State of Ohio Environmental Protection Agency

RE: FINAL PERMIT TO INSTALL MODIFICATION **CERTIFIED MAIL**
ALLEN COUNTY

Street Address:
50 West Town Street, Suite 700
Lazarus Gov. Center **TELE:** (614) 644-3020 **FAX:** (614) 644-2329
Mailing Address:
Lazarus Gov. Center
P.O. Box 1049

Application No: 03-13794
Fac ID: 0302020012
DATE: 5/29/2008

Husky Lima Refinery
Tom Jettinghoff
1150 S. Metcalf Street
Lima, OH 45804

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 of the Director is final and may be appealed to the Environmental Review Appeals Commission pursuant to Section 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. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of $70.00 which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. 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, OH 43215

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

CC: **USEPA** **NWDO**

OhioEPA

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install **Issue Date: 5/29/2008**
Terms and Conditions **Effective Date: 5/29/2008**

FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 03-13794

Application Number:	03-13794
Facility ID:	0302020012
Permit Fee:	**$200**
Name of Facility:	Husky Lima Refinery
Person to Contact:	Tom Jettinghoff
Address:	1150 S. Metcalf Street Lima, OH 45804

Location of proposed air contaminant source(s) [emissions unit(s)]:
1150 South Metcalf Street
Lima, **Ohio**

Description of proposed emissions unit(s):
Administrative modification to correct erroneous heat content for refinery fuel gas for catalytic gasoline hydrotreating unit process heater.

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

Chris Korleski
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 (i.e., postmarked) quarterly 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

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)

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

Pollutant	Tons Per Year
NOx	287.11
CO	118.83
VOC	112.64
PE	10.56
SO2	112.52

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

1. This PTI involves installation of a catalytic gasoline hydrotreater (CGHT) and butane-butylene treater (B-B Treater) to accommodate production of federally mandated Tier II fuels. The CGHT point source emissions are from the process heater, emissions unit B028. The B-B Treater point source emissions are from the sulfur recovery unit incinerator, emissions unit P040. The remainder of the emissions from the CGHT and the B-B Treater are fugitive VOC.

   The CGHT, B-B Treater and sulfur recovery unit (SRU) are subject to the appropriate provisions (including operational restrictions, monitoring and record keeping, reporting, and testing) of OAC rule 3745-21-09(T) - Leaks from petroleum refinery equipment, OAC rule 3745-21-09(DD) - Leaks from process units that produce organic chemicals, 40 CFR 60 Subpart VV (Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry), 40 CFR 60 Subpart GGG (Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries, 40 CFR 63 Subpart CC (Petroleum Refinery MACT Standards), and 40 CFR 61 Subpart V (National Emission Standard for Equipment Leaks - Fugitive Emission Sources).

   The permittee has submitted an alternative leak detection and repair (LDAR) monitoring plan pursuant to OAC rule 3745-21-09(T)(4) and 40 CFR 63, Subpart CC.

2. The permittee shall include the CGHT and B-B Treater in the current site benzene waste operations program. The program shall comply with the appropriate provisions (includes operational restrictions, monitoring and record keeping, reporting, and testing) of 40 CFR 61 Subpart FF.

3. Facility specific terms and conditions involving 40 CFR Part 61 Subpart FF and 40 CFR Part 63 Subpart CC have been incorporated into Part III - special terms and conditions for the following specific emissions units which are affected: T191, T192, T194, T198, and T201.

4. This facility is subject to 40 CFR Part 63, Subpart UUU, National Emission Standards for Hazardous Air Pollutants: Petroleum Refineries MACT II. The permittee shall comply with all applicable requirements of 40 CFR Part 63, Subpart UUU. The permittee shall also comply with all applicable requirements of 40 CFR Part 63, Subpart A (General Provisions) and 40 CFR Part 63, Subpart UUU. Compliance with all

applicable requirements shall be achieved by the dates set forth in 40 CFR Part 63, Subpart A and Subpart UUU.

5. In accordance with the federal consent decree addendum, civil action No. SA07CA0683RF for the Claus 1 Sulfur Pit which became effective on November 20, 2007, the construction schedule in association with the modification of the existing sulfur recovery unit (SRU), emissions unit P040 shall be as follows:

   a. Relocation of sulfur loading rack; completed on 8/19/07;

   b. Construct new sulfur pit ; complete by 2/29/08;

   c. Project mechanical and instrument completion without SRU tie-ins; complete by 10/30/08;

   d. SRU tie-ins at Claus 1 SRU shut down, complete by 11/14/08; and

   e. Claus 1 SRU vapor controls on-line; complete by 11/20/08

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
B004 - refinery fuel gas or natural gas fired crude II heater; 630 million Btu/hr maximum with low NOx burners (PR 175150), (Administrative modification of PTI 03-13794, issued on 3/4/03, to reduce NOx emissions through the installation of low NOx burners on an existing emissions unit)	OAC rule 3745-17-10(B)(1)	0.020 lb of particulate emissions (PE) per million Btu of actual heat input
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-18-08(C)(2)	1.0 lb of sulfur dioxide (SO_2) per million Btu of actual heat input
	OAC rule 3745-21-08(B)	See A.I.2.c.
	OAC rule 3745-31-05(A)(3)	0.10 lb of NOx per million Btu of actual heat input, 275.94 tons of NOx/yr 25.20 lbs of carbon monoxide (CO)/hr, 110.38 tons of CO/yr
	OAC rule 3745-31-05(C)	See A.I.2.b. See A.I.2.a.

Emissions Unit ID: B004

2. Additional Terms and Conditions

2.a The permittee has requested a federally enforceable limitation for NOx of 0.10 lb per million Btu of actual heat input, 275.94 tons NOx/yr, 25.20 lbs CO/hr, and 110.38 tons CO /yr. The federally enforceable limitations shall be established in accordance with OAC rule 3745-31-05(A)(3). The permittee has requested federally enforceable NOx and CO emission limitations for purposes of avoiding Prevention of Significant Deterioration (PSD) permitting by emissions netting (see Netting Determination).

2.b Best Available Technology (BAT) control requirements for this emissions unit have been determined to be use of low NOx burners meeting 0.10 lb NOx per million Btu of actual heat input.

2.c On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

II. Operational Restrictions

1. The permittee shall burn only refinery fuel gas or natural gas in this emissions unit. The sulfur content of the refinery fuel gas or natural gas burned in this emissions unit shall comply with the allowable SO2 emission limitation specified in section A.I.1.

III. Monitoring and/or Recordkeeping Requirements

1. Samples of refinery fuel gas burned in this emissions unit shall be obtained on a monthly basis, and analyzed for heat content, density and sulfur content. The following ASTM sampling and analysis methods shall be used to obtain data for use in calculating the SO2 emission rate as outlined in section A.III.2.:

   a. molar composition of refinery fuel gas - ASTM Method D2163; and

   b. heat content of refinery fuel gas - ASTM Method D2421.

   The permittee may also use online analyzers at the facility that have equivalent capability to determine the molar composition and heat content for the ASTM Methods D2163 and D2421.

2. The permittee shall record on a monthly basis, the calculated SO2 emission rate in pounds per million Btu. The SO2 emission rate shall be calculated in accordance with OAC rule 3745-18-04(F)(3), as follows:

ER = (1 x 10^6)/H x D x S x 1.998

where: ER = the emission rate in pounds of sulfur dioxide per million Btu;
H = the heat content of the gaseous fuel in Btu per standard cubic foot;
D = the density of the gaseous fuel in pounds per standard cubic foot; and
S = the decimal fraction of sulfur in the gaseous fuel.

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

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the SO2 emission limitation of 1.0 pound of SO2 per million Btu of actual heat input was exceeded, based upon the calculations specified in section A.III.2.

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

V. Testing Requirements

1. 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 180 days following start-up of the emissions unit with low NOx burners.

   b. The emission testing shall be conducted to demonstrate compliance with the allowable emission rate of 0.10 lb of NOx per million Btu of actual heat input and the allowable mass emission rate for CO.

   c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for NOx, Methods 1 through 4 and 7 of 40 CFR, Part 60, Appendix A; for CO, Methods 1 through 4 and 10 of 40 CFR, Part 60, Appendix A. Alternate U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

d. The test(s) shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

e. 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).

f. 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.

g. 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).

