



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL MODIFICATION  
MONTGOMERY COUNTY**

**CERTIFIED MAIL**

Street Address:

122 S. Front Street

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:  
Lazarus Gov. Center  
P.O. Box 1049

**Application No: 08-03708**

**Fac ID: 0857040915**

**DATE: 6/6/2006**

CITGO Petroleum Corporation  
Steve Bland  
1800 Farr Dr.  
Dayton, OH 454042960

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
309 South Fourth Street, Room 222  
Columbus, Ohio 43215

Sincerely,

Michael W. Ahern, Manager  
Permit Issuance and Data Management Section  
Division of Air Pollution Control

CC: USEPA

RAPCA



**Permit To Install  
Terms and Conditions**

**Issue Date: 6/6/2006  
Effective Date: 6/6/2006**

FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 08-03708

Application Number: 08-03708  
Facility ID: 0857040915  
Permit Fee: **\$625**  
Name of Facility: CITGO Petroleum Corporation  
Person to Contact: Steve Bland  
Address: 1800 Farr Dr.  
Dayton, OH 454042960

Location of proposed air contaminant source(s) [emissions unit(s)]:

**1800 Farr Drive  
Dayton, Ohio**

Description of proposed emissions unit(s):

**administrative modification to correct monitoring, record keeping and reporting.**

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described source(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

## Part I - GENERAL TERMS AND CONDITIONS

### A. Permit to Install General Terms and Conditions

#### 1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

#### 2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which 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 cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

#### 3. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

#### 4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon

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the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

**5. Scheduled Maintenance/Malfunction Reporting**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

**6. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

**7. Air Pollution Nuisance**

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

**8. Termination of Permit to Install**

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

**9. Construction of New Sources(s)**

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The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

#### **10. Public Disclosure**

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

#### **11. Applicability**

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

**12. Best Available Technology**

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

**13. Source Operation and Operating Permit Requirements After Completion of Construction**

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

**14. Construction Compliance Certification**

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

**15. Fees**

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

**B. Permit to Install Summary of Allowable Emissions**

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)  
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons Per Year</u>
VOC	95
Individual HAP	9.9

7

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Combined HAP

24.9

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PTI A

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Emissions Unit ID: J001

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

- The specific operations(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 specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
J001 - Bulk Gasoline Terminal Loading Rack with Vapor Recovery Unit	OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions from the vapor control system shall not exceed 0.50 pound of VOC per 1000 gallons (60 milligrams of VOC per liter) of gasoline loaded into the delivery vessel.
* Modification	OAC rule 3745-35-07(B) (Synthetic Minor to avoid Title V permitting)	Facility-wide VOC emissions shall not exceed 95 tons per rolling, 12-month period.  Facility-wide individual hazardous air pollutant (HAP) emissions shall not exceed 9.9 tons per rolling, 12-month period (see A.2.a).  Facility-wide combined HAP emissions shall not exceed 24.9 tons per rolling, 12-month period (see A.2.a).
	OAC rule 3745-21-09(Q)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-

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**Modif**

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**Emissions Unit ID: J001**

05(A)(3).

## 2. Additional Terms and Conditions

- 2.a** The emissions of hazardous air pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from all emissions units at this facility shall not exceed 9.9 tons/year for any single HAP and 24.9 tons/year for any combination of HAPs, as rolling, 12-month summations.

## B. Operational Restrictions

- a. The annual throughput of gasoline shall not exceed 277,988,000 gallons per rolling, 12-month period. The annual throughput of distillate (i.e., diesel fuel and kerosene) shall not exceed 201,000,000 gallons per rolling, 12-month period.
- b. The loading rack shall be equipped with a vapor collection system whereby during the transfer of gasoline to any delivery vessel:
- i. All vapors displaced from the delivery vessel during loading are vented only to the vapor collection system.
  - ii. The pressure in the vapor collection system is maintained between minus 6 and plus 18 inches of water gauge pressure.
- c. The loading rack shall be equipped with a vapor control system whereby:
- i. All vapors collected by the vapor collection system are vented to the vapor control system.
  - ii. Any liquid gasoline returned to a stationary storage tank from the vapor control system is free of entrained air to the extent possible with good engineering design.
- d. A means shall be provided to prevent drainage of gasoline from the loading device when it is not in use or to accomplish complete drainage before the loading device is disconnected.
- e. All gasoline loading lines and vapor lines shall be equipped with fittings which are vapor tight.
- f. The permittee shall not permit gasoline to be spilled, discarded in sewers, stored in

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open containers or handled in any other manner that would result in evaporation.

