials (as defined in OAC Rule 3745-21-01) in this loading rack during any one day.

b. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of all volatile photochemically reactive materials that are loaded in this rack.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day during which the daily amount of volatile photochemically reactive materials loaded exceeded 40,000 gallons, and the actual gallons loaded during each such day.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

2. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P060 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Applicable Emissions Limitations/Control

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P061 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Loading rack C/D 2-3 (P061): loading of lubricant additives to tank cars.	OAC rule 3745-21-07(E)	See A.I.2.a. and A.I.2.b. below.

2. **Additional Terms and Conditions**

a. The permittee shall not load more than 40,000 gallons of volatile photochemically reactive materials (as defined in OAC Rule 3745-21-01) in this loading rack during any one day.

b. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of all volatile photochemically reactive materials that are loaded in this rack.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day during which the daily amount of volatile photochemically reactive materials loaded exceeded 40,000 gallons, and the actual gallons loaded during each such day.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

2. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P061 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

   1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: P062 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Loading rack C6 (P062): loading of lubricant additives, anglamols and gas additives to tank cars, controlled by a carbon adsorber (R CDrum 2).	OAC rule 3745-21-07(E)	See A.I.2.a. and A.I.2.b. below.

2. **Additional Terms and Conditions**

a. The permittee shall not load more than 40,000 gallons of volatile photochemically reactive materials (as defined in OAC rule 3745-21-01) in this loading rack during any one day unless all displaced vapors and gases are vented to a carbon adsorption system that processes and recovers at least ninety per cent by weight of the vapors and gases.

b. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

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II. **Operational Restrictions**

1. All loading of gasoline additives shall be accomplished either through a submerged fill loading line or shall be bottom loaded.

   [Authority for term: OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of all volatile photochemically reactive materials that were loaded in this rack.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

2. The permittee shall record daily any time period that displaced vapors and gases were not vented to the carbon adsorption system while loading more than 40,000 gallons of volatile photochemically reactive materials in this loading rack.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall record daily any time period that loading of gasoline additives was accomplished in a manner other than through a submerged fill loading line or a bottom loading point.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

4. The carbon adsorption system shall be continuously maintained to ensure that the existing carbon is replaced with fresh carbon immediately when breakthrough is indicated.

   The permittee shall monitor and record the presence of any odors in the exhaust stream from the carbon adsorption system daily or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater.

   The permitted shall monitor and record all periods when carbon breakthrough is detected. Existing carbon shall be replaced with fresh carbon immediately upon carbon breakthrough. As an alternative, the permittee shall replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval, as determined by the maximum design flow rate and the organic concentration in the gas stream.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that include:

   a. an identification of each day during which the daily amount of volatile photochemically reactive materials loaded exceeded 40,000 gallons and the time period that the carbon adsorption system was not used to control the emissions; and the actual gallons loaded during each such day; and

   b. an identification of each time period that loading of gasoline additives was accomplished in a manner other than through a submerged fill loading line or a bottom loading point.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit deviation (excursion) reports that identify all periods during which the existing carbon is not replaced with fresh carbon immediately when breakthrough is indicated. These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Emission Limitation: 90% by weight recovery of all vapor and gases by the carbon adsorber.

   Applicable Compliance Method: Compliance shall be demonstrated by emissions testing using the procedures specified in OAC rule 3745-21-10(C).

   [Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C), and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. in the event that more than 40,000 gallons per day of volatile photochemically reactive materials are loaded in this loading rack, emissions testing shall be conducted within 90 days of the loading and within 1 year prior to permit expiration;

b. the emission testing shall be conducted to demonstrate compliance with the percent by weight recovery of all vapor and gases by the carbon adsorber;

c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

d. testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Northeast District Office of the Ohio EPA; and

e. the permittee shall demonstrate that the testing will be performed for the worst case emission conditions. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C), and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P062 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: P063 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Loading rack C/D 7 (P063): loading of lubricant additives to tank cars, controlled by a carbon adsorber (R CDrum 1).	OAC rule 3745-21-07(E)	See A.I.2.a. and A.I.2.b. below.

2. **Additional Terms and Conditions**

a. The permittee shall not load more than 40,000 gallons of volatile photochemically reactive materials (as defined in OAC rule 3745-21-01) in this loading rack during any one day unless all displaced vapors and gases are vented to a carbon adsorption system that processes and recovers at least ninety per cent by weight of the vapors and gases.

b. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of all volatile photochemically reactive materials that were loaded in this rack.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

2. The permittee shall record daily any time period that displaced vapors and gases were not vented to the carbon adsorption system while loading more than 40,000 gallons of volatile photochemically reactive materials in this loading rack.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The carbon adsorption system shall be continuously maintained to ensure that the existing carbon is replaced with fresh carbon immediately when breakthrough is indicated.

   The permittee shall monitor and record the presence of any odors in the exhaust stream from the carbon adsorption system daily or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater.

   The permitted shall monitor and record all periods when carbon breakthrough is detected. Existing carbon shall be replaced with fresh carbon immediately upon carbon breakthrough. As an alternative, the permittee shall replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval, as determined by the maximum design flow rate and the organic concentration in the gas stream.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day during which the daily amount of volatile photochemically reactive materials loaded exceeded 40,000 gallons and the time period that the carbon adsorption system was not used to control the emissions; and the actual gallons loaded during each such day.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit deviation (excursion) reports that identify all periods during which the existing carbon is not replaced with fresh carbon immediately when breakthrough is indicated. These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Emission Limitation: 90% by weight recovery of all vapor and gases by the carbon adsorber.

   Applicable Compliance Method: Compliance shall be demonstrated by emissions testing using the procedures specified in OAC rule 3745-21-10(C).

   [Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C), and OAC rule 3745-77-07(C)(1)]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. in the event that more than 40,000 gallons per day of volatile photochemically reactive materials are loaded in this loading rack, emissions testing shall be conducted within 90 days of the loading and within 1 year prior to permit expiration;

   b. the emission testing shall be conducted to demonstrate compliance with the percent by weight recovery of all vapor and gases by the carbon adsorber;

   c. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10;

   d. testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Northeast District Office of the Ohio EPA; and

   e. the permittee shall demonstrate that the testing will be performed for the worst case emission conditions. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test"

notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

[Authority for term: OAC rule 3745-15-04(A), OAC rule 3745-21-10(C), and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P063 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P064 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Poly Plant loading rack (P064): loading of lubricant additives to tank cars.	OAC rule 3745-21-07(E)	See A.I.2.a. and A.I.2.b. below.

2. **Additional Terms and Conditions**

a. The permittee shall not load more than 40,000 gallons of volatile photochemically reactive materials (as defined in OAC Rule 3745-21-01) in this loading rack during any one day.

b. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of all volatile photochemically reactive materials that are loaded in this rack.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day during which the daily amount of volatile photochemically reactive materials loaded exceeded 40,000 gallons, and the actual gallons loaded during each such day.