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

a. Emission Limitation
0.020 lb of PE per million Btu of actual heat input

Applicable Compliance Method
The permittee may demonstrate compliance with this limitation by dividing the appropriate particulate emission factor of 1.9 pounds per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), by the heat content of 853 Btu per standard cubic foot for the refinery fuel gas fired in this emissions unit. If natural gas is solely being fired, the permittee shall demonstrate compliance with this limitation by multiplying the maximum hourly natural gas combustion rate, in million standard cubic feet per hour, by the appropriate particulate emission factor, in pound(s) per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), and then dividing by the maximum heat input to the process heater. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in OAC rule 3745-17-03(B)(9).

b. 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, the permittee shall demonstrate compliance with the visible particulate emission limitation above in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the requirements specified in OAC rule 3745-17-03(B)(1).

c. Emission Limitation
1.0 lb of SO2 per million Btu of actual heat input

Applicable Compliance Method
The monitoring, record keeping and reporting requirements in sections A.III.1, A.III.2, A.III.4 and A.IV of this permit shall be used to demonstrate compliance with the above limitation. The monthly SO2 emissions shall be calculated in accordance with the equation in OAC rule 3745-18-04(F)(3). If required, the permittee also shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 6 and the requirements specified in OAC rule 3745-18-04(E)(1).

d. Emission Limitation
0.10 lb of NOx per million Btu of actual heat input, 275.94 tons of NOx/yr

Applicable Compliance Method
Compliance with the lb of NOx per million Btu emission limitation shall be demonstrated by the performance testing required in condition A.V.1.

The annual emission limitation was derived by multiplying the 0.10 lb of NOx per million Btu emission limitation times the maximum heat input capacity of 630 million Btu/hr for the crude II heater, then multiplying by 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the lb/million Btu emission limitation is maintained.

e. Emission Limitation
25.20 lbs of CO/hr, 110.38 tons of CO/yr

Applicable Compliance Method
Compliance with the hourly mass emission limitation shall be demonstrated by

the performance testing required in condition A.V.1

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	OAC rule 3745-21-08(B)
B028 - refinery fuel gas/ natural gas fired process heater for catalytic gasoline hydrotreating unit**,** equipped with low nitrogen oxides burners**,** 18.2 million Btu/hr maximum heat input	OAC rule 3745-31-05(A)(3)	OAC rule 3745-18-06(E) 40 CFR 60.104(a)(1)
	OAC rule 3745-17-07(A)	
	OAC rule 3745-17-10(B)(1)	

Applicable Emissions Limitations/Control Measures		
2.10 tons sulfur dioxide (SO2)/yr 0.043 lb of nitrogen oxides (NOx) per million Btu of actual heat input (see A.I.2.a) 3.44 tons NOx/yr 1.50 lbs carbon monoxide (CO)/hr, 6.57 tons CO/yr 0.10 lb volatile organic compounds (VOC)/hr, 0.44 ton VOC/yr 0.14 lb particulate emissions (PE)/hr, 0.61 ton PE/yr See A.I.2.d. Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule. See A.I.2.e. See A.I.2.c. See A.I.2.f.	See A.I.2.b.	

Emissions Unit ID: B028

2. Additional Terms and Conditions

2.a Best available technology (BAT) control requirements for this emissions unit has been determined to be use of low NOx burners meeting 0.043 lb NOx per million Btu of actual heat input.

2.b The permittee shall not burn any refinery fuel gas in this emissions unit that contains hydrogen sulfide (H2S) in excess of 230 mg/dscm (162 ppm). This H2S standard in 40 CFR 60.104(a)(1) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition in 40 CFR 60.101(d).

2.c On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.d The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and 40 CFR 60.104(a)(1).

2.e The emission limitation specified by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2.f This emissions unit is fuel burning equipment which combusts refinery fuel gas or natural gas. When firing natural gas, the emissions unit is exempt from OAC rule 3745-18-06 per OAC rule 3745-18-06(A). When firing refinery fuel gas, OAC rule 3745-18-06(E) does not establish an emission limitation because the process weight rate is equal to zero. "Process weight" is defined in OAC rule 3745-18-01(B)(14).

II. Operational Restrictions

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

III. Monitoring and/or Recordkeeping Requirements

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

2. In order to demonstrate compliance with the emission limitation of 230 mg/dscm (162 ppm) of H2S in the refinery fuel gas (and if applicable, combined fuel firing as noted in A.I.2.a above), the permittee shall operate and maintain an instrument for continuously

monitoring and recording the concentration (dry basis) of H2S in the refinery fuel gas or combined fuel stream before being burned in this emissions unit. The monitoring shall be conducted in accordance with 40 CFR 60.105(a)(4), as follows:

a. The span value for this instrument is a ppm equivalent of 425 mg/dscm of H2S.

b. Fuel gas combustion devices having a common source of fuel gas may be monitored at only one location, if monitoring at this location accurately represents the concentration of H2S in the fuel gas being burned.

c. The performance evaluations for this H2S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR Part 60, Appendix B. The permittee shall conduct an annual relative accuracy test audit (RATA) for the H2S continuous emission monitoring equipment. Method 11 of 40 CFR Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the annual RATAs.

3. A statement of certification of the existing H2S continuous emission monitoring system (CEMS) 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 7. Proof of certification shall be made available to representatives of the appropriate Ohio EPA District Office or local air agency upon request.

4. The permittee shall operate and maintain existing equipment to continuously monitor and record hydrogen sulfide from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

   The permittee shall maintain records of all data obtained by the H2S CEMS including, but not limited to, parts per million of H2S on an instantaneous (1-minute) basis, emissions of H2S in units of the applicable standard as a rolling, 3-hour average, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than refinery fuel gas or natural gas was burned in this emissions unit. Each

report shall be submitted within 30 days after the deviation occurs.

2. The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting any H2S CEMS 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 source 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 be included the quarterly report.

3. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) on a quarterly basis, in writing, of all rolling, 3-hour periods during which the average concentration of H2S as measured by the H2S CEMS under 40 CFR 60.105(a)(4) exceeded 230 mg/dscm (162 ppm). The rolling, 3-hour average shall be determined as the arithmetic average of three contiguous 1-hour averages. The notification shall include a copy of the record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during previous calendar quarters.

4. If there were no concentrations of H2S in the refinery fuel gas (or combined fuel stream, if applicable) that exceeded the value specified in section A.I.2.b during the calendar quarter, then the permittee shall submit a statement to that effect along with the emissions unit and monitor operating times. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during previous calendar quarters.

5. Pursuant to the New Source Performance Standards (NSPS), the permittee is hereby advised of the requirements to report the following at the appropriate times:

   a. construction date (no later than 30 days after such date);

   b. actual start-up date (within 15 days after such date); and

   c. date of performance testing (if required, at least 30 days prior to testing).

   Reports are to be sent to:

   Ohio Environmental Protection Agency
   DAPC - Permit Management Unit
   Lazarus Government Center
   P.O. Box 1049
   Columbus, OH 43216-1049

and

Ohio EPA, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402

V. Testing Requirements

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

   a. Emission Limitation
   0.14 lb PE/hr, 0.61 ton PE/yr

   Applicable Compliance Method
   The permittee shall demonstrate compliance with the hourly limitation by multiplying the maximum hourly refinery fuel gas or natural gas combustion rate, in million standard cubic feet per hour, by the appropriate particulate emission factor, in pound(s) per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), and then dividing by the maximum heat input to the process heater. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Methods 1 - 5.

   The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

   b. 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, the permittee shall demonstrate compliance with the visible particulate emission limitation above in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the requirements specified in OAC rule 3745-17-03(B)(1).

   c. Emission Limitation

2.10 tons SO2/yr

Applicable Compliance Method
The annual emission limitation was established in accordance with the following equation:

Tons SO2/yr = (0.10 gr H2S/scf)(lb H2S/7,000 gr H2S)(64.1 lb SO2/34.1 lb H2S)(17,843 cf/hr)(8760 hrs/yr)(ton/2000 lbs)

where:
(0.10 gr H2S/scf) = 40 CFR 60.104(a)(1) emission limitation
(64.1 lb SO2/34.1 lb H2S) = conversion of hydrogen sulfide to sulfur dioxide assuming all H2S is converted to SO2
(17,843 cf/hr) = maximum fuel flow rate
(8,760 hrs/yr) = maximum operating schedule

All other values are conversion factors.

Compliance with the annual emission limitation will be shown as long as the permittee maintains compliance with the H2S emission limitation in 40 CFR 60.104(a)(1).

d. Emission Limitation
0.043 lb NOx per million Btu of actual heat input, 3.44 tons NOx/yr

Applicable Compliance Method
The emission limitation is based on the burner manufacturer's emissions data for low NOx burners to be installed on this emissions unit. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Methods 1 - 4 and 7.

The annual emission limitation was derived by multiplying the 0.043 lb of NOx per million Btu emission limitation times the maximum heat input capacity of 18.2 million Btu/hr for the process heater, then multiplying by 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the 0.043 lb of NOx per million Btu emission limitation is maintained.

e. Emission Limitation
1.50 lbs CO/hr, 6.57 tons CO/yr

Applicable Compliance Method
The permittee shall demonstrate compliance with the hourly limitation by multiplying the maximum hourly refinery fuel gas or natural gas combustion rate, in million standard cubic feet per hour, by the appropriate CO emission factor, in

pound(s) per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), and then dividing by the maximum heat input to the process heater. If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with 40 CFR, Part 60, Appendix A, Methods 1 through 4, and 10.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

f. Emission Limitation
0.10 lb VOC/hr, 0.44 ton VOC/yr

Applicable Compliance Method
The permittee shall demonstrate compliance with the hourly limitation by multiplying the maximum hourly refinery fuel gas or natural gas combustion rate, in million standard cubic feet per hour, by the appropriate VOC emission factor, in pound(s) per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), and then dividing by the maximum heat input to the process heater. If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with 40 CFR, Part 60, Appendix A, Methods 1-4, and 18, 25, or 25A, as appropriate.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

g. Emission Limitation
The permittee shall not burn any refinery fuel gas in this emissions unit that contains H2S in excess of 230 mg/dscm (162 ppm).