- g. The permittee shall repair within 15 days any leak from the vapor collection system and vapor control system when such leak is equal to or greater than 100 percent of the lower explosive limit as propane, as determined under paragraph (K) of OAC rule 3745-21-10.
- h. The following vapor recovery unit (VRU) parameters have been identified as key operating parameters for which acceptable operating ranges have been established. The permittee shall operate the VRU within these acceptable operating ranges:
  - i. to ensure proper regeneration of the carbon beds, during the regeneration cycle, the minimum vacuum pulled shall be greater than or equal to 25 inches of mercury and the air purge solenoid must be open;
  - ii. to ensure proper absorption by the absorption tower, the gasoline supply temperature shall not exceed 98 degrees F;
  - iii. to ensure a proper flow rate from the absorption tower to the carbon bed, the absorber pressure shall not exceed 15 psi; and
  - iv. to ensure proper adsorption, the carbon bed temperature, at all levels, shall not exceed 150 degrees F.

Operation of the VRU outside of these specified operating ranges is not necessarily indicative of an emission violation, but rather serves as a trigger level for maintenance and/or repair activities, or further investigation to establish correct operation.

**C. Monitoring and/or Recordkeeping Requirements**

- 1. The permittee shall maintain monthly records of the following information for this emissions unit:
  - a. The total throughput of gasoline, in gallons.
  - b. The total throughput of distillate, in gallons.
  - c. The rolling, 12-month gasoline throughput rate, in gallons.
  - d. The rolling, 12-month distillate throughput rate, in gallons.

2. The permittee shall maintain monthly records of the following information for the entire facility:
  - a. The total VOC emissions, in tons.\*
  - b. The rolling, 12-month VOC emission rate, in tons. \*
  - c. The total individual HAP emissions for each HAP, in tons.\*\*
  - d. The total combined HAPs emissions, in tons (the summation of a above for all HAPs).\*\*
  - e. The rolling, 12-month individual HAP emission rate, in tons. \*\*
  - f. The rolling, 12-month combined HAPs emission rate, in tons. \*\*

\* See calculation methodology in Section E.2.b of this permit.  
\*\* See calculation methodology in Section E.2.c of this permit.
3. The permittee shall maintain the data required by the "Vapor Recovery System Operating Check List" as submitted to the Regional Air Pollution Control Agency on June 11, 1997, on a daily basis when the emissions unit is in operation, excluding Saturdays, Sundays and holidays. Any subsequent changes to these operating guidelines shall be mutually agreeable to the permittee and the Regional Air Pollution Control Agency.
4. The permittee shall implement, within 90 days of the issuance of this permit, a preventive maintenance program (PMP) for the vapor recovery unit (VRU) which has been approved by the Regional Air Pollution Control Agency. The PMP shall include an annual inspection of the VRU by a qualified individual trained in the operation and inspection of carbon adsorption/absorption systems. The resultant report shall be maintained on site and shall be made available during subsequent inspections by the Regional Air Pollution Control Agency.
5. The permittee shall collect and record the following information for the VRU each day when the emissions unit is in operation, excluding Saturdays, Sundays and holidays:
  - a. a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated source.

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- b. during the regeneration cycle, the vacuum pressure in inches of mercury;
- c. the gasoline supply temperature in degrees F;
- d. the absorber pressure in psi; and
- e. the carbon bed temperature in degrees F.

**D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the following:
  - a. the rolling, 12-month gasoline throughput restriction of 277,988,000 (for this emissions unit);
  - b. the rolling, 12-month distillate throughput restriction of 201,000,000 (for this emissions unit);
  - c. the rolling, 12-month VOC emission limitation of 95 tons (for this entire facility);
  - d. the rolling, 12-month individual HAP emission limitation of 9.9 tons (for the entire facility);
  - e. the rolling, 12-month combined HAP emission limitation of 24.9 tons (for the entire facility); and
  - f. the VRU key operating parameters established in Section B.8 above.

The permittee shall submit quarterly deviation (excursion) reports in accordance with the General Terms and Conditions of this permit.