[Authority for term: OAC rule 3745-77-07(C)(1)]

2. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P065 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Building 18 West loading rack (P065): loading of lubricant additives to tank cars.	OAC rule 3745-21-07(E)	See A.I.2.a. and A.I.2.b. below.

2. **Additional Terms and Conditions**

a. The permittee shall not load more than 40,000 gallons of volatile photochemically reactive materials (as defined in OAC Rule 3745-21-01) in this loading rack during any one day.

b. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of all volatile photochemically reactive materials that are loaded in this rack.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day during which the daily amount of volatile photochemically reactive materials loaded exceeded 40,000 gallons, and the actual gallons loaded during each such day.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

2. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P065 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Issuance type: Title V Final Permit

Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: P066 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Ball House 200 loading rack (P066): loading of lubricant additives to tank cars.	OAC rule 3745-21-07(E)	See A.I.2.a. and A.I.2.b. below.

2. **Additional Terms and Conditions**

a. The permittee shall not load more than 40,000 gallons of volatile photochemically reactive materials (as defined in OAC Rule 3745-21-01) in this loading rack during any one day.

b. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of all volatile photochemically reactive materials that are loaded in this rack.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day during which the daily amount of volatile photochemically reactive materials loaded exceeded 40,000 gallons, and the actual gallons loaded during each such day.

[Authority for term: OAC rule 3745-77-07(C)(1)]

2. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Issuance type: Title V Final Permit

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Facility ID: 0243000024 Emissions Unit ID: P066 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Issuance type: Title V Final Permit

Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: P067 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Ball House loading rack 400 (P067): loading of lubricant additives to tank cars.	OAC rule 3745-21-07(E)	See A.I.2.a. and A.I.2.b. below.

2. **Additional Terms and Conditions**

a. The permittee shall not load more than 40,000 gallons of volatile photochemically reactive materials (as defined in OAC Rule 3745-21-01) in this loading rack during any one day.

b. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of all volatile photochemically reactive materials that are loaded in this rack.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day during which the daily amount of volatile photochemically reactive materials loaded exceeded 40,000 gallons, and the actual gallons loaded during each such day.

[Authority for term: OAC rule 3745-77-07(C)(1)]

2. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P067 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Issuance type: Title V Final Permit

Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: P068 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Tank 403 loading rack (P068): loading of lubricant additives to tank cars.	OAC rule 3745-21-07(E)	See A.I.2.a. and A.I.2.b. below.

2. **Additional Terms and Conditions**

a. The permittee shall not load more than 40,000 gallons of volatile photochemically reactive materials (as defined in OAC Rule 3745-21-01) in this loading rack during any one day.

b. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of all volatile photochemically reactive materials that are loaded in this rack.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day during which the daily amount of volatile photochemically reactive materials loaded exceeded 40,000 gallons, and the actual gallons loaded during each such day.

[Authority for term: OAC rule 3745-77-07(C)(1)]

2. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P068 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: P069 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Tank 458 loading rack (P069): loading of lubricant additives to tank cars.	OAC rule 3745-21-07(E)	See A.I.2.a. and A.I.2.b. below.

2. **Additional Terms and Conditions**

a. The permittee shall not load more than 40,000 gallons of volatile photochemically reactive materials (as defined in OAC Rule 3745-21-01) in this loading rack during any one day.

b. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of all volatile photochemically reactive materials that are loaded in this rack.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day during which the daily amount of volatile photochemically reactive materials loaded exceeded 40,000 gallons, and the actual gallons loaded during each such day.

[Authority for term: OAC rule 3745-77-07(C)(1)]

2. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P069 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: P070 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Building 5/6 East loading rack (P070): loading of lubricant additives to tank cars.	OAC rule 3745-21-07(E)	See A.I.2.a. and A.I.2.b. below.

2. **Additional Terms and Conditions**

a. The permittee shall not load more than 40,000 gallons of volatile photochemically reactive materials (as defined in OAC Rule 3745-21-01) in this loading rack during any one day.

b. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of all volatile photochemically reactive materials that are loaded in this rack.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day during which the daily amount of volatile photochemically reactive materials loaded exceeded 40,000 gallons, and the actual gallons loaded during each such day.

[Authority for term: OAC rule 3745-77-07(C)(1)]

2. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P070 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: P071 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Miscellaneous bottom loading rack (P071): loading of lubricant additives to tank cars.	OAC rule 3745-21-07(E)	See A.I.2.a. and A.I.2.b. below.

2. **Additional Terms and Conditions**

a. The permittee shall not load more than 40,000 gallons of volatile photochemically reactive materials (as defined in OAC Rule 3745-21-01) in this loading rack during any one day.

b. The permittee shall prevent liquid drainage from the loading arm when it is not in use or accomplish complete drainage before the loading arm is disconnected.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall record daily the amount, in gallons, of all volatile photochemically reactive materials that are loaded in this rack.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day during which the daily amount of volatile photochemically reactive materials loaded exceeded 40,000 gallons, and the actual gallons loaded during each such day.

[Authority for term: OAC rule 3745-77-07(C)(1)]

2. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P071 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P073 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process AN (P073): production of specialty chemicals using one reactor system. A	OAC rule 3745-31-05(A)(3) PTI 02-16572	VOC: 5.37 lbs/batch and 1.0 ton/year from all process vent streams controlled by the fume incinerator system

reactor system may contain all or some of the following: mix tanks, reactor, filter and finish tank. Volatile organic compound (VOC) emissions from the one reactor system are controlled by either an incinerator (AC-6 or AC-7 Fm Inc's), or a wet scrubber (C-4 CScrb) followed by a flare (F-4 Flare). SO2 emissions will result from the combustion of sulfur-containing organic compounds at the fume incinerator system and flare. Sulfur-containing organic compounds may be controlled by a wet scrubber (C-4 CScrb) prior to the flare.	OAC rule 3745-21-09(LL)	and/or flare; 26.8 lbs/batch from all process vent streams not controlled by the fume incinerator system or flare. The requirements of this rule also include the requirements of OAC rule 3745-21-09(LL). SO2: 10 lbs/day and 1.8 tons/year. VOC: 5 tons/rolling 12-month period from all process vent streams not controlled by the fume incinerator system or flare; see A.I.2.a. through A.I.2.c. below. The emissions limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-18-06(E)	

2. **Additional Terms and Conditions**

a. The incinerator(s) shall reduce VOC emissions by at least 98% by weight at all times, as determined by paragraph OAC rule 3745-21-10(C).

b. The flare shall be designed and operated as follows:

i. The flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of five minutes during any two consecutive hours.

ii. The flare shall be operated with either an electric arc ignition system or a pilot flame. If a pilot flame is employed, the flame shall be present at all times and shall be monitored with a thermocouple or any other equivalent device to detect the presence of the pilot flame. If an electric arc ignition system is employed, the arcing shall pulse continually and shall be monitored to detect any failure.