Applicable Compliance Method
Compliance with this emission limitation shall be demonstrated in accordance with the continuous emission monitoring requirements specified in section A.III.2. through A.III.4.

VI. Miscellaneous Requirements

Emissions Unit ID: B028

1. Within one hundred eighty (180) days of the effective date of this permit, the permittee shall update the existing quality assurance/quality control plan for the refinery fuel gas H2S continuous emission monitor designed to ensure continuous valid and representative readings of H2S. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. A logbook dedicated to the monitoring system must be kept on site and available for inspection during regular office hours.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P038 - Northside (FCC) Cooling Tower (modification of existing emissions unit originally installed 1949)	OAC rule 3745-31-05 (A)(3)	9.34 tons particulate emissions (PE)/yr 1.24 lb volatile organic compounds (VOC)/hr, 5.43 tons VOC/yr See A.I.2.a. and A.I.2.b.
	OAC rule 3745-17-11 (B)	28.2 lbs/hr of PE (see A.I.2.c.)
	OAC rule 3745-17-07 (A)	Visible particulate emissions shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

2. Additional Terms and Conditions

2.a Best Available Technology (BAT) control requirements for this emissions unit have been determined to be use of high efficiency drift eliminators.

2.b The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and OAC rule 3745-17-11(B).

2.c The total dissolved solids (TDS) present in cooling water drift is directly responsible for the formation of particulate emissions when the drift is

discharged from a cooling tower. The process weight rate (PWR) used to determine the allowable particulate mass emission rate is the total tons of TDS processed per hour through the cooling tower. Based on an a TDS concentration for optimum cooling tower operation of 2400 ppm and the cooling water maximum process flow rate of 29,600 gallons per minute, a PWR of 17.77 tons of TDS per hour was calculated. Using Table 1 in OAC rule 3745-17-11(B), the allowable particulate mass emission rate was determined to be 28.2 lbs/hr.

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information for this emissions unit each week:

   a. The permittee shall test and record the TDS content, in ppm, of the cooling water once per week. The TDS content shall be measured using test procedures that conform to regulation 40 CFR 136, "Test Procedures For The Analysis of Pollutants" or an equivalent method approved by the Ohio EPA, Northwest District Office.

2. Each week, the permittee shall calculate and record the particulate emissions, in pounds per hour. The particulate emissions shall be calculated as follows:

   [(29,600 gallons/minute) x (ppm TDS) x (0.00006) x (60 min/hr) x (0.0584)] / (7000 grains/lb) = particulate emissions, in lbs/hr

   where:

   29,600 gallons/minute = the maximum water flow rate;
   ppm TDS = the TDS level;
   0.00006 = the maximum drift loss factor;
   60 min/hr = conversion factor for minutes to hours;
   0.0584 = conversion factor for ppm to grains/gallon; and
   7000 gr/lb = conversion factor for grains to pounds.

3. Each week, the permittee shall use the information in A.III.2 to calculate the cumulative particulate emissions to date, for the calendar year from January to December.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation reports that identify all exceedances of the hourly and annual allowable particulate emission limitation. The quarterly deviation reports shall be submitted in accordance with the general terms and conditions of this permit.

V. Testing Requirements

1. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

   a. Emission Limitation
   28.2 lbs PE/hr

   Applicable Compliance Method
   Compliance shall be demonstrated by the monitoring and record keeping requirements specified in sections A.III.1 and A.III.2 of these terms and conditions. If required, the permittee shall conduct drift measurement testing to determine the drift factor for this cooling tower utilizing the "Isokinetic Drift Measurement Test Code for Water Cooling Towers", ATC-140(94), June, 1994 (or the most recent edition) from the Cooling Technology Institute.

   b. Emission Limitation
   9.34 tons PE/yr

   Applicable Compliance Method
   The annual emission limitation was established as follows:

   [(29,600 gallons/minute) x (2400 ppm TDS) x (0.00006) x (60 min/hr) x (8,760 hours/year) x (0.0584)] / [(7000 grains/lb) x (2000 lbs/ton)] = particulate emissions, in tons/yr

   where:

   29,600 gallons/minute = the maximum water flow rate;
   ppm TDS = the TDS level;
   0.00006 = the maximum drift loss factor;
   60 min/hr = conversion factor for minutes to hours;
   0.0584 = conversion factor for ppm to grains/gallon; and
   7000 gr/lb = conversion factor for grains to pounds.

   Therefore, provided compliance is shown with the TDS limitation, compliance with the annual limitation will be assumed.

c. Emission Limitation
1.24 lb VOC/hr, 5.43 tons VOC/yr

Applicable Compliance Method
The permittee shall demonstrate compliance with the hourly limitation by multiplying the appropriate VOC emission factor of 0.7 pounds per million gallons of flow, from AP-42 Table 5.1-2 (dated 1/95), by the maximum flow of 1,776,000 gallons per hour.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

d. Emission Limitation
Visible particulate emissions shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method
If required, the permittee shall demonstrate compliance with the visible particulate emission limitation above in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the requirements specified in OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit ID: P040

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements
P040 - modification of the existing sulfur recovery unit (SRU) - P002, P011 and P015 (Includes an increase in capacity from 52 long tons per day (LTD) to 55 LTD for the Claus 1 SRU, new 55 LTD Claus 2 SRU, new 110 LTD tail gas treatment unit (TGTU), and replacement of the existing tail gas incinerator with a new tail gas incinerator.	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-31-05(A)(3) (Cont.)
	40 CFR Part 63, Subpart CC
	40 CFR Part 63, Subpart UUU
	40 CFR 60.104(a)(2)(i)
Administrative modification to PTI No. 03-13794 issued on 3/4/03 to modify the proposed additional equipment for federal Tier II fuels project.	OAC rule 3745-21-09(T)
	OAC rule 3745-18-08(C)(3)
	OAC rule 3745-17-11(B)(1)
	OAC rule 3745-17-07(A)

Applicable Emissions Limitations/Control Measures	
See A.I.2.a.	of SO2/yr; and 250 parts per million by volume (dry basis) of SO2 at 0% excess air.
Combustion emissions from the tail gas incinerator shall not exceed the following: 0.14 lb of particulate emissions (PE)/hr, 0.61 ton of PE/yr (see A.I.2.b); 1.84 lbs of nitrogen oxides (NOx)/hr, 8.06 tons of NOx/yr; 1.88 lbs of carbon monoxide (CO)/hr, 8.23 tons of CO/yr; and 0.10 lb of volatile organic compounds (VOC)/hr, 0.44 ton of VOC/yr. Visible PE shall not exceed 20% opacity, as a six-minute average.	The requirements of this rule also include compliance with 40 CFR Part 63, Subpart CC; 40 CFR 60.104(a); and OAC rule 3745-18-08(C)(3). See A.I.2.e. Standards for fugitive equipment leaks (See section A.1 and A.4 of Part II - Facility Specific Terms and Conditions of this permit). 250 parts per million by volume (dry basis) of SO2 at 0% excess air. leaks from petroleum refinery equipment (See section A.1 of Part II - Facility Specific Terms and Conditions of this permit). 100 lbs SO2/1,000 lbs of sulfur processed (See A.I.2.a.)
Process emissions from the tail gas incinerator shall not exceed the following: 19.18 lbs of sulfur dioxide (SO2)/hr, as a 12-hr average, and 84.02 tons	none (See A.I.2.c.) none (See A.I.2.d.)

2. Additional Terms and Conditions

2.a The existing sulfur recovery unit consists of three emissions units: P002, P011 and P015. After the proposed modifications are complete, the sulfur recovery unit will have one common egress point of emissions, the exhaust stack for the tail gas incinerator. Because there is only one egress point, the permittee has requested that P002, P011 and P015 be combined administratively into one new emissions unit, P040. The Ohio EPA has agreed to this administrative consolidation; however, this consolidation does not mean that P040 is not subject to OAC rule 3745-18-08. Because P040 is simply a grouping of P002, P011 and P015, it will continue to be subject to OAC rule 3745-18-08. In addition, this common egress point will include a spent air stream from the new Butane-Butylene Treater (emissions unit P041) which is routed to the oxidation chamber of the tail gas incinerator. Therefore, all the above emission limits are combined for these emissions units (P040 and P041).

2.b It is assumed that all particulate emissions are PM_{10}.

2.c The uncontrolled mass rate of PE* from this emissions unit is less than 10 pounds/hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight rate is equal to zero. "Process weight" is defined in OAC rule 3745-17-01(B)(14).