2. The permittee shall submit annual reports that summarize the following information:
  - a. The total actual annual gasoline throughput for this emissions unit, in gallons.
  - b. The total actual annual distillate throughput for this emissions unit, in gallons.
  - c. The total actual annual VOC emissions for the entire facility, in tons.

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- d. The total actual annual individual HAP emissions for the entire facility, in tons.
- e. The total actual annual combined HAPs emissions for the entire facility, in tons.

These reports shall be submitted by April 15 of each year and shall cover the previous calendar year.

3. The permittee shall submit quarterly summary reports that include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the emissions unit was in operation. The reports shall be submitted by January 31, April 30, July 31 and October 31 of each year and the cover the previous calendar quarter.

**E. Testing Requirements**

1. Within three (3) months after the effective date of this permit, the permittee shall conduct or have conducted an emission test(s) for this emissions unit in order to demonstrate continuing compliance with the allowable VOC emission limitation of 0.50 pound of VOC per 1,000 gallons of gasoline loaded.

The emission test methods and procedures are those outlined in OAC rule 3745-21-10(E), i.e., a minimum of one 6-hour test, during which at least 300,000 liters (79,260 gallons) of gasoline are loaded. (The test should be conducted at the maximum gasoline throughput possible.)

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Regional Air Pollution Control 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 Regional Air Pollution Control Agency's refusal to accept the results of the emission test(s).

Personnel from the Regional Air Pollution Control 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 emission test(s) shall be signed by

**Emissions Unit ID: J001**

the person or persons responsible for the tests and submitted to the Regional Air Pollution Control 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 RAPCA. The permittee shall include in the report the operating parameters as required in paragraph three of E.1.

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

- a. Emission Limitation-  
VOC emissions from the vapor control system shall not exceed 0.50 pound of VOC per 1000 gallons of gasoline loaded into the delivery vessel.

Applicable Compliance Method-

Compliance with the lb VOC/1000 gallons of gasoline loaded emission limitation above shall be based upon the results of emission tests conducted in accordance with the procedures outlined in section E.1 of this permit.

- b. Emission Limitation-  
Facility-wide VOC emissions shall not exceed 95 tons per rolling, 12-month period.

Applicable Compliance Method-

Compliance with the annual allowable VOC emission limitation above shall be determined as follows:

- i. For the VRU, multiply the rolling, 12-month gasoline throughput rate, from Section C.1.c, by the VOC emission factor (lbs VOC/1000 gallons gasoline loaded), calculated based on the results of the most recent emission tests that demonstrated compliance for the VRU.
- ii. For distillates loading, multiply the rolling, 12-month distillate throughput, from Section C.1.d, by the VOC emission factor (lb VOC/1000 gallons of distillate loaded), calculated using AP-42, Section 5.2, Equation 1 (1/95).
- iii. For storage tanks, determine emissions using USEPA's "TANKS" Program Version 4 or higher.
- iv. For fugitive emissions (i.e., valves, flanges, open ended lines, and pumps), determine emissions using EPA-453/R-95-017, "Protocol for Equipment Leak Emission Estimates."

- v. For the oil water separator, determine emissions using emission factors provided in AP-42, Fifth Edition, Table 5.1-2 (1/95).
  - vi. For the Air Stripper Groundwater Treatment System (P004), sum the rolling, 12-month HAP emissions rates, as calculated in Section E.2.c.vi.
  - vii. For the Soil Vapor Extraction System (P005), sum the rolling, 12-month HAP emissions rates, as calculated in Section E.2.c.vii.
  - viii. Sum i + ii + iii + iv + v + vi + vii, and then divide by 2000 lbs/ton.
- c. Emission Limitations-
- Facility-wide individual HAP emissions shall not exceed 9.9 tons per rolling, 12-month period.
- Facility-wide combined HAP emissions shall not exceed 24.9 tons per rolling, 12-month period.
- Applicable Compliance Methods-
- Compliance with the annual allowable HAP emission limitations above shall be determined as follows:
- i. For individual and combined HAP emissions from the VRU, multiply the VOC emissions, from Section E.2.b.i above, by the HAP emission factors\* obtained from "Gasoline Distribution Industry (Stage I) - Background Information for Proposed Standards, EPA-450/R-94-002a, January 1994, Table 3-2."