iii. The flare shall be steam-assisted, air-assisted or non-assisted.

iv. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be three hundred Btu/scf or greater if the flare is steam-assisted or air-assisted, or shall be two hundred Btu/scf or greater if the flare is non-assisted.

v. Except as provided in paragraph A.I.2.c.vi. of this permit, the flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, of less than sixty feet per second if the flare is steam-assisted or non-assisted, or less than the maximum permitted velocity, as determined in paragraph (P)(4) of rule 3745-21-10 of the Administrative Code, if the flare is air-assisted.

b. vi. Excluded from the requirements of paragraph A.I.2.c.v. of this permit is any steam-assisted or non-assisted flare that meets both of the following requirements:

a. The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be greater than one thousand Btu/scf.

b. The flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, less than four hundred feet per second.

c. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

d. Any potential SO2 emissions above deminimis generated when processing sulfur-containing raw materials shall be controlled by the scrubber prior to exhausting to the flare.

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II. **Operational Restrictions**

1. The average combustion temperature within the thermal incinerator(s) shall not be less than 1600 degrees Fahrenheit at all times the emissions unit is in operation.

[Authority for term: PTI 02-16572 and OAC rule 3745-77-07(A)(1)]

2. A pilot flame shall be maintained at all times in the flare's pilot light burner.

[Authority for term: PTI 02-16572, OAC rule 3745-21-09(LL), and OAC rule 3745-77-07(A)(1)]

3. This permittee shall operate and maintain the wet scrubber at all times the process vent stream is vented to the scrubber in accordance with the following parameters:

a. not less than 7.5 pH when using a caustic scrubber liquor;

b. not more than 6.5 pH when using Anthium dioxide; and

c. not less than two gallons per minute scrubber liquor flow rate.

[Authority for term: PTI 02-16572 and OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install #02-16572, issued on September 24, 2002: A.III.10. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

   [Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

2. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted from the mix tanks, reactor, filter and finish tank, for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of pounds (lbs) of VOC emitted per batch run.

   The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

   If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

   [Authority for term: PTI 02-16572, OAC rule 3745-21-09(LL), and OAC rule 3745-77-07(C)(1)]

3. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

   [Authority for term: PTI 02-16572 and OAC rule 3745-77-07(C)(1)]

4. The permittee shall collect and record the following information for each month:

   a. the company identification of each final product generated;

   b. the number of batches run for each final product generated;

   c. the emission factors used to determine the amount of VOC emitted from the mix tanks, reactor, filter and finish tank for each final product generated (in lbs of VOC/batch run);

   d. the total VOC emission rate from all process vent streams controlled by the fume incinerator system and/or flare, for each of the final products generated, in lbs of VOC/batch run, using the following equation:

   E (Controlled) = (emission factor, in lbs of VOC/each batch) x (1- (CE/100))

   Where: CE = control efficiency of the incinerator(s) (as demonstrated during the most recent emissions test) or the caustic wet scrubber and flare, whichever is associated with that particular vent stream;

   e. the monthly VOC emission rate from all process vent streams controlled by the fume incinerator system and/or flare, for all of the final products generated, in lbs, using the following equation:

   E monthly = the sum, from i=1 to i=n, of (number of batches run)(lbs of VOC/batch run); where

   i = each individual final product generated; and
   n = the total number of final products generated per month;
   f. the ton per year VOC emission rate from all process vent streams controlled by the fume incinerator system and/or flare, for all of the final products generated;

   g. the total VOC emission rate from all process vent streams not controlled by the fume incinerator system or flare, for each of the final products generated (in lbs of VOC/batch run);

   h. the total monthly VOC emission rate from all process vent streams not controlled by the fume incinerator system or flare, for all of the final products generated, in lbs, using the following equation:

   E monthly = the sum, from i=1 to i=n, of (number of batches run)(lbs of VOC/batch run); where

   i = each individual final product generated; and
   n = the total number of final products generated per month; and

   i. the rolling, twelve-month summation of the monthly VOC emissions from all process vent streams not

controlled by the fume incinerator system or flare, for all final products generated (in tons, calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

[Authority for term: PTI 02-16572, OAC rule 3745-21-09(LL), and OAC rule 3745-77-07(C)(1)]

5. The permittee shall develop emission factors for the amount of SO2 emitted from the incinerator(s) and/or flare, either for each final product generated or for each batch run in this emissions unit. The emission factors shall be in units of pounds of SO2 emitted per ton of final product generated, or pounds of SO2 emitted per batch.

The permittee shall submit SO2 emission factors for all products containing sulfur. The specific methodology used to calculate the SO2 emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all SO2 emission factors shall be kept on site and available for Ohio EPA review.

If necessary, the permittee shall conduct emission testing, at the request of the Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

[Authority for term: PTI 02-16572 and OAC rule 3745-77-07(C)(1)]

6. The permittee shall collect and record the following information monthly for each batch:

a. the company identification of each final product generated;

b. the quantity of each final product generated per batch in kg;

c. the processing time for each batch in hours;

d. the emission factor for sulfur compound emissions used to determine the amount of SO2 emitted from the process for each final product generated (in pounds/kg of final product generated or pounds/batch run);

e. the SO2 emission rate for each batch of final product generated after control or combustion devices, in pounds, using the following equation:

E=(quantity of product in kg or number of batches run) x (sulfur compound emission factor in lbs/kg or lbs/batch) x (conversion factor for lbs SO2/lb sulfur compound) x (1-CE/100))

Where:

CE= control efficiency of the control device removing sulfur compounds based on the most recent stack test data;

f. the total SO2 emission rate to the atmosphere for all final products generated, in pounds;

g. the number of hours per batch; and

h. the average hourly SO2 emission rate for each batch, in pounds per hour, and the maximum lb/hr SO2 emission rate accounting for the possibility of multiple batches being made simultaneously.

[Authority for term: PTI 02-16572 and OAC rule 3745-77-07(C)(1)]

7. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

a. all periods of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than 1,600 degrees Fahrenheit; and

b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation and venting gases.

[Authority for term: PTI 02-16572 and OAC rule 3745-77-07(C)(1)]

8. The permittee shall properly operate and maintain a device to continuously monitor the pilot flame when the emissions unit is in operation. The monitoring device and any recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall record the following information each day:

a. all periods during which the pilot flame was out; and

b. the operating times for the flare, monitoring equipment, and the associated emissions unit when in operation and venting gases.