* The burning of gaseous fuels is the only source of PE from this emissions unit.

2.d This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.

2.e Pursuant to the Group 1 miscellaneous process vent requirements in 40 CFR 63.641, the permittee shall reduce emissions of organic HAP's using a flare(s) that meets the requirements of 40 CFR 63.11(b) of subpart A.

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

Emissions Unit ID: P040

1. Upon installation and startup of the new tail gas incinerator, the permittee shall operate and maintain equipment to continuously monitor and record SO_2 from this emissions unit in units of the applicable standard. The span value of the continuous emission monitoring system shall be 500 ppm SO_2. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

   The permittee shall maintain records of all data obtained by the continuous SO_2 monitoring system including, but not limited to, parts per million of SO_2 on an instantaneous (one-minute) basis, and lbs/hr of SO_2, as a 12-hr average; results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.

   Prior to the installation of the continuous SO_2 monitoring system, the permittee shall submit information detailing the proposed location of the sampling site(s) in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2 for approval by the Ohio EPA, Central Office.

   The permittee shall maintain a written quality assurance/quality control (QA/QC) plan for the SO_2 CEMS that follows the requirements of 40 CFR Part 60 Appendix F. The QA/QC plan and logbook for the SO_2 CEMS must be kept on site and available for inspection during regular office hours.

2. The permittee shall operate and maintain equipment to continuously monitor and record the O_2 from this emissions unit in percent O_2. The span value of the continuous emission monitoring system shall be 10 percent O_2. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 or as approved by the Ohio EPA, Central Office.

   The permittee shall maintain records of all data obtained by the continuous O_2 monitoring system including, but not limited to percent O_2 on an instantaneous (one-minute) basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

   Prior to the installation of the continuous O_2 monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 3 for approval by the Ohio EPA, Central Office.

3. The permittee shall maintain daily records of the following information for this emissions unit:

   a. the total amount of sulfur processed;

   b. the total SO_2 emissions, in pounds; and

c. the average SO_2 emission rate, in pound of SO_2 per 1,000 pounds of sulfur processed.

For a specific period of time, the amount of sulfur processed is equal to the amount of sulfur entering the Claus units plus the amount of any sulfur bypassed to the flare(s) from the amine units and/or the sour water stripper, except for periods of start-up, shutdown, or malfunction as defined in 40 CFR 60.2.

IV. Reporting Requirements

1. Pursuant to OAC rule 3745-15-04 and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of SO_2 values in excess of the applicable lbs/hr and NSPS limitations for SO_2. These reports also shall identify all instances of daily SO_2 emission values in excess of the limitation specified in OAC rule 3745-18-08 (including those instances due to the bypassing of the Claus unit(s)) and shall specify the total SO_2 emissions for the calendar quarter (in tons).

   The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting any continuous SO_2 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.

Pursuant to OAC rule 3745-15-04 and ORC sections 3704.03(I) and 3704.031, the permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60.7. The summary shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following the end of each calendar quarter in a manner prescribed by the Director.

2. Pursuant to 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting any continuous O_2 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.

3. All quarterly reports and deviation reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

V. Testing Requirements

1. 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 60 days after achieving the maximum production rate at which this emissions unit will be operated, but no later than 180 days following the completion of the modifications to this emissions unit.

   b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for SO2 of 19.18 lbs/hr, ***as a 12-hr average***, 250 parts per million by volume (dry basis) of SO2 at 0% excess air, and 100 lbs/1,000 lbs of sulfur processed.

   c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for SO2, Methods 1 through 4 and 6 of 40 CFR, Part 60, Appendix A. Alternate U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

   d. The test(s) shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

e. 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).

f. 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.

g. 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).

2. Within 180 days following start-up of the emissions unit with the new tail gas incinerator, the permittee shall conduct certification tests of the continuous SO_2 monitoring system pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous SO_2 monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6.

3. Within 180 days following start-up of this emissions unit with the new tail gas incinerator, the permittee shall conduct certification tests of such equipment pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 3. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to

examine equipment and witness the certification tests.

In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous O_2 monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 3.

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

   a. Emission Limitation
   0.14 lb of PE/hr, 0.61 ton of PE/yr

   Applicable Compliance Method
   The permittee may demonstrate compliance with the hourly limitation by multiplying the appropriate particulate emission factor of 7.6 pounds per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), by the maximum fuel flow rate of 18,431 standard cubic foot/hr. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 5 of 40 CFR Part 60, Appendix A.

   The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

   b. Emission Limitation
   1.84 lbs of NOx/hr, 8.06 tons of NOx/yr

   Applicable Compliance Method
   The permittee may demonstrate compliance with the hourly limitation by multiplying the appropriate NOx emission factor of 100 pounds per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), by the maximum fuel flow rate of 18,431 standard cubic foot/hr. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 7 of 40 CFR Part 60, Appendix A.

   The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission

limitation is maintained.

c. Emission Limitation
1.88 lbs of CO/hr, 8.23 tons of CO/yr

Applicable Compliance Method
The CO emission limitation was derived from a vendor guarantee of a maximum CO emission rate of 100 ppm. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 10 of 40 CFR Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

d. Emission Limitation
0.10 lb of VOC/hr, 0.44 ton of VOC/yr

Applicable Compliance Method
The permittee may demonstrate compliance with the hourly limitation by multiplying the appropriate VOC emission factor of 5.5 pounds per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), by the maximum fuel flow rate of 18,431 standard cubic foot/hr. If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with 40 CFR, Part 60, Appendix A, Methods 1 through 4, and 18, 25, or 25A, as appropriate.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

e. Emission Limitation
Visible PE shall not exceed 20% opacity, as a six-minute average.

Applicable Compliance Method
If required, the permittee shall demonstrate compliance with the visible particulate emission limitation above in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the requirements specified in OAC rule 3745-17-03(B)(1).

f. Emission Limitation
250 parts per million by volume (dry basis) of SO2 at 0% excess air

Applicable Compliance Method
The permittee shall demonstrate compliance by conducting emission testing in accordance with the requirements in section A.V.1. and by the monitoring and record keeping in A.III.1 and A.III.2.

g. Emission Limitation
19.18 lbs of SO2/hr, as a 12-hr average, 84.02 tons of SO2/yr

Applicable Compliance Method
The permittee shall demonstrate compliance with the hourly limitation by conducting emission testing in accordance with the requirements in section A.V.1., and by the monitoring and record keeping in A.III.1 and A.III.2.

The annual emission limitation was derived by multiplying the hourly emission rate derived from the following equation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

h. Emission Limitation
100 lbs of SO2/1,000 lbs of sulfur processed

Applicable Compliance Method
The permittee shall demonstrate compliance by conducting emission testing in accordance with the requirements in section A.V.1. and by the monitoring and record keeping in A.III.1 and A.III.3.

VI. Miscellaneous Requirements

1. Within 180 days of the effective date of this permit, the permittee shall update the existing assurance/quality control plan for the continuous SO_2 monitoring system designed to ensure continuous valid and representative readings of SO_2. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous SO_2 monitoring system must be kept on site and available for inspection during regular office hours.

2. Within 180 days of the effective date of this permit, the permittee shall update the existing assurance/quality control plan for the continuous O_2 designed to ensure continuous valid and representative readings. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous O_2 system must be kept

on site and available for inspection during regular office hours.

Emissions Unit ID: P040

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements
P041 - Butane-Butylene (B-B)Treater	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-31-05(A)(3) (Cont.)
	OAC rule 3745-18-06(E)
	OAC rule 3745-17-11(B)(1)
	OAC rule 3745-17-07(A)

Applicable Emissions Limitations/Control Measures	
See A.I.2.a and A.I.2.b.	250 parts per million by volume (dry basis) of SO2 at 0% excess air.
Combustion emissions from the tail gas incinerator shall not exceed the following:	Process emissions during the extended startup period shall not exceed 26.40 tons of SO2 (see A.I.2.b).
0.14 lb of particulate emissions (PE)/hr, 0.61 ton of PE/yr (see A.I.2.c);	See A.I.2.d.
1.84 lbs of nitrogen oxides (NOx)/hr, 8.06 tons of NOx/yr;	none (See A.I.2.e.)
1.88 lbs of carbon monoxide (CO)/hr, 8.23 tons of CO/yr; and	none (See A.I.2.f.)
0.10 lb of volatile organic compounds (VOC)/hr, 0.44 ton of VOC/yr.	
Visible PE shall not exceed 20% opacity, as a six-minute average.	
Process emissions from the tail gas incinerator shall not exceed the following:	
19.18 lbs of sulfur dioxide (SO2)/hr, as a 12-hr average, and 84.02 tons of SO2/yr; and	

2. Additional Terms and Conditions

2.a The spent air stream from the B-B Treater shall be routed to the oxidation chamber of the new tail gas incinerator at the sulfur recovery unit (SRU), emissions unit P040. The new tail gas incinerator is a common egress point for emissions from the SRU and the B-B Treater spent air stream; therefore, all the emission limitations are combined for these emission units (P040 and P041).