\* The specific HAP emission factors are:

- (a) benzene - 0.009 pound of benzene emissions per pound of VOC emissions;
- (b) ethyl benzene - 0.001 pound of ethyl benzene emissions per pound of VOC emissions;
- (c) hexane - 0.016 pound of hexane emissions per pound of VOC emissions;

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- (d) toluene - 0.013 pound of toluene emissions per pound of VOC emissions;
  - (e) xylene - 0.005 pound of xylene emissions per pound of VOC emissions;
  - (f) 2,2,4-trimethylpentane - 0.008 pound of 2,2,4-trimethylpentane emissions per pound of VOC emissions; and
  - (g) combined HAPs - 0.052 pound of combined HAP emissions per pound of VOC emissions.
- ii. For individual and combined HAP emissions from gasoline storage tanks, multiply the VOC emissions from all gasoline storage tanks at the facility, as determined using USEPA's "TANKS" Program Version 4 or higher, by the HAP emission factors specified in Section E.2.c.i above.
  - iii. For individual and combined HAPs emissions from equipment leaks (i.e., fugitive emissions from valves, flanges, open ended lines, pumps, etc.), multiply the VOC emissions, from Section E.2.b.iv above, by the HAP emission factors specified in Section E.2.c.i above.
  - iv. For individual HAP emissions from distillates loading, multiply the VOC emissions, from Section E.2.b.ii above, by the HAP emission factors from the specification option of USEPA's "TANKS" Program Version 4 or higher. For combined HAPs emissions from distillates loading, sum the individual HAP emissions.
  - v. For individual HAP emissions from distillates storage tanks, multiply the VOC emissions from all distillates storage tanks at the facility, as determined using USEPA's "TANKS" Program Version 4 or higher, by the HAP emission factors from the specification option of USEPA's "TANKS" Program Version 4 or higher. For combined HAPs emissions from distillates storage tanks, sum the individual HAP emissions.
  - vi. For individual HAP and combined HAPs emissions from the Air Stripper Groundwater Treatment System (P004), multiply the permittee-supplied emission factors and densities\*, determined in accordance with USEPA Test Method 602 (modified), by the daily throughput of groundwater through the air stripper.

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\* The permittee-supplied HAP emission factors and densities are:

- (a) benzene - 280 ppb (7.32 lbs/gal)
- (b) toluene - 13 ppb (7.26 lbs/gal)
- (c) ethyl benzene- 600 ppb (7.26 lbs/gal)
- (d) xylenes - 800 ppb (7.25 lbs/gal)

vii. For individual HAP and combined HAPs emissions from the Soil Vapor Extraction System (P005), determine emissions using the results of the quarterly VOC and HAP (i.e., BTEX, which consists of benzene, toluene, ethyl benzene and xylene) concentration analyses and record keeping.

viii. For each individual HAP, sum i + ii + iii + iv + v + vi + vii, and then divide by 2000 lbs/ton. For combined HAPs emissions, sum all the individual HAP emissions.

d. Should more accurate emission factors be developed, the permittee shall use them, provided the new emission factors are mutually agreeable to the RAPCA and the permittee.

## **F. Miscellaneous Requirements**

1. \* This PTI supercedes 08-03708 issued December 12, 1997 and represents no change in emissions.

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

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

- The specific operations(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 specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P004 - Air Stripper Groundwater Treatment System  * Modification	OAC rule 3745-31-05(A)(3)  OAC rule 3745-35-07(B) (Synthetic Minor to avoid Title V permitting)          OAC rule 3745-21-07(G)(2)	Organic compound (OC) emissions from this emissions unit shall not exceed 4.0 lbs/day and 0.70 tons/yr (TPY) (see A.2.a).  Facility-wide volatile organic compound (VOC) emissions shall not exceed 95 tons per rolling, 12-month period.  Facility-wide individual hazardous air pollutant (HAP) emissions shall not exceed 9.9 tons per rolling, 12-month period (see A.2.b).  Facility-wide combined HAP emissions shall not exceed 24.9 tons per rolling, 12-month period (see A.2.b).  The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

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**Modif**

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**Emissions Unit ID: P004**

**2. Additional Terms and Conditions**

- 2.a** Compliance with the daily and annual OC emissions limitations above shall be maintained through either BTEX (benzene, toluene, ethyl benzene, and xylene) concentration reductions or reductions in flowrate of groundwater through the emissions unit.
- 2.b** The emissions of hazardous air pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from all emissions units at this facility shall not exceed 9.9 tons/year for any single HAP and 24.9 tons/year for any combination of HAPs, as rolling, 12-month summations.