[Authority for term: PTI 02-16572, OAC rule 3745-21-09(LL) and OAC rule 3745-77-07(C)(1)]

9. The permittee shall monitor the pH of the scrubber liquor and properly operate and maintain equipment to continuously monitor the scrubber liquor flow rate of the wet scrubber while in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the

manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day the scrubber is used:

a. the pH of the scrubber liquor, before and after each batch and once during the batch (if the scrubber liquor is changed after each batch, the pH may be collected and recorded once at the end of each batch run);

b. the scrubber liquor flow rate, in gallons per minute, at the start of each batch; and

c. the operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

[Authority for term: PTI 02-16572 and OAC rule 3745-77-07(C)(1)]

10. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the flare. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to eliminate the visible emissions.

At any time the permittee observes visible emissions from the flare, the permittee shall monitor the visible emissions for a minimum period of 10 minutes in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 and record the results in an operations log.

[Authority for term: PTI 02-16572 and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #02-16572, issued on September 24, 2002: A.IV.7 and A.IV.8. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

2. The permittee shall submit deviation (excursion) reports that identify any exceedances of the pounds per batch, tons per year and tons per rolling, 12-month period emission limitations for VOC.

[Authority for term: PTI 02-16572 and OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit deviation (excursion) reports that identify any exceedances of the pounds per day and tons per year emission limitations for SO2.

[Authority for term: PTI 02-16572 and OAC rule 3745-77-07(C)(1)]

4. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the average combustion temperature within the thermal incinerator did not comply with the temperature limitation specified above.

[Authority for term: PTI 02-16572 and OAC rule 3745-77-07(C)(1)]

5. The permittee shall submit deviation (excursion) reports that identify all periods during which the flare pilot flame was not functioning properly. The reports shall include the date, time, and duration of each such period, as well as the cause of each deviation.

[Authority for term: PTI 02-16572 and OAC rule 3745-77-07(C)(1)]

6. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels for the wet scrubber:

a. the pH of the scrubber liquor; and

b. the scrubber liquor flow rate.

[Authority for term: PTI 02-16572 and OAC rule 3745-77-07(C)(1)]

7. The permittee shall submit quarterly reports that (a) identify all days during which any visible particulate emissions were observed from the flare, (b) describe any corrective actions taken to eliminate the visible particulate emissions, and (c) include all visible emission readings conducted pursuant to the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 as a result of the presence of visible emissions from the flare. These quarterly reports shall be submitted to the appropriate Ohio EPA District

Office by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter.

[Authority for term: PTI 02-16572 and OAC rule 3745-77-07(C)(1)]

8. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 5.37 lbs VOC per batch from all process vent streams controlled by the fume incinerator system and/or flare.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factors for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

[Authority for term: PTI 02-16572, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation: 1.0 ton VOC per year from all process vent streams controlled by the fume incinerator system and/or flare.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions.

[Authority for term: PTI 02-16572 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitation: 98% destruction of VOC by the incinerator.

Applicable Compliance Method: Compliance shall be demonstrated by the testing conducted for emissions units P051 and P052 for fume incinerators AC-7 and AC-6, respectively. No additional testing shall be required for P073 to comply with this emission limitation.

[Authority for term: PTI 02-16572, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

d. Emission Limitation: 26.8 lbs VOC per batch from all process vent streams not controlled by the fume incinerator system or flare.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factors for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

[Authority for term: PTI 02-16572, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

e. Emission Limitation: 5 tons of VOC per rolling twelve-month period from all process vent streams not controlled by the fume incinerator system or flare.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions.

[Authority for term: PTI 02-16572 and OAC rule 3745-77-07(C)(1)]

f. Emission Limitation: 10.0 lbs SO_2 per day.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, compliance shall be demonstrated by testing the amount of sulfur produced by this emissions unit prior to the fume incinerator system and flare using a U.S. EPA approved test method subject to the review and approval of the Ohio EPA Northeast District Office.

[Authority for term: PTI 02-16572 and OAC rule 3745-77-07(C)(1)]

g. Emission Limitation: 1.8 tons SO_2 per year.

Applicable Compliance Method: This limit is based on the allowable daily emission limit (10.0 lbs/day) multiplied by the maximum possible operating days (365 days/yr), and divided by 2000 lbs/ton. Therefore, provided compliance is shown with the daily limitation, compliance will also be shown with the annual limitation.

[Authority for term: PTI 02-16572 and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant

that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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Facility ID: 0243000024 Issuance type: Title V Final Permit

Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: P074 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Process AO (P074): production of specialty chemicals using two reactor systems. A reactor system may contain all or some of the following: hold tanks, reactor, filter and feed tanks. Volatile organic compound (VOC) emissions from the two reactors, filters and holding tanks are controlled by an incinerator (AC-6 or AC-7 Fm Inc's) followed by an emergency flare (S-4 Flare) as backup. VOC emissions from the material feed tanks are not controlled. Nitrogen dioxide (NO2) emissions will result from the combustion of nitrogen-containing organic compounds at the incinerator(s).	OAC rule 3745-31-05(A)(3) (PTI 02-17449)	VOC: 3.5 lbs/batch and 1.0 ton/year from all process vent streams controlled by the fume incinerator system; 17.5 lbs/batch from all process vent streams not controlled by the fume incinerator system. The requirements of this rule also include the requirements of OAC rule 3745-21-09(LL). NO2 emissions shall not exceeed 25 lbs/batch and 7 tons/year.
	OAC rule 3745-21-09(LL)	VOC emissions shall not exceed 5 tons/rolling, 12-month period from all process vent streams not controlled by the fume incinerator system. See sections A.I.2.a and A.I.2.b below.

2. **Additional Terms and Conditions**

a. The VOC emissions from the reactors, filters and holding tanks shall be controlled at all times by an incineratoror a flare. VOC emissions from the material feed tanks are not controlled.

b. The incinerator(s) shall reduce VOC emissions by at least 98%, by weight, at all times, as determined by paragraph OAC rule 3745-21-10(C).

c. Any process wastewater shall be discharged to a wastewater separator that has all separator sections equipped with covers and seals that minimize the amount of VOC exposed to the ambient air.

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II. **Operational Restrictions**

1. The average combustion temperature within the thermal incinerator(s) shall not be less than 1600 degrees Fahrenheit at all times the emissions unit is in operation.

[Authority for term: PTI 02-17449 and OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are

as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install #02-17449, issued on April 3, 2003 and modified on March 25, 2004: A.III.2. and A.III.5. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

2. The permittee shall develop emission factors for the amount of uncontrolled VOC emitted from the material feed tanks, reactors, filters and hold tanks, for each batch run in this emissions unit, and shall include emissions from flushing. The emission factors shall be in units of pounds (lbs) of VOC emitted per batch run.

The permittee shall submit VOC emission factors for all products produced in this emissions unit. The emission factors for the reaction vessels, and all other pieces of equipment associated with this emissions unit, shall be computed based on calculation methods from the Pharmaceutical NESHAP or other Ohio EPA-approved calculation methods. The specific methodology used to calculate the VOC emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all VOC emission factors shall be kept on site and available for Ohio EPA review.