2.b The permittee has indicated that due to the long construction schedule for the SRU, the B-B Treater will be in operation prior to the completion of the modifications to the SRU. In order to minimize emissions during the extended startup period, the permittee shall route the spent air stream from P041 to the incinerator at the existing SRU.

SO2 emissions shall not exceed 26.40 tons during the extended startup period. This period shall be from the date of the issuance of this permit, until such time as the modifications are completed for emissions unit P040, or until 10/31/2005, whichever comes first.

2.c It is assumed that all particulate emissions are PM_{10}.

2.d The emission limitation specified by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2.e The uncontrolled mass rate of PE* from this emissions unit is less than 10 pounds/hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight rate is equal to zero. "Process weight" is defined in OAC rule 3745-17-01(B)(14).

* The burning of gaseous fuels is the only source of PE from this emissions unit.

2.f This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.

II. Operational Restrictions

None

Emissions Unit ID: P041

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain equipment to continuously monitor and record SO_2 from this emissions unit in units of the applicable standard. The span value of the continuous emission monitoring system shall be 500 ppm SO_2. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

   The permittee shall maintain records of all data obtained by the continuous SO_2 monitoring system including, but not limited to, parts per million of SO_2 on an instantaneous (one-minute) basis, and lbs/hr of SO_2; as a 12-hr average, results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.

   Prior to the installation of the continuous SO_2 monitoring system, the permittee shall submit information detailing the proposed location of the sampling site(s) in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2 for approval by the Ohio EPA, Central Office.

   The permittee shall maintain a written quality assurance/quality control (QA/QC) plan for the SO_2 CEMS that follows the requirements of 40 CFR Part 60 Appendix F. The QA/QC plan and logbook for the SO_2 CEMS must be kept on site and available for inspection during regular office hours.

2. The permittee shall operate and maintain equipment to continuously monitor and record the O_2 from this emissions unit in percent O_2. The span value of the continuous emission monitoring system shall be 10 percent O_2. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 or as approved by the Ohio EPA, Central Office. The permittee shall maintain records of all data obtained by the continuous O_2 monitoring system including, but not limited to percent O_2 on an instantaneous (one-minute) basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

   Prior to the installation of the continuous O_2 monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 3 for approval by the Ohio EPA, Central Office.

3. During the period that the spent air stream from the new B-B Treater is being routed to the existing incinerator, the permittee shall calculate and record on a monthly basis, the SO_2 emission rate (in tons per month and total tons, to date) for the extended startup period. The calculated SO_2 emission rate shall be the emissions from the incinerator solely associated with the new B-B Treater. The SO2 emission rate for the spent air stream shall be determined as follows:

a. Samples of the spent air stream shall be obtained on a monthly basis, and analyzed for SO2 content by appropriate methods approved by the Ohio EPA.

b. The permittee shall monitor and record the spent air stream flow rate, each month, using a gas flow meter at the inlet of the incinerator.

c. The permittee shall use the information in A.III.3.a and A.III.3.b to calculate the SO_2 emission rate (in tons per month and total tons, to date) for the extended startup period.

IV. Reporting Requirements

1. Pursuant to OAC rule 3745-15-04 and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, duration magnitude, reason (if known), and corrective actions taken (if any), of all instances of SO_2 values in excess of the applicable lbs/hr and ppm limitations. These reports shall also contain the total SO_2 emissions for the calendar quarter (in tons).

   The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting any continuous SO_2 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.

Pursuant to OAC rule 3745-15-04 and ORC sections 3704.03(I) and 3704.031, the permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60.7. The summary shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following the end of each calendar quarter in a manner prescribed by the Director.

2. Pursuant to 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting any continuous O_2 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.

3. All quarterly reports and deviation reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

4. The permittee shall provide a report detailing the SO_2 emissions during the extended startup period. This report shall be submitted within 30 days after the completion of the extended startup period.

V. Testing Requirements

1. Within 180 days following start-up of the emissions unit with the new tail gas incinerator, the permittee shall conduct certification tests of the continuous SO_2 monitoring system pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous SO_2 monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6.

2. Within 180 days following start-up of this emissions unit with the new tail gas incinerator, the permittee shall conduct certification tests of such equipment pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 3. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to

examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous O_2 monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 3.

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

a. Emission Limitation
0.14 lb of PE/hr, 0.61 ton of PE/yr

Applicable Compliance Method
The permittee may demonstrate compliance with the hourly limitation by multiplying the appropriate particulate emission factor of 7.6 pounds per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), by the maximum fuel flow rate of 18,431 standard cubic foot/hr. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 5 of 40 CFR Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

b. Emission Limitation
1.84 lbs of NOx/hr, 8.06 tons of NOx/yr

Applicable Compliance Method
The permittee may demonstrate compliance with the hourly limitation by multiplying the appropriate NOx emission factor of 100 pounds per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), by the maximum fuel flow rate of 18,431 standard cubic foot/hr. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 7 of 40 CFR Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

c. Emission Limitation
1.88 lbs of CO/hr, 8.23 tons of CO/yr

Applicable Compliance Method
The CO emission limitation was derived from a vendor guarantee of a maximum CO emission rate of 100 ppm. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 10 of 40 CFR Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

d. Emission Limitation
0.10 lb of VOC/hr, 0.44 ton of VOC/yr

Applicable Compliance Method
The permittee may demonstrate compliance with the hourly limitation by multiplying the appropriate VOC emission factor of 5.5 pounds per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), by the maximum fuel flow rate of 18,431 standard cubic foot/hr. If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with 40 CFR, Part 60, Appendix A, Methods 1 through 4, and 18, 25, or 25A, as appropriate.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

e. Emission Limitation
Visible PE shall not exceed 20% opacity, as a six-minute average.

Applicable Compliance Method
If required, the permittee shall demonstrate compliance with the visible particulate emission limitation above in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the requirements specified in OAC rule 3745-17-03(B)(1).

f. Emission Limitation
250 parts per million by volume (dry basis) of SO2 at 0% excess air

Applicable Compliance Method
The permittee shall demonstrate compliance by the monitoring and record keeping in A.III.1 and A.III.2.

Compliance shall also be demonstrated by emission testing requirements contained in section A.V.1. for emissions unit P040 (see A.I.2.a).

g. Emission Limitation
19.18 lbs of SO2/hr, as a 12-hr average, 84.02 tons of SO2/yr

Applicable Compliance Method
Compliance with the hourly limitation shall be demonstrated by emission testing requirements contained in section A.V.1. for emissions unit P040 (see A.I.2.a).

The annual emission limitation was derived by multiplying the hourly emission rate derived from the following equation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

h. Emission Limitation
26.40 tons of SO2 during the extended startup period

Applicable Compliance Method
Compliance with this mass emission limitation shall be demonstrated by the record keeping specified in condition A.III.3.

VI. Miscellaneous Requirements

1. Within 180 days of the effective date of this permit, the permittee shall update the existing assurance/quality control plan for the continuous SO_2 monitoring system designed to ensure continuous valid and representative readings of SO_2. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous SO_2 monitoring system must be kept on site and available for inspection during regular office hours.

Emissions Unit ID: P041

2. Within 180 days of the effective date of this permit, the permittee shall update the existing assurance/quality control plan for the continuous O_2 designed to ensure continuous valid and representative readings. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous O_2 system must be kept on site and available for inspection during regular office hours.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit ID: T191

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
T191 - above ground internal floating roof tank (2,284,273 gallons)(prior modification of PTI No. 03-5325 issued 1/24/91 to increase vapor pressure and emissions)(group 1 storage vessel)	OAC rule 3745-31-05(A)	40 CFR 63 Subpart CC: 40 CFR 63.640(n)(1) OAC rule 3745-21-09 (L)
	40 CFR 60 Subpart Kb: 40 CFR 60.112b 40 CFR 60.113b 40 CFR 60.115b 40 CFR 60.116b 40 CFR 61 Subpart FF	

Applicable Emissions Limitations/Control Measures	
5.19 tons of volatile organic compounds (VOC)/yr The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart Kb; 40 CFR Part 61, Subpart FF; 40 CFR Part 63, Subpart CC; and OAC rule 3745-21-09(L). See A.I.2.n. see Subpart Kb sections below: See A.I.2.e through A.I.2.m. See A.III.2 through A.III.5 and A.IV.1. See A.III.6, A.III.7, and A.IV.2 through A.IV.4. See A.III.1.c, A.III.8 through A.III.10, and A.IV.5. The control requirements, monitoring and/or record keeping requirements, and reporting requirements are satisfied by the requirements in 40 CFR 60 Subpart Kb.	If the emissions unit is subject to the provisions of 40 CFR subpart Kb, the permittee is required to comply only with the requirements of 40 CFR subpart Kb. See A.I.2.a through A.I.2.d, and A.III.1.a through A.III.1.b.

Emissions Unit ID: T191

2. Additional Terms and Conditions

2.a The maximum true vapor pressure of organic liquid stored in this storage tank shall not exceed 11.1 psia.