**B. Operational Restrictions**

1. The daily throughput volume of groundwater shall not exceed 288,000 gallons.

**C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain daily records of the following:
  - a. the groundwater throughput, in gallons; and
  - b. the OC emissions, in pounds, i.e, the sum of the daily individual BTEX compound emissions based on the daily groundwater throughput and the emission factors in section E.1.c of this permit.
2. The permittee shall obtain monthly samples of the influent groundwater stream and conduct or have conducted an analysis for BTEX concentrations, in parts per billion (ppb).
3. The permittee shall maintain monthly records of the following information, using the methods identified in sections E.1.b and E.1.c of this permit:
  - a. the total individual HAP emissions and the rolling, 12-month summation of the individual HAP emissions from this facility;
  - b. the total combined HAPs emissions and the rolling, 12-month summation of the combined HAPs emissions from this facility; and

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- c. the total OC emissions and the rolling, 12-month summation of the total VOC emissions from this facility.

**D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the following:
  - a. the daily groundwater throughput limitation;
  - b. the daily OC emission limitation;
  - c. the rolling, 12-month facility emission limitation for VOC;
  - d. the rolling, 12-month facility emission limitation for individual HAP; and
  - e. the rolling, 12-month facility emission limitation for combined HAPs..

If no deviations occurred during the quarterly period, the permittee shall submit a report stating that no deviations occurred. The report shall include an explanation of the cause of any exceedance(s) and a description of any corrective action taken or required to correct the exceedance(s). 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 3-month period (January to March, April to June, July to September, and October to December, respectively).

2. The permittee shall submit quarterly reports, consistent with the schedule above, which summarize the monthly BTEX analyses.

**E. Testing Requirements**

1. Compliance with the emission limitation(s) in section A of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
OC emissions from this emissions unit shall not exceed 4.0 lbs/day and 0.70 TPY.

Applicable Compliance Method:

Compliance shall be demonstrated through the record keeping and reporting requirements of sections C.1 and D.1 of this permit.

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- b. **Emission Limitation:**  
Facility-wide VOC emissions shall not exceed 95 tons per rolling, 12-month period.

Applicable Compliance Method-  
Compliance with the annual allowable VOC emission limitation above shall be determined as follows:

- i. For the VRU (J001), multiply the rolling, 12-month gasoline throughput rate, from Section C.1.c for J001, by the VOC emission factor (lbs VOC/1000 gallons gasoline loaded), calculated based on the results of the most recent emission tests that demonstrated compliance for the VRU.
  - ii. For distillates loading (J001), multiply the rolling, 12-month distillate throughput, from Section C.1.d for J001, by the VOC emission factor (lb VOC/1000 gallons of distillate loaded), calculated using AP-42, Section 5.2, Equation 1 (1/95).
  - iii. For storage tanks, determine emissions using USEPA's "TANKS" Program Version 4 or higher.
  - iv. For fugitive emissions (i.e., valves, flanges, open ended lines, and pumps), determine emissions using EPA-453/R-95-017, "Protocol for Equipment Leak Emission Estimates."
  - v. For the oil water separator, determine emissions using emission factors provided in AP-42, Fifth Edition, Table 5.1-2 (1/95).
  - vi. For the Air Stripper Groundwater Treatment System (P004), sum the rolling, 12-month HAP emissions rates, as calculated in Section E.2.c.vi.
  - vii. For the Soil Vapor Extraction System (P005), sum the rolling, 12-month HAP emissions rates, as calculated in Section E.2.c.vii.
  - viii. Sum i + ii + iii + iv + v + vi + vii, and then divide by 2000 lbs/ton.
- c. Facility-wide individual HAP emissions shall not exceed 9.9 tons per rolling, 12-month period.

Facility-wide combined HAP emissions shall not exceed 24.9 tons per rolling, 12-month period.

Applicable Compliance Methods-

Compliance with the annual allowable HAP emission limitations above shall be determined as follows:

- i. For individual and combined HAP emissions from the VRU (J001), multiply the VOC emissions, from Section E.2.b.i above for J001, by the HAP emission factors\* obtained from "Gasoline Distribution Industry (Stage I) - Background Information for Proposed Standards, EPA-450/R-94-002a, January 1994, Table 3-2."