If necessary, the permittee shall conduct emission testing, at the request of the Ohio EPA Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

[Authority for term: PTI 02-17449, OAC rule 3745-21-09(LL), and OAC rule 3745-77-07(C)(1)]

3. The permittee shall keep records of all materials used in this emissions unit for the purpose of determining the emission factors.

[Authority for term: PTI 02-17449 and OAC rule 3745-77-07(C)(1)]

4. The permittee shall collect and record the following information for each month:

a. the company identification of each final product generated;

b. the number of batches run for each final product generated;

c. the emission factors used to determine the amount of VOC emitted from the material feed tanks, reactors, filters and hold tanks for each final product generated (in lbs of VOC/batch run);

d. the total VOC emission rate from all process vent streams controlled by the fume incinerator system, for each of the final products generated, in lbs of VOC/batch run, using the following equation:

E (Controlled) = (sum of emission factors, in lbs of VOC/each batch) x (1- (CE/100))

where: CE = control efficiency of the incinerator(s) (as demonstrated during the most recent emissions test);

e. the monthly VOC emission rate from all process vent streams controlled by the fume incinerator system, for all of the final products generated, in lbs, using the following equation:

E monthly = the sum, from i=1 to i=n, of (number of batches run)(lbs of VOC/batch run); where

i = each individual final product generated; and
n = the total number of final products generated per month;
f. the ton per year VOC emission rate from all process vent streams controlled by the fume incinerator system, for all of the final products generated (determined by multiplying A.III.3.e. by 12 months and dividing by 2000 lbs);

g. the total VOC emission rate from all process vent streams not controlled by the fume incinerator system, for each of the final products generated (in lbs of VOC/batch run);

h. the monthly VOC emission rate from all process vent streams not controlled by the fume incinerator system, for all of the final products generated, in lbs, using the following equation:

E monthly = the sum, from i=1 to i=n, of (number of batches run)(lbs of VOC/batch run);

where:

i = each individual final product generated; and
n = the total number of final products generated per month; and

i. the rolling, twelve-month summation of the monthly VOC emissions from all process vent streams not controlled by the fume incinerator system, for all final products generated (in tons, calculated by summing the monthly VOC emissions for the preceding 11 months plus the VOC emissions for the current month).

[Authority for term: PTI 02-17449, OAC rule 3745-21-09(LL), and OAC rule 3745-77-07(C)(1)]

5. The permittee shall develop emission factors for the amount of NO2 emitted from the flare for each batch run in this emissions unit. The emission factors shall be in units of pounds of NO2 emitted per batch run.

The permittee shall submit NO2 emission factors for all products containing nitrogen. The specific methodology used to calculate the NO2 emissions, example calculations using the approved methodology, and the emission factors shall be submitted upon final issuance of this permit and shall be subject to the review and approval of the Ohio EPA Northeast District Office. Detailed calculations of all NO2 emission

factors shall be kept on site and available for Ohio EPA review.

If necessary, the permittee shall conduct emission testing, at the request of the Ohio EPA Northeast District Office, during the production of a specific final product to confirm the accuracy of the emission factor.

[Authority for term: PTI 02-17449 and OAC rule 3745-77-07(C)(1)]

6. The permittee shall collect and record the following information for each month:

a. the company identification of each final product generated;

b. the number of batches run for each final product generated;

c. the emission factor used to determine the amount of NO2 emitted from the flare, for each final product generated using nitrogen-containing raw materials (in pounds of NO2/batch run);

d. the monthly NO2 emission rate from all process vent streams controlled by the flare, for all of the final products generated, in lbs, using the following equation:

E monthly = the sum, from i=1 to i=n, of (number of batches run)(lbs of NO2/batch run)

where:

i = each individual final product generated; and
n = the total number of final products generated per month; and

e. the ton per year VOC emission rate from all process vent streams controlled by the incinerator(s), for all of the final products generated (determined by multiplying A.III.5.d. by 12 months and dividing by 2000 lbs).

[Authority for term: PTI 02-17449, OAC rule 3745-21-09(LL), and OAC rule 3745-77-07(C)(1)]

7. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

a. all periods of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than 1,600 degrees Fahrenheit; and

b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation and venting gases.

[Authority for term: PTI 02-17449 and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify any exceedances of the pounds per batch, tons per year and tons per rolling, 12-month period emission limitations for VOC.

[Authority for term: PTI 02-17449 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit deviation (excursion) reports that identify any exceedances of the pounds per batch and tons per year emission limitations for NO2.

[Authority for term: PTI 02-17449 and OAC rule 3745-77-07(C)(1)]

3. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the average combustion temperature within the thermal incinerator did not comply with the temperature limitation specified above.

[Authority for term: PTI 02-17449 and OAC rule 3745-77-07(C)(1)]

4. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Compliance with the allowable emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 3.5 lbs VOC per batch from all process vent streams controlled by the fume incinerator system.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required, the emission factors for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

[Authority for term: PTI 02-17449, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation: 1.0 ton VOC per year from all process vent streams controlled by the fume incinerator system.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in section A.III of these terms and conditions.

[Authority for term: PTI 02-17449 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitation: 17.5 lbs VOC per batch from all process vent streams not controlled by the fume incinerator system.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in section A.III of these terms and conditions. If required, the emission factors for a final product shall be determined by emissions testing using U.S. EPA reference Methods 25, 25A, or, with prior approval from the Ohio EPA, an alternative U.S. EPA-approved test method.

[Authority for term: PTI 02-17449, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

d. Emission Limitation: 5 tons of VOC per rolling, 12-month period from all process vent streams not controlled by the fume incinerator system.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in section A.III of these terms and conditions.

[Authority for term: PTI 02-17449 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitation: 25 lbs NO2 per batch.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in section A.III of these terms and conditions.

[Authority for term: PTI 02-17449 and OAC rule 3745-77-07(C)(1)]

f. Emission Limitation: 7.0 tons NO2 per year.

Applicable Compliance Method: Compliance shall be demonstrated by the record keeping required in section A.III of these terms and conditions.

[Authority for term: PTI 02-17449 and OAC rule 3745-77-07(C)(1)]

g. Emission Limitation: 98% destruction of VOC by the incinerator.

Applicable Compliance Method: Compliance shall be demonstrated by the testing conducted for emissions units P051 and P052 for fume incinerators AC-7 and AC-6, respectively. No additional testing shall be required for P074 to comply with this emission limitation.

[Authority for term: PTI 02-17449, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: P074 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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Facility ID: 0243000024 Emissions Unit ID: T013 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the

applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Tank #232 (T013): 88,100-gallon capacity, outdoor, fixed-roof, vertical steel tank with submerged fill and no vapor controls for storing liquid organic materials or petroleum liquids.	OAC rule 3745-21-07(D) or OAC rule 3745-21-09(L)	See sections A.I.2.a and A.I.2.b below.