2.b The fixed roof storage tank shall be equipped with an internal floating roof.

2.c The automatic bleeder vents shall be closed at all times, except when the roof is floated off or landed on the roof leg supports; and the rim vents, if provided, shall be set to open when the roof is being floated off the roof leg supports or is at the manufacturer's recommended setting.

2.d All openings, except stub drains, shall be equipped with a cover, seal or lid, which is in the closed position at all times, except when in actual use for tank gauging or sampling.

2.e The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

2.f Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:

i. A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.

ii. Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage

vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.

iii. A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

2.g Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

2.h Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.

2.i Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.

2.j Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.

2.k Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

2.l Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

2.m Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

Emissions Unit ID: T191

2.n Best available technology (BAT) control requirements for this emissions unit have also been determined to include the use of submerged fill.

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping

1. The permittee shall maintain records of the following information:

   a. The types of petroleum liquids stored in the tank.

   b. The maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid that has a maximum true vapor pressure greater than 1.0 pound per square inch absolute.

   c. Available data on the storage temperature may be used to determine the maximum true vapor pressure as in the following:

      i. For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.

      ii. For crude oil or refined petroleum products the vapor pressure may be obtained by the following:

         (a) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference--see Sec. 60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

         (b) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.

iii. For other liquids, the vapor pressure:

(a) May be obtained from standard reference texts, or

(b) Determined by ASTM Method D2879-83 (incorporated by reference--see Sec. 60.17); or

(c) Measured by an appropriate method approved by the Administrator; or

(d) Calculated by an appropriate method approved by the Administrator.

d. The annual throughput of any petroleum liquid stored in the tank

2. Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the permittee shall repair the items before filling the storage vessel.

3. For vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the permittee shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in A.IV.3. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

4. For vessels equipped with a double-seal system as specified in A.I.2.f.ii.:

a. Visually inspect the vessel as specified in A.III.5. at least every 5 years; or

b. Visually inspect the vessel as specified in A.III.3.

5. Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the permittee shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in A.III.3 and A.III.4.b and at intervals no greater than 5 years in the case of vessels specified in A.III.4.a.

6. The permittee shall keep copies of all reports and records required in A.IV.2, A.IV.3, and A.IV.4, for at least 2 years.

7. Keep a record of each inspection performed as required by A.III.2, A.III.3, A.III.4, and A.III.5. Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

8. The permittee shall keep copies of all records required by A.III.2 through A.III.10, excluding A.III.9, for at least 2 years.

9. The permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel (shall be kept for the life of the source).

10. The permittee of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements.

    a. Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in A.III.1.c.

    b. For vessels in which the vapor pressure of the anticipated liquid composition is above 76.6 kPa (11.1 psia), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:

        i. ASTM Method D2879-83 (incorporated by reference--see 40 CFR. 60.17); or

ii. ASTM Method D323-82 (incorporated by reference--see 40 CFR 60.17); or

iii. As measured by an appropriate method as approved by the Administrator.

IV. Reporting Requirements

1. Notify the Director (the Northwest District Office) in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by A.III.2 and A.III.5 to afford the Director (the Northwest District Office) the opportunity to have an observer present. If the inspection required by A.III.5 is not planned and the permittee could not have known about the inspection 30 days in advance or refilling the tank, the permittee shall notify the Director (the Northwest District Office) at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately

followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Director (the Northwest District Office) at least 7 days prior to the refilling.

2. Furnish the Director (the Northwest District Office) with a report that describes the control equipment and certifies that the control equipment meets the specifications of A.I.2.e through A.I.2.m and A.III.2. This report shall be an attachment to the notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.

3. If any of the conditions described in A.III.3 are detected during the annual visual inspection required by A.III.3, a report shall be furnished to the Director (the Northwest District Office) within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.

4. After each inspection required by A.III.4 that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in A.III.4.b, a report shall be furnished to the Director (the Northwest District Office) within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of A.I.2.e through A.I.2.m or A.III.4 and list each repair made.

5. The permittee of each storage vessel either with a design capacity greater than or equal to 151 cubic meters storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa (0.75 psia) or with a design capacity greater than or equal to 75 cubic meters but less than 151 cubic meters storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa (4.0 psia) shall notify the Director (the Northwest District Office) within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.

V. Testing Requirements

1. Compliance with the emission limitation in section A.I.1 of these terms and conditions shall be determined in accordance with the following method:

   a. Emission Limitation:
   5.19 tons of VOC/yr

Emissions Unit ID: T191

Applicable Compliance Method:
The permittee shall demonstrate compliance by working and breathing loss calculations as determined by the U.S. EPA Tanks 4.0 program.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
T192 - above ground internal floating roof tank (2,284,273 gallons)(prior modification of PTI No. 03-5325 issued 1/24/91 to increase vapor pressure and emissions)(group 1 storage vessel)	OAC rule 3745-31-05(A)(3)	
		40 CFR 63 Subpart CC: 40 CFR 63.640(n)(1)
		OAC rule 3745-21-09 (L)
	40 CFR 60 Subpart Kb:	
	40 CFR 60.112b	
	40 CFR 60.113b	
	40 CFR 60.115b	
	40 CFR 60.116b	
	40 CFR 61 Subpart FF	

Applicable Emissions Limitations/Control Measures	
5.19 tons of volatile organic compounds (VOC)/yr The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart Kb; 40 CFR Part 61, Subpart FF; 40 CFR Part 63, Subpart CC; and OAC rule 3745-21-09(L). See A.I.2.n. see Subpart Kb sections below: See A.I.2.e through A.I.2.m. See A.III.2 through A.III.5 and A.IV.1. See A.III.6, A.III.7, and A.IV.2 through A.IV.4. See A.III.1.c, A.III.8 through A.III.10, and A.IV.5. The control requirements, monitoring and/or record keeping requirements, and reporting requirements are satisfied by the requirements in 40 CFR 60 Subpart Kb.	If the emissions unit is subject to the provisions of 40 CFR subpart Kb, the permittee is required to comply only with the requirements of 40 CFR subpart Kb. See A.I.2.a through A.I.2.d and A.III.1.a through A.III.1.b.

Emissions Unit ID: T192

2. Additional Terms and Conditions

2.a The maximum true vapor pressure of organic liquid stored in this storage tank shall not exceed 11.1 psia.

2.b The fixed roof storage tank shall be equipped with an internal floating roof.

2.c The automatic bleeder vents shall be closed at all times, except when the roof is floated off or landed on the roof leg supports; and the rim vents, if provided, shall be set to open when the roof is being floated off the roof leg supports or is at the manufacturer's recommended setting.

2.d All openings, except stub drains, shall be equipped with a cover, seal or lid, which is in the closed position at all times, except when in actual use for tank gauging or sampling.

2.e The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

2.f Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:

i. A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.

ii. Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage

vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.

iii. A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

2.g Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

2.h Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.

2.i Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.

2.j Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.

2.k Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

2.l Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

2.m Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

Emissions Unit ID: T192

2.n Best available technology (BAT) control requirements for this emissions unit have also been determined to include the use of submerged fill.

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping

1. The permittee shall maintain records of the following information:

   a. The types of petroleum liquids stored in the tank.

   b. The maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid that has a maximum true vapor pressure greater than 1.0 pound per square inch absolute.

   c. Available data on the storage temperature may be used to determine the maximum true vapor pressure as in the following:

      i. For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.

      ii. For crude oil or refined petroleum products the vapor pressure may be obtained by the following:

         (a) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference--see Sec. 60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

         (b) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.

iii. For other liquids, the vapor pressure:

(a) May be obtained from standard reference texts, or

(b) Determined by ASTM Method D2879-83 (incorporated by reference--see Sec. 60.17); or

(c) Measured by an appropriate method approved by the Administrator; or

(d) Calculated by an appropriate method approved by the Administrator.

d. The annual throughput of any petroleum liquid stored in the tank

2. Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the permittee shall repair the items before filling the storage vessel.

3. For vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the permittee shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in A.IV.3. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

4. For vessels equipped with a double-seal system as specified in A.I.2.f.ii.:

a. Visually inspect the vessel as specified in A.III.5. at least every 5 years; or

b. Visually inspect the vessel as specified in A.III.3.

5. Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the permittee shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in A.III.3 and A.III.4.b and at intervals no greater than 5 years in the case of vessels specified in A.III.4.a.

6. The permittee shall keep copies of all reports and records required in A.IV.2, A.IV.3, and A.IV.4, for at least 2 years.

7. Keep a record of each inspection performed as required by A.III.2, A.III.3, A.III.4, and A.III.5. Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

8. The permittee shall keep copies of all records required by A.III.2 through A.III.10, excluding A.III.9, for at least 2 years.

9. The permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel (shall be kept for the life of the source).

10. The permittee of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements.

10.a Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in A.III.1.c.