\* The specific HAP emission factors are:

- (a) benzene - 0.009 pound of benzene emissions per pound of VOC emissions;
  - (b) ethyl benzene - 0.001 pound of ethyl benzene emissions per pound of VOC emissions;
  - (c) hexane - 0.016 pound of hexane emissions per pound of VOC emissions;
  - (d) toluene - 0.013 pound of toluene emissions per pound of VOC emissions;
  - (e) xylene - 0.005 pound of xylene emissions per pound of VOC emissions;
  - (f) 2,2,4-trimethylpentane - 0.008 pound of 2,2,4-trimethylpentane emissions per pound of VOC emissions; and
  - (g) combined HAPs - 0.052 pound of combined HAP emissions per pound of VOC emissions.
- ii. For individual and combined HAP emissions from gasoline storage tanks, multiply the VOC emissions from all gasoline storage tanks at the facility, as determined using USEPA's "TANKS" Program Version 4 or higher, by the HAP emission factors specified in Section E.2.c.i above.
  - iii. For individual and combined HAPs emissions from equipment leaks (i.e., fugitive emissions from valves, flanges, open ended lines, pumps, etc.), multiply the VOC emissions, from Section E.2.b.iv above, by the HAP

emission factors specified in Section E.2.c.i above.

- iv. For individual HAP emissions from distillates loading (J001), multiply the VOC emissions, from Section E.2.b.ii above, by the HAP emission factors from the specification option of USEPA's "TANKS" Program Version 4 or higher. For combined HAPs emissions from distillates loading, sum the individual HAP emissions.
- v. For individual HAP emissions from distillates storage tanks, multiply the VOC emissions from all distillates storage tanks at the facility, as determined using USEPA's "TANKS" Program Version 4 or higher, by the HAP emission factors from the specification option of USEPA's "TANKS" Program Version 4 or higher. For combined HAPs emissions from distillates storage tanks, sum the individual HAP emissions.
- vi. For individual HAP and combined HAPs emissions from the Air Stripper Groundwater Treatment System (P004), multiply the permittee-supplied emission factors and densities\*, determined in accordance with USEPA Test Method 602 (modified), by the daily throughput of groundwater through the air stripper.  
  
\* The permittee-supplied HAP emission factors and densities are:
  - (a) benzene - 280 ppb (7.32 lbs/gal)
  - (b) toluene - 13 ppb (7.26 lbs/gal)
  - (c) ethyl benzene- 600 ppb (7.26 lbs/gal)
  - (d) xylenes - 800 ppb (7.25 lbs/gal)
- vii. For individual HAP and combined HAPs emissions from the Soil Vapor Extraction System (P005), determine emissions using the results of the quarterly VOC and HAP (i.e., BTEX, which consists of benzene, toluene, ethyl benzene and xylene) concentration analyses and record keeping.
- viii. For each individual HAP, sum i + ii + iii + iv + v + vi + vii, and then divide by 2000 lbs/ton. For combined HAPs emissions, sum all the individual HAP emissions.

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- d. Should more accurate emission factors be developed, the permittee shall use them, provided the new emission factors are mutually agreeable to the RAPCA and the permittee.

**F. Miscellaneous Requirements**

1. \* This PTI supercedes 08-03708 issued December 12, 1997 and represents no change in emissions.

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

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

- The specific operations(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 specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P005 - Soil Vapor Extraction System	OAC rule 3745-31-05(A)(3)	Organic compound (OC) emissions from this emissions unit shall not exceed 15 lbs/day and 2.74 tons/yr (TPY) (see A.2.a).
* Modification	OAC rule 3745-35-07(B) (Synthetic Minor to avoid Title V permitting)	Facility-wide volatile organic compound (VOC) emissions shall not exceed 95 tons per rolling, 12-month period.
		Facility-wide individual hazardous air pollutant (HAP) emissions shall not exceed 9.9 tons per rolling, 12-month period (see A.2.b).
		Facility-wide combined HAP emissions shall not exceed 24.9 tons per rolling, 12-month period (see A.2.b).
	OAC rule 3745-21-07(G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

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**2. Additional Terms and Conditions**

- 2.a** The benzene concentration in the effluent air stream shall not exceed an amount which corresponds to 1.4 lbs/day benzene emissions.
- 2.b** The emissions of hazardous air pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from all emissions units at this facility shall not exceed 9.9 tons/year for any single HAP and 24.9 tons/year for any combination of HAPs, as rolling, 12-month summations.