2. **Additional Terms and Conditions**

a. When storing liquid organic materials, as defined in OAC rule 3745-21-01(C)(3), this emissions unit shall not store volatile photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(7).

b. When storing petroleum liquids, as defined in OAC rule 3745-21-01(E)(13), the vapor pressure of the petroleum liquid shall not be greater than 1.52 psia.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permitte shall maintain monthly records documenting the following information:

a. the type of liquid stored; and

b. whether or not the material is a petroleum liquid, as defined in OAC rule 3745-21-01(E)(13), with a vapor pressure greater than 1.52 psia, or a volatile photochemically reactive material, as defined in OAC rule 3745-21-01(C)(7).

[Authority for term: OAC rule 3745-21-07(D) and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall notify the Ohio EPA Northeast District Office within 30 days of storing volatile photochemically reactive material in this emissions unit. The notification shall include the chemical name of the liquid being stored, the date of filling the tank with volatile photochemically reactive material, and the method of complying with the requirements of OAC rule 3745-21-07(D).

[Authority for term: OAC rule 3745-77-07(C)(1)]

2. If the permittee places, stores, or holds in the fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 1.52 pounds per square inch absolute, and such tank does not comply with the requirements of paragraph (L)(1) of OAC rule 3745-21-09, the permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) within 30 days of becoming aware of the occurrence.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: T013 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: T022 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Tank #404 (T022): 88,740-gallon capacity, outdoor, fixed-roof, vertical steel tank with splash fill and no vapor controls for storing liquid organic materials or petroleum liquids.	OAC rule 3745-21-07(D) or OAC rule 3745-21-09(L)	See sections A.I.2.a and A.I.2.b below.

2. **Additional Terms and Conditions**

a. When storing liquid organic materials, as defined in OAC rule 3745-21-01(C)(3), this emissions unit shall not store volatile photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(7).

b. When storing petroleum liquids, as defined in OAC rule 3745-21-01(E)(13), the vapor pressure of the petroleum liquid shall not be greater than 1.52 psia.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permitte shall maintain monthly records documenting the following information:

a. the type of liquid stored; and

b. whether or not the material is a petroleum liquid, as defined in OAC rule 3745-21-01(E)(13), with a vapor pressure greater than 1.52 psia, or a volatile photochemically reactive material, as defined in OAC rule 3745-21-01(C)(7).

[Authority for term: OAC rule 3745-21-07(D) and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall notify the Ohio EPA Northeast District Office within 30 days of storing volatile photochemically reactive material in this emissions unit. The notification shall include the chemical name of the liquid being stored, the date of filling the tank with volatile photochemically reactive material, and the method of complying with the requirements of OAC rule 3745-21-07(D).

[Authority for term: OAC rule 3745-77-07(C)(1)]

2. If the permittee places, stores, or holds in the fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 1.52 pounds per square inch absolute, and such tank does not comply with the requirements of paragraph (L)(1) of OAC rule 3745-21-09, the permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) within 30 days of becoming aware of the occurrence.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: T022 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: T023 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Tank #405 (T023): 88,740-gallon capacity, outdoor, fixed-roof, vertical steel tank with splash fill and no vapor controls for storing liquid organic materials or petroleum liquids.	OAC rule 3745-21-07(D) or OAC rule 3745-21-09(L)	See sections A.I.2.a and A.I.2.b below.

2. **Additional Terms and Conditions**

a. When storing liquid organic materials, as defined in OAC rule 3745-21-01(C)(3), this emissions unit shall not store volatile photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(7).

b. When storing petroleum liquids, as defined in OAC rule 3745-21-01(E)(13), the vapor pressure of the petroleum liquid shall not be greater than 1.52 psia.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permitte shall maintain monthly records documenting the following information:

a. the type of liquid stored; and

b. whether or not the material is a petroleum liquid, as defined in OAC rule 3745-21-01(E)(13), with a vapor pressure greater than 1.52 psia, or a volatile photochemically reactive material, as defined in OAC rule 3745-21-01(C)(7).

[Authority for term: OAC rule 3745-21-07(D) and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall notify the Ohio EPA Northeast District Office within 30 days of storing volatile photochemically reactive material in this emissions unit. The notification shall include the chemical name of the liquid being stored, the date of filling the tank with volatile photochemically reactive material, and the method of complying with the requirements of OAC rule 3745-21-07(D).

[Authority for term: OAC rule 3745-77-07(C)(1)]

2. If the permittee places, stores, or holds in the fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 1.52 pounds per square inch absolute, and such tank does not comply with the requirements of paragraph (L)(1) of OAC rule 3745-21-09, the permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) within 30 days of becoming aware of the occurrence.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Issuance type: Title V Final Permit

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Facility ID: 0243000024 Emissions Unit ID: T023 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Issuance type: Title V Final Permit

Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: T034 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Tank #458 (T034): 49,156-gallon capacity, outdoor, fixed-roof, vertical steel tank with splash fill and no vapor controls for storing liquid organic materials or petroleum liquids.	OAC rule 3745-21-07(D) or OAC rule 3745-21-09(L)	See sections A.I.2.a and A.I.2.b below.

2. **Additional Terms and Conditions**

a. When storing liquid organic materials, as defined in OAC rule 3745-21-01(C)(3), this emissions unit shall not store volatile photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(7).

b. When storing petroleum liquids, as defined in OAC rule 3745-21-01(E)(13), the vapor pressure of the petroleum liquid shall not be greater than 1.52 psia.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permitte shall maintain monthly records documenting the following information:

a. the type of liquid stored; and

b. whether or not the material is a petroleum liquid, as defined in OAC rule 3745-21-01(E)(13), with a vapor pressure greater than 1.52 psia, or a volatile photochemically reactive material, as defined in OAC rule 3745-21-01(C)(7).

[Authority for term: OAC rule 3745-21-07(D) and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall notify the Ohio EPA Northeast District Office within 30 days of storing volatile photochemically reactive material in this emissions unit. The notification shall include the chemical name of the liquid being stored, the date of filling the tank with volatile photochemically reactive material, and the method of complying with the requirements of OAC rule 3745-21-07(D).

[Authority for term: OAC rule 3745-77-07(C)(1)]

2. If the permittee places, stores, or holds in the fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 1.52 pounds per square inch absolute, and such tank does not comply with the requirements of paragraph (L)(1) of OAC rule 3745-21-09, the permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) within 30 days of becoming aware of the occurrence.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: T034 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Issuance type: Title V Final Permit

Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: T073 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Tank #12 (T073): 154,000-gallon capacity, outdoor, fixed-roof, vertical steel tank with splash fill for storing liquid organic materials or petroleum liquids. Vapors are controlled by a wet scrubber that uses water as the scrubbing solution (12tk WScrb).	OAC rule 3745-31-05(A)(3) (PTI 02-01747)	The requirements established pursuant to this rule are equivalent to the requirements of OAC rule 3745-21-07(D) and rule 3745-21-09(L).
	OAC rule 3745-21-07(D) or OAC rule 3745-21-09(L)	See sections A.I.2.a and A.I.2.b below.