10.b For vessels in which the vapor pressure of the anticipated liquid composition is above 76.6 kPa (11.1 psia), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:

i. ASTM Method D2879-83 (incorporated by reference--see 40 CFR. 60.17); or

ii. ASTM Method D323-82 (incorporated by reference--see 40 CFR 60.17); or

iii. As measured by an appropriate method as approved by the Administrator.

IV. Reporting Requirements

1. Notify the Director (the Northwest District Office) in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by A.III.2 and A.III.5 to afford the Director (the Northwest District Office) the opportunity to have an observer present. If the inspection required by A.III.5 is not planned and the permittee could not have known about the inspection 30 days in advance or refilling the tank, the permittee shall notify the Director (the Northwest District Office) at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately

followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Director (the Northwest District Office) at least 7 days prior to the refilling.

2. Furnish the Director (the Northwest District Office) with a report that describes the control equipment and certifies that the control equipment meets the specifications of A.I.2.e through A.I.2.m and A.III.2. This report shall be an attachment to the notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.

3. If any of the conditions described in A.III.3 are detected during the annual visual inspection required by A.III.3, a report shall be furnished to the Director (the Northwest District Office) within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.

4. After each inspection required by A.III.4 that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in A.III.4.b, a report shall be furnished to the Director (the Northwest District Office) within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of A.I.2.e through A.I.2.m or A.III.4 and list each repair made.

5. The permittee of each storage vessel either with a design capacity greater than or equal to 151 cubic meters storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa (0.75 psia) or with a design capacity greater than or equal to 75 cubic meters but less than 151 cubic meters storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa (4.0 psia) shall notify the Director (the Northwest District Office) within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.

V. Testing Requirements

1. Compliance with the emission limitation in section A.I.1 of these terms and conditions shall be determined in accordance with the following method:

   a. Emission Limitation:
   5.19 tons of VOC/yr

Emissions Unit ID: T192

Applicable Compliance Method:
The permittee shall demonstrate compliance by working and breathing loss calculations as determined by the U.S. EPA Tanks 4.0 program.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
T194 - above ground fixed roof tank (338,411 gallons) (prior modification of PTI No. 03-5770 issued 10/2/91 to increase vapor pressure and emissions)(group 2 storage vessel)	OAC rule 3745-31-05(A)	37.80 tons of volatile organic compounds (VOC)/yr The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart Kb; 40 CFR Part 63, Subpart CC; and OAC rule 3745-21-09(L).
	40 CFR 60 Subpart Kb: 40 CFR 60.116b	See A.I.2.a. See A.III.1.c, and A.III.2 through A.III.5.
	40 CFR 63 Subpart CC: 40 CFR 63.640(n)(1)	If the emissions unit is subject to the provisions of 40 CFR subpart Kb, the permittee is required to comply only with the requirements of 40 CFR subpart Kb.
	OAC rule 3745-21-09 (L)	None (see A.II.1.)

2. Additional Terms and Conditions

2.a Best available technology (BAT) control requirements for this emissions unit

have been determined to include the use of submerged fill.

II. Operational Restrictions

1. The permittee shall not place, store, or hold in this fixed roof tank any petroleum liquid which, as stored, has a true vapor pressure greater than or equal to 5.2 kPa (0.75 psia).

III. Monitoring and/or Recordkeeping

1. The permittee shall maintain records of the following information:

   a. The types of petroleum liquids stored in the tank.

   b. The maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid.

   c. Available data on the storage temperature may be used to determine the maximum true vapor pressure as in the following:

      i. For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.

      ii. For crude oil or refined petroleum products the vapor pressure may be obtained by the following:

         (a) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference--see Sec. 60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

         (b) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.

iii. For other liquids, the vapor pressure:

(a) May be obtained from standard reference texts, or

(b) Determined by ASTM Method D2879-83 (incorporated by reference--see Sec. 60.17); or

(c) Measured by an appropriate method approved by the Administrator; or

(d) Calculated by an appropriate method approved by the Administrator.

d. The annual throughput of any petroleum liquid stored in the tank

2. The permittee shall keep copies of all records required by A.III.1 through A.III.5, excluding A.III.3, for at least 2 years.

3. The permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel (shall be kept for the life of the source).

4. The permittee of each storage vessel either with a design capacity greater than or equal to 151 cubic meters storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa or with a design capacity greater than or equal to 75 cubic meters but less than 151 cubic meters storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa shall notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.

5. The permittee of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements.

a. Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in A.III.1.c.

IV. Reporting Requirements

1. If the permittee places, stores, or holds in the fixed roof tank any petroleum liquid with a true vapor pressure which is equal to or greater than 0.75 pounds per square inch absolute, the permittee shall notify the Director (the Northwest District Office) within 30 days of becoming aware of the occurrence.

V. Testing Requirements

1. Compliance with the emission limitation in section A.I.1 of these terms and conditions

shall be determined in accordance with the following method:

a. Emission Limitation:
37.80 tons of VOC/yr

Applicable Compliance Method:
The permittee shall demonstrate compliance by working and breathing loss calculations as determined by the U.S. EPA Tanks 4.0 program.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
T198 - above ground fixed roof tank (121,176 gallons) (prior modification of PTI No. 03-6387 issued 5/28/92 to increase vapor pressure and emissions)(group 2 storage vessel)	OAC rule 3745-31-05(A)	5.66 tons of volatile organic compounds (VOC)/yr The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart Kb; 40 CFR Part 63, Subpart CC; and OAC rule 3745-21-09(L).
	40 CFR 60 Subpart Kb: 40 CFR 60.116b	See A.I.2.a. See A.III.1.c, and A.III.2 through A.III.5.
	40 CFR 63 Subpart CC: 40 CFR 63.640(n)(1)	If the emissions unit is subject to the provisions of 40 CFR subpart Kb, the permittee is required to comply only with the requirements of 40 CFR subpart Kb.
	OAC rule 3745-21-09 (L)	None (see A.II.1.)

2. Additional Terms and Conditions

2.a Best available technology (BAT) control requirements for this emissions unit

have been determined to include the use of submerged fill.

II. Operational Restrictions

1. The permittee shall not place, store, or hold in this fixed roof tank any petroleum liquid which, as stored, has a true vapor pressure greater than or equal to 5.2 kPa (0.75 psia).

III. Monitoring and/or Recordkeeping

1. The permittee shall maintain records of the following information:

   a. The types of petroleum liquids stored in the tank.

   b. The maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid.

   c. Available data on the storage temperature may be used to determine the maximum true vapor pressure as in the following:

      i. For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.

      ii. For crude oil or refined petroleum products the vapor pressure may be obtained by the following:

         (a) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference--see Sec. 60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

(b) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.

iii. For other liquids, the vapor pressure:

(a) May be obtained from standard reference texts, or

(b) Determined by ASTM Method D2879-83 (incorporated by reference--see Sec. 60.17); or

(c) Measured by an appropriate method approved by the Administrator; or

(d) Calculated by an appropriate method approved by the Administrator.

d. The annual throughput of any petroleum liquid stored in the tank

2. The permittee shall keep copies of all records required by A.III.1 through A.III.5, excluding A.III.3, for at least 2 years.

3. The permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel (shall be kept for the life of the source).

4. The permittee of each storage vessel either with a design capacity greater than or equal to 151 cubic meters storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa or with a design capacity greater than or equal to 75 cubic meters but less than 151 cubic meters storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa shall notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.

5. The permittee of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements.

a. Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in A.III.1.c.

IV. Reporting Requirements

1. If the permittee places, stores, or holds in the fixed roof tank any petroleum liquid with a true vapor pressure which is equal to or greater than 0.75 pounds per square inch absolute, the permittee shall notify the Director (the Northwest District Office) within 30 days of becoming aware of the occurrence.

V. Testing Requirements

1. Compliance with the emission limitation in section A.I.1 of these terms and conditions

shall be determined in accordance with the following method:

a. Emission Limitation:
5.66 tons of VOC/yr

Applicable Compliance Method:
The permittee shall demonstrate compliance by working and breathing loss calculations as determined by the U.S. EPA Tanks 4.0 program.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit ID: T201

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements
T201 - above-ground external floating roof storage tank with a capacity of 8,000,000 gallons, concrete shell construction, a mechanical shoe primary seal, and a rim-mounted secondary seal (prior modification of PTI No. 03-7095 issued 7/14/93 to increase vapor pressure and emissions)(group 1 storage vessel)	OAC rule 3745-31-05(A) OAC rule 3745-21-09(Z) 40 CFR Part 60, Subpart Kb: 40 CFR 60.112b(a)(2) 40 CFR 60.113b(b) 40 CFR 60.115b 40 CFR 60.116b 40 CFR Part 63, Subpart CC: 40 CFR 63.640(n)(1)

Applicable Emissions Limitations/Control Measures	
52.48 tons of volatile organic compounds (VOC)/yr	If the emissions unit is subject to the provisions of 40 CFR Part 60, Subpart Kb, the permittee is required to comply only with the requirements of 40 CFR Part 60, Subpart Kb.
The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart Kb; 40 CFR Part 63, Subpart CC; and OAC rule 3745-21-09(Z).	
See A.I.2.l.	
See A.I.2.a through A.I.2.g, A.III.1 through A.III.3, A.III.4.b, A.III.4.d, and A.IV.1.	
see Subpart Kb sections below:	
See A.I.2.h, A.I.2.i, and A.II.2.	
See A.I.2.j, A.I.2.k, A.II.1, and A.III.5 through A.III.8.	
See A.III.9, and A.IV.2 through A.IV.4.	
See A.III.4.a, A.III.4.e, A.III.10, A.III.11, and A.IV.5.	