**B. Operational Restrictions**

None

**C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall conduct, or have conducted, quarterly analyses of the effluent air stream of this emissions unit in order to determine the concentration (in parts per million [ppm]) and mass emissions rate (in lbs/day) of OC and BTEX (benzene, toluene, ethyl benzene, xylene) compounds. OC emissions may be calculated as the sum of the BTEX compound emissions.
2. The permittee shall maintain quarterly records of the number of days during the calendar quarter that the emissions unit was in operation.
3. The permittee shall, on a quarterly basis, calculate and record the average daily emissions of OC and benzene, in pounds.
4. The permittee shall maintain monthly records of the following information, using the methods identified in sections E.1.b and E.1.c of this permit:
  - a. the total individual HAP emissions and the rolling, 12-month summation of the individual HAP emissions from this facility;
  - b. the total combined HAPs emissions and the rolling, 12-month summation of the combined HAPs emissions from this facility; and
  - c. the total OC emissions and the rolling, 12-month summation of the total VOC emissions from this facility.

#### **D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the following:
  - a. the OC emission limitation, 15 lbs/day;
  - b. the benzene emission limitation, 1.4 lbs/day;
  - c. the rolling, 12-month facility emission limitation for VOC;
  - d. the rolling, 12-month facility emission limitation for individual HAP; and
  - e. the rolling, 12-month facility emission limitation for combined HAPs.

If no deviations occurred during the quarterly period, the permittee shall submit a report stating that no deviations occurred. The report shall include an explanation of the cause of any exceedance(s) and a description of any corrective action taken or required to correct the exceedance(s). 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 3-month period (January to March, April to June, July to September, and October to December, respectively).

#### **E. Testing Requirements**

1. Compliance with the emission limitation(s) in section A of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
OC emissions from this emissions unit shall not exceed 15 lbs/day and 2.74 TPY.

**Applicable Compliance Method:**

Compliance shall be determined based on the record keeping and reporting requirements of sections C.1 - C.3 and D.1 of this permit. OC emissions may be calculated as the sum of the BTEX emissions.

The following equation may be employed to calculate BTEX emissions based on quarterly records:

$$E = (C) \times (MW) \times (K) \times (Q) \times (1440 \text{ min/day})$$

where:

E = emissions rate, in lbs/day, for the given BTEX compound;

C = concentration of the given BTEX compound, in ppm;

MW = molecular weight of the compound of interest, in lb/lb-mol;\*

K =  $2.5954 \times 10^{-6}$  lb-mol/SCF (conversion factor); and

Q = volumetric flow rate of the effluent air stream, in SCF/min.

\* BTEX compound molecular weights, in lb/lb-mol:

benzene - 78.11

toluene - 92.13

ethyl benzene - 106.16

xylene - 106.16

- b. Emission Limitation:  
Facility-wide VOC emissions shall not exceed 95 tons per rolling, 12-month period.

Applicable Compliance Method-

Compliance with the annual allowable VOC emission limitation above shall be determined as follows:

- i. For the VRU (J001), multiply the rolling, 12-month gasoline throughput rate, from Section C.1.c for J001, by the VOC emission factor (lbs VOC/1000 gallons gasoline loaded), calculated based on the results of the most recent emission tests that demonstrated compliance for the VRU.
  - ii. For distillates loading (J001), multiply the rolling, 12-month distillate throughput, from Section C.1.d for J001, by the VOC emission factor (lb VOC/1000 gallons of distillate loaded), calculated using AP-42, Section 5.2, Equation 1 (1/95).
  - iii. For storage tanks, determine emissions using USEPA's "TANKS" Program Version 4 or higher.
  - iv. For fugitive emissions (i.e., valves, flanges, open ended lines, and pumps), determine emissions using EPA-453/R-95-017, "Protocol for Equipment Leak Emission Estimates."
  - v. For the oil water separator, determine emissions using emission factors provided in AP-42, Fifth Edition, Table 5.1-2 (1/95).
  - vi. For the Air Stripper Groundwater Treatment System (P004), sum the rolling, 12-month HAP emissions rates, as calculated in Section E.2.c.vi.
  - vii. For the Soil Vapor Extraction System (P005), sum the rolling, 12-month HAP emissions rates, as calculated in Section E.2.c.vii.
  - viii. Sum i + ii + iii + iv + v + vi + vii, and then divide by 2000 lbs/ton.
- c. Facility-wide individual HAP emissions shall not exceed 9.9 tons per rolling, 12-month period.