2. **Additional Terms and Conditions**

a. When storing liquid organic materials, as defined in OAC rule 3745-21-01(C)(3), this emissions unit shall not store volatile photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(7).

b. When storing petroleum liquids, as defined in OAC rule 3745-21-01(E)(13), the vapor pressure of the petroleum liquid shall not be greater than 1.52 psia.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permitte shall maintain monthly records documenting the following information:

a. the type of liquid stored; and

b. whether or not the material is a petroleum liquid, as defined in OAC rule 3745-21-01(E)(13), with a vapor pressure greater than 1.52 psia, or a volatile photochemically reactive material, as defined in OAC rule 3745-21-01(C)(7).

[Authority for term: OAC rule 3745-21-07(D) and OAC rule 3745-77-07(C)(1)]

2. The permittee shall properly operate and maintain equipment to continuously monitor and record the scrubber water flow rate for the wet scrubber, in gallons per minute, during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the flow rate on a continuous basis.

Whenever the monitored value for the flow rate falls below the level specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the scrubber water flow rate above the minimum level specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the

following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the flow rate readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.
The acceptable level for the scrubber water flow rate for the scrubber is not less than 2 gallons per minute.

This acceptable level is effective for the duration of this permit. Any changes in the acceptable level must be approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the level based upon information obtained during future VOC emission tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the level will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

If the control efficiency of the wet scrubber is always assumed to be zero, and compliance with the emission limitation of five tons per rolling twelve-month period from all process vent streams is demonstrated by the record keeping required in Section A.III of these terms and conditions, then the permittee may choose not to conduct parametric monitoring, record keeping and reporting for the wet scrubber as required under A.II, A.III and A.IV.

The provisions of this term shall not be applicable if the emission limitation of five tons per rolling twelve-month period has been exceeded. In such case, the permittee shall comply with the requirements of OAC rule 3745-21-09(LL)(1), as well as all monitoring, record keeping, and reporting requirements specified in the terms and conditions for this emissions unit.

[Authority for term: OAC rule 3745-21-09(LL)(1) and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall notify the Ohio EPA Northeast District Office within 30 days of storing volatile photochemically reactive material in this emissions unit. The notification shall include the chemical name of the liquid being stored, the date of filling the tank with volatile photochemically reactive material, and the method of complying with the requirements of OAC rule 3745-21-07(D).

   [Authority for term: OAC rule 3745-77-07(C)(1)]

2. If the permittee places, stores, or holds in the fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 1.52 pounds per square inch absolute, and such tank does not comply with the requirements of paragraph (L)(1) of OAC rule 3745-21-09, the permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) within 30 days of becoming aware of the occurrence.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. Unless the control efficiency of the wet scrubber is assumed to be zero, the permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time when the scrubber water flow rate was below the acceptable level;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the scrubber water flow rate into compliance with the acceptable level, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

   These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

4. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: T073 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: T077 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Tank #242 (T077): 169,657-gallon capacity, outdoor, fixed-roof, vertical steel tank with submerged fill and no vapor controls for storing liquid organic materials or petroleum liquids.	OAC rule 3475-31-05(A)(3) (PTI 02-09822)	Volatile organic compound emissions shall not exceed 0.25 tons per year. The requirements established pursuant to this rule also include the requirements of OAC rule 3745-21-07(D) and rule 3745-21-09(L).
	OAC rule 3745-21-07(D) or OAC rule 3745-21-09(L)	See sections A.I.2.a and A.I.2.b below.

2. **Additional Terms and Conditions**

a. When storing liquid organic materials, as defined in OAC rule 3745-21-01(C)(3), this emissions unit shall not store volatile photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(7).

b. When storing petroleum liquids, as defined in OAC rule 3745-21-01(E)(13), the vapor pressure of the petroleum liquid shall not be greater than 1.52 psia.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install #02-09822, issued on January 18, 1996: A.III.2. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

   [Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

2. The permitte shall maintain monthly records documenting the following information:

   a. the type of liquid stored; and

   b. whether or not the material is a petroleum liquid, as defined in OAC rule 3745-21-01(E)(13), with a vapor pressure greater than 1.52 psia, or a volatile photochemically reactive material, as defined in OAC rule 3745-21-01(C)(7); and

   c. the monthly throughput of liquid, in gallons.

   [Authority for term: OAC rule 3745-21-07(D) and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #02-09822, issued on January 18, 1996: A.IV.2. through A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

2. The permittee shall submit deviation (excursion) reports that identify all exceedances of the tons per year emission limitation for VOC.

[Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall notify the Ohio EPA Northeast District Office within 30 days of storing volatile photochemically reactive material in this emissions unit. The notification shall include the chemical name of the liquid being stored, the date of filling the tank with volatile photochemically reactive material, and the method of complying with the requirements of OAC rule 3745-21-07(D).

[Authority for term: OAC rule 3745-77-07(C)(1)]

4. If the permittee places, stores, or holds in the fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 1.52 pounds per square inch absolute, and such tank does not comply with the requirements of paragraph (L)(1) of OAC rule 3745-21-09, the permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) within 30 days of becoming aware of the occurrence.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #02-09822, issued on January 18, 1996: A.V.2.a. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

[Authority for term: OAC Rule 3745-77-07(A)(3)(a)(ii)]

2. Compliance with the allowable emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation: 0.25 tons per year of VOC emissions

Applicable Compliance Method: Compliance shall be demonstrated using the throughput data required in Section A.III of these terms and conditions, the storage tank dimensions, and U.S. EPA emission factors and equations found in AP-42, Section 7.1.3, "Emissions Factors for Organic Liquid Storage Tanks" (September 1997).

[Authority for term: PTI 02-09822 and OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: T077 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall

not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Issuance type: Title V Final Permit

Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: T122 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Tank #465 (T122): 24,864-gallon capacity, outdoor, fixed-roof, vertical steel tank with splash fill and no vapor controls for storing liquid organic materials or petroleum liquids.	OAC rule 3745-21-07(D) or OAC rule 3745-21-09(L)	See sections A.I.2.a and A.I.2.b below.

2. **Additional Terms and Conditions**

a. When storing liquid organic materials, as defined in OAC rule 3745-21-01(C)(3), this emissions unit shall not store volatile photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(7).

b. In accordance with OAC rule 3745-21-09(L)(2), this storage tank is exempt from the requirements of OAC rule 3745-21-09(L)(1) because the tank has a capacity of less than 40,000 gallons.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permitte shall maintain monthly records documenting the following information:

a. the type of liquid stored; and

b. whether or not the material is volatile photochemically reactive material, as defined in OAC rule 3745-21-01(C)(7).