2. Additional Terms and Conditions

2.a Any external floating roof storage tank equipped with either a 1) liquid-mounted primary seal and rim-mounted secondary seal; or a 2) mechanical shoe primary seal and a rim-mounted secondary seal; or a 3) mechanical shoe primary seal and a shoe-mounted, secondary seal, provided the shoe-mounted secondary seal was installed prior to 1/10/81; or a 4) vapor-mounted primary seal and a rim-mounted secondary seal; or a 5) flexible wiper primary seal and a rim-mounted secondary seal; shall meet the following requirements:

i. there shall be no visible holes, tears, or other openings in the seal or seal fabric;

ii. for the primary seal, the total seal gap area shall not exceed 10.0 square inches per foot of tank diameter (equivalent of 10.0 square inches for every 3.14 linear feet of tank circumference); and

iii. for the secondary seal, the total seal gap area shall not exceed 1.0 square inch per foot of tank diameter (equivalent of 1.0 square inch for every 3.14 linear feet of tank circumference).

The permittee may change the seal types during the term of this permit provided that a written notification and revised "emission activity category" form, including the results of the latest seal gap measurements, are submitted to the appropriate Ohio EPA District Office or local air agency within 30 days after the change occurs.

2.b Any opening in the external floating roof, except automatic bleeder vents, rim space vents, leg sleeves, stub drains, and slotted gauging/sampling wells shall be equipped with:

i. a cover, seal or lid which remains in the closed position at all times without any visible gaps, except when the opening is in actual use; and

ii. a projection into the tank below the liquid surface.

2.c Any automatic bleeder vent shall remain in the closed position, except when the external floating roof is floated off or landed on the roof leg supports.

2.d Any rim vent shall be set to open only at the manufacturer's recommended

setting, except when the external floating roof is being floated off the roof leg supports.

2.e Any emergency roof drain shall be equipped with a slotted membrane fabric cover or other device which covers at least 90 percent of the area of the opening.

2.f Any stub drain shall be equipped with a projection into the tank below the liquid surface.

2.g Any slotted gauging/sampling well shall be equipped with an object which floats on the liquid surface within the well and which covers at least 90 percent of the area of the well opening.

2.h An external floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a vessel with no fixed roof. Each external floating roof must meet the following specifications:

i. Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(a) The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in section A.II.1, the seal shall completely cover the annular space between the edge of the floating roof and tank wall.

(b) The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in section A.II.1.

ii. Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is

floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

2.i The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

2.j If a failure that is detected during inspections required in section A.III.5 cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in 40 CFR 60.115b(b)(4). Such extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

2.k Notify the Administrator 30 days in advance of any gap measurements required by section A.III.5 to afford the Administrator the opportunity to have an observer present.

2.l Best available technology (BAT) control requirements for this emissions unit have been determined to include the use of submerged fill.

II. Operational Restrictions

1. Make necessary repairs or empty the storage vessel within 45 days of identification in any inspection for seals not meeting the requirements listed in the following:

   a. The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 square centimeters per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm.

      i. One end of the mechanical shoe shall extend into the stored liquid, and the other end shall extend a minimum vertical distance of 61 cm above the stored liquid surface.

      ii. There shall be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.

b. The secondary seal shall meet the following requirements:

i. The secondary seal shall be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in section A.III.6.c.

ii. The accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 square centimeters per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm.

iii. There shall be no holes, tears, or other openings in the seal or seal fabric.

2. The permittee shall not place, store, or hold in this external floating roof tank any petroleum liquid which, as stored, has a true vapor pressure greater than 76.6 kPa (11.11 psia).

III. Monitoring and/or Recordkeeping

1. The seal and seal fabric shall be inspected annually for visible holes, tears, or other openings.

2. The secondary seal gap shall be measured annually in accordance with the methods specified in 40 CFR 60, Subpart Kb, which are equivalent to or more stringent than OAC rule 3745-21-10.

3. The primary seal gap shall be measured at least once every 5 years, in accordance with the methods specified in 40 CFR 60, Subpart Kb, which are equivalent to or more stringent than OAC rule 3745-21-10.

4. The permittee shall maintain records of the following information:

a. the dates and results of any seal and seal fabric inspections and any seal gap measurements;

b. the types of petroleum liquids stored in the tank;

c. the annual throughput of any petroleum liquid stored in the tank; and

d. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid that has a maximum true vapor pressure greater than 1.0 pound per square inch absolute.

e. Available data on the storage temperature may be used to determine the maximum true vapor pressure as in the following:

i. For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.

ii. For crude oil or refined petroleum products the vapor pressure may be obtained by the following:

(a) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference--see 40 CFR 60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

(b) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.

5. Determine the gap areas and maximum gap widths, between the primary seal and the wall of the storage vessel and between the secondary seal and the wall of the storage vessel according to the following frequencies:

a. Measurements of gaps between the tank wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the vessel or within 60 days of the initial fill with VOL and at least once every 5 years thereafter.

b. Measurements of gaps between the tank wall and the secondary seal shall be performed within 60 days of the initial fill with VOL and at least once per year thereafter.

c. If any emissions unit ceases to store VOL for a period of 1 year or more, subsequent introduction of VOL into the vessel shall be considered an initial fill

for the purposes of sections A.III.5.a and A.III.5.b.

6. Determine gap widths and areas in the primary and secondary seals individually by the following procedures:

   a. Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.

   b. Measure seal gaps around the entire circumference of the tank in each place where a 0.32-cm diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the wall of the storage vessel and measure the circumferential distance of each such location.

   c. The total surface area of each gap described in sections A.III.6.b shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

7. Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each seal by the nominal diameter of the tank and compare each ratio to the respective standards in sections A.II.1.

8. Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.

   a. If the external floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, the permittee shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL.

   b. For all the inspections required by section A.III.8, the permittee shall notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the Administrator the opportunity to inspect the storage vessel prior to refilling. If the inspection required by section A.III.8 is not planned and the permittee could not have known about the inspection 30 days in advance of refilling the tank, the permittee shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation

may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

9. Keep a record of each gap measurement performed as required by sections A.III.5 through A.III.7. Each record shall identify the storage vessel in which the measurement was performed and shall contain:

   a. the date of measurement;

   b. the raw data obtained in the measurement; and

   c. the calculations described in sections A.III.6 and A.III.7.

10. The permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. These records shall be kept for the life of the emissions unit.

11. The permittee of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements:

   a. Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in section A.III.4.d.

   b. For vessels in which the vapor pressure of the anticipated liquid composition is above 76.6 kPa, an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:

      i. ASTM Method D2879-83 (incorporated by reference--see 40 CFR 60.17); or

      ii. ASTM Method D323-82 (incorporated by reference--see 40 CFR 60.17); or

      iii. as measured by an appropriate method as approved by the Administrator.

IV. Reporting Requirements

1. The permittee shall notify the Director (the Northwest District Office) within 30 days of any seal and seal fabric inspection or any seal gap measurement which documents a violation of the applicable control equipment requirements. The notification shall also describe the corrective actions which have been or will be taken to achieve compliance.

2. Furnish the Director (the Northwest District Office) with a report that describes the control equipment and certifies that the control equipment meets the specifications of

sections A.I.2.h, A.I.2.i, A.II.1, A.III.6, and A.III.7. This report shall be an attachment to the notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.

3. Within 60 days of performing the seal gap measurements required by section A.III.5, furnish the Director (the Northwest District Office) with a report that contains:

   a. the date of measurement;

   b. the raw data obtained in the measurement; and

   c. the calculations described in sections A.III.6 and A.III.7.

4. After each seal gap measurement that detects gaps exceeding the limitations specified by section A.II.1, submit a report to the Director (the Northwest District Office) within 30 days of the inspection. The report will identify the vessel and contain the information specified in section A.IV.3 and the date the vessel was emptied or the repairs made and date of repair.

5. The permittee of each storage vessel either with a design capacity greater than or equal to 151 cubic meters storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa or with a design capacity greater than or equal to 75 cubic meters but less than 151 cubic meters storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa shall notify the Director (the Northwest District Office) within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.

V. Testing Requirements

1. Compliance with the emission limitation in section A.I.1 of these terms and conditions shall be determined in accordance with the following method:

   a. Emission Limitation:
   52.48 ton of VOC/yr

   Applicable Compliance Method:
   The permittee shall demonstrate compliance by working and breathing loss calculations as determined by the U.S. EPA Tanks 4.0 program.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None