Facility-wide combined HAP emissions shall not exceed 24.9 tons per rolling, 12-month period.

**Applicable Compliance Methods-**

Compliance with the annual allowable HAP emission limitations above shall be determined as follows:

- i. For individual and combined HAP emissions from the VRU (J001), multiply the VOC emissions, from Section E.2.b.i above for J001, by the HAP emission factors\* obtained from "Gasoline Distribution Industry (Stage I) - Background Information for Proposed Standards, EPA-450/R-94-002a, January 1994, Table 3-2."

\* The specific HAP emission factors are:

- (a) benzene - 0.009 pound of benzene emissions per pound of VOC emissions;
  - (b) ethyl benzene - 0.001 pound of ethyl benzene emissions per pound of VOC emissions;
  - (c) hexane - 0.016 pound of hexane emissions per pound of VOC emissions;
  - (d) toluene - 0.013 pound of toluene emissions per pound of VOC emissions;
  - (e) xylene - 0.005 pound of xylene emissions per pound of VOC emissions;
  - (f) 2,2,4-trimethylpentane - 0.008 pound of 2,2,4-trimethylpentane emissions per pound of VOC emissions; and
  - (g) combined HAPs - 0.052 pound of combined HAP emissions per pound of VOC emissions.
- ii. For individual and combined HAP emissions from gasoline storage tanks, multiply the VOC emissions from all gasoline storage tanks at the facility, as determined using USEPA's "TANKS" Program Version 4 or higher, by the HAP emission factors specified in Section E.2.c.i above.

- iii. For individual and combined HAPs emissions from equipment leaks (i.e., fugitive emissions from valves, flanges, open ended lines, pumps, etc.), multiply the VOC emissions, from Section E.2.b.iv above, by the HAP emission factors specified in Section E.2.c.i above.
- iv. For individual HAP emissions from distillates loading (J001), multiply the VOC emissions, from Section E.2.b.ii above, by the HAP emission factors from the specification option of USEPA's "TANKS" Program Version 4 or higher. For combined HAPs emissions from distillates loading, sum the individual HAP emissions.
- v. For individual HAP emissions from distillates storage tanks, multiply the VOC emissions from all distillates storage tanks at the facility, as determined using USEPA's "TANKS" Program Version 4 or higher, by the HAP emission factors from the specification option of USEPA's "TANKS" Program Version 4 or higher. For combined HAPs emissions from distillates storage tanks, sum the individual HAP emissions.
- vi. For individual HAP and combined HAPs emissions from the Air Stripper Groundwater Treatment System (P004), multiply the permittee-supplied emission factors and densities\*, determined in accordance with USEPA Test Method 602 (modified), by the daily throughput of groundwater through the air stripper.  
  
\* The permittee-supplied HAP emission factors and densities are:
  - (a) benzene - 280 ppb (7.32 lbs/gal)
  - (b) toluene - 13 ppb (7.26 lbs/gal)
  - (c) ethyl benzene- 600 ppb (7.26 lbs/gal)
  - (d) xylenes - 800 ppb (7.25 lbs/gal)
- vii. For individual HAP and combined HAPs emissions from the Soil Vapor Extraction System (P005), determine emissions using the results of the quarterly VOC and HAP (i.e., BTEX, which consists of benzene, toluene, ethyl benzene and xylene) concentration analyses and record keeping.
- viii. For each individual HAP, sum i + ii + iii + iv + v + vi + vii, and then divide

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by 2000 lbs/ton. For combined HAPs emissions, sum all the individual HAP emissions.

- d. Should more accurate emission factors be developed, the permittee shall use them, provided the new emission factors are mutually agreeable to the RAPCA and the permittee.

**F. Miscellaneous Requirements**

1. \* This PTI supercedes 08-03708 issued December 12, 1997 and represents no change in emissions.