[Authority for term: OAC rule 3745-21-07(D) and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall notify the Ohio EPA Northeast District Office within 30 days of storing volatile photochemically reactive material in this emissions unit. The notification shall include the chemical name of the liquid being stored, the date of filling the tank with volatile photochemically reactive material, and the method of complying with the requirements of OAC rule 3745-21-07(D).

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: T122 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Applicable Emissions Limitations/Control

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: T123 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Tank #465 (T123): 24,864-gallon capacity, outdoor, fixed-roof, vertical steel tank with splash fill and no vapor controls for storing liquid organic materials or petroleum liquids.	OAC rule 3745-21-07(D) or OAC rule 3745-21-09(L)	See sections A.I.2.a and A.I.2.b below.

2. **Additional Terms and Conditions**

a. When storing liquid organic materials, as defined in OAC rule 3745-21-01(C)(3), this emissions unit shall not store volatile photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(7).

b. In accordance with OAC rule 3745-21-09(L)(2), this storage tank is exempt from the requirements of OAC rule 3745-21-09(L)(1) because the tank has a capacity of less than 40,000 gallons.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permitte shall maintain monthly records documenting the following information:

a. the type of liquid stored; and

b. whether or not the liquid organic material is volatile photochemically reactive material, as defined in OAC rule 3745-21-01(C)(7).

[Authority for term: OAC rule 3745-21-07(D) and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall notify the Ohio EPA Northeast District Office within 30 days of storing volatile photochemically reactive material in this emissions unit. The notification shall include the chemical name of the liquid being stored, the date of filling the tank with volatile photochemically reactive material, and the method of complying with the requirements of OAC rule 3745-21-07(D).

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: T123 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: T136 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Tank #109 (T136): 13,200-gallon capacity, outdoor, fixed-roof, vertical steel tank with submerged fill and no vapor controls for storing liquid organic materials or petroleum liquids.	OAC rule 3745-21-07(D) or OAC rule 3745-21-09(L)	See sections A.I.2.a and A.I.2.b below.

2. **Additional Terms and Conditions**

a. When storing liquid organic materials, as defined in OAC rule 3745-21-01(C)(3), this emissions unit shall not store volatile photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(7).

b. In accordance with OAC rule 3745-21-09(L)(2), this storage tank is exempt from the requirements of OAC rule 3745-21-09(L)(1) because the tank has a capacity of less than 40,000 gallons.

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. The permitte shall maintain monthly records documenting the following information:

a. the type of liquid stored; and

b. whether or not the liquid organic material is volatile photochemically reactive material, as defined in OAC rule 3745-21-01(C)(7).

[Authority for term: OAC rule 3745-21-07(D) and OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. The permittee shall notify the Ohio EPA Northeast District Office within 30 days of storing volatile photochemically reactive material in this emissions unit. The notification shall include the chemical name of the liquid being stored, the date of filling the tank with volatile photochemically reactive material, and the method of complying with the requirements of OAC rule 3745-21-07(D).

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0243000024 Emissions Unit ID: T136 Issuance type: Title V Final Permit

B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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Part III - Terms and Conditions for Emissions Units

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Facility ID: 0243000024 Emissions Unit ID: T186 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Tank #159 (T186): 8,090-gallon capacity, outdoor, fixed-roof, vertical steel tank with splash fill for storing liquid organic materials or petroleum liquids. Vapors are controlled by an incinerator (AC-6/7 FM Inc's)	OAC rule 3745-31-05(A)(3) (PTI 02-7805)	Volatile organic compounds (VOC) emissions shall not exceed 0.25 ton per year. The requirements established pursuant to this rule also include the requirements of OAC rule 3745-21-07(D) and rule 3745-21-09(L).
	OAC rule 3745-21-07(D) or OAC rule 3745-21-09(L)	See sections A.I.2.a and A.I.2.b below.

2. **Additional Terms and Conditions**

a. When storing liquid organic materials, as defined in OAC rule 3745-21-01(C)(3), this emissions unit shall not store volatile photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(7).

b. In accordance with OAC rule 3745-21-09(L)(2), this storage tank is exempt from the requirements of OAC rule 3745-21-09(L)(1) because the tank has a capacity of less than 40,000 gallons.

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II. **Operational Restrictions**

1. The average combustion temperature within the thermal incinerator(s) shall not be less than 1600 degrees Fahrenheit at all times the emissions unit is in operation.

   [Authority for term: OAC rule 3745-77-07(A)(1)]

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III. **Monitoring and/or Record Keeping Requirements**

1. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install #02-7805, issued on December 7, 1994: A.III.2. and A.III.3. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

   [Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

2. The permitte shall maintain monthly records documenting the following information:

   a. the type of liquid stored;

   b. whether or not the liquid organic material is volatile photochemically reactive material, as defined in OAC rule 3745-21-01(C)(7); and

   c. the monthly throughput of liquid, in gallons.

   [Authority for term: OAC rule 3745-21-07(D) and OAC rule 3745-77-07(C)(1)]

3. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

   The permittee shall collect and record the following information for each day:

   a. all periods of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than 1,600 degrees Fahrenheit; and

   b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation and venting gases.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

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IV. **Reporting Requirements**

1. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #02-7805, issued on December 7, 1994: A.IV.2 and A.IV.3. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

   [Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

2. The permittee shall submit deviation (excursion) reports that identify all exceedances of the tons per year emission limitation for VOC.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

3. The permittee shall notify the Ohio EPA Northeast District Office within 30 days of storing volatile photochemically reactive material in this emissions unit. The notification shall include the chemical name of the liquid being stored, the date of filling the tank with volatile photochemically reactive material, and the method of complying with the requirements of OAC rule 3745-21-07(D).

   [Authority for term: OAC rule 3745-77-07(C)(1)]

4. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the average combustion temperature within the thermal incinerator did not comply with the temperature limitation specified above.

[Authority for term: OAC rule 3745-77-07(C)(1)]

5. The quarterly deviation (excursion) reports shall be submitted in accordance with section A.1.c.ii of the General Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

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V. **Testing Requirements**

1. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #02-7805, issued on December 7, 1994: A.V.2.a. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

2. Compliance with the allowable emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation: 0.25 ton per year of VOC emissions

Applicable Compliance Method: Compliance shall be demonstrated using the throughput data required in section A.III of these terms and conditions, the storage tank dimensions, and U.S. EPA emission factors and equations found in AP-42, section 7.1.3, "Emissions Factors for Organic Liquid Storage Tanks" (September 1997).

[Authority for term: OAC rule 3745-77-07(C)(1)]

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VI. **Miscellaneous Requirements**

1. None

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B. State Enforceable Section

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. **Additional Terms and Conditions**

1. None

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II. **Operational Restrictions**

1. None

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III. **Monitoring and/or Record Keeping Requirements**

1. None

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IV. **Reporting Requirements**

1. None

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V. **Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None