



State of Ohio Environmental Protection Agency

P.O. Box 1049, 1800 WaterMark Dr.  
Columbus, Ohio 43266-0149  
(614) 644-3020  
FAX (614) 644-2329

George V. Voinovich  
Governor

Donald R. Schregardus  
Director

Re: Permit to Install  
Lucas County  
Application No: 04-770  
NSPS

CERTIFIED MAIL

October 28, 1992

BP OIL COMPANY - TOLEDO REFINERY  
MICHAEL L. FINKLER  
P. O. BOX 696  
TOLEDO, OH 43694

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions I urge you to read it carefully.

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

Environmental Board of Review  
236 East Town Street, Room 300  
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo, Manager  
Field Operations & Permit Section  
Division of Air Pollution Control

cc: US EPA  
TOLEDO ENVIRONMENTAL SERVICES DIVISION



---

## Permit to Install Terms and Conditions

---

Application No. 04-770  
APS Premise No. 0448020007  
Permit Fee: \$1560.00

Name of Facility: BP OIL COMPANY - TOLEDO REFINERY

Person to Contact: MICHAEL L. FINKLER

Address: P. O. BOX 696  
TOLEDO, OH 43694

Location of proposed source(s): 4001 CEDAR POINT RD  
OREGON, OHIO

Description of proposed source(s):  
2 - 720,000 GALLON WASTEWATER STORAGE TANKS.

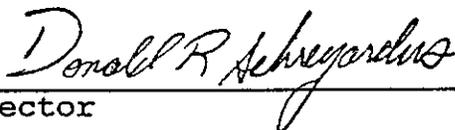
Date of Issuance: October 28, 1992

Effective Date: October 28, 1992

The above named entity is hereby granted a permit to install for the above described source(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit 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 and specifications, the above described source(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency



Director

TERMINATION OF PERMIT TO INSTALL

Substantial construction for installation must take place within 18 months of the effective date of this permit. 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.

NOTICE OF INSPECTION

The Director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above-named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, or to examine records or reports pertaining to the construction, modification or installation of the source(s) of environmental pollutants identified within this permit.

CONSTRUCTION OF NEW SOURCE(S)

The proposed source(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 are inadequate or cannot meet applicable standards.

If the construction of the proposed source(s) has already begun or has been completed prior to the date the Director of the Ohio 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 Ohio Administrative Code (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 prove to be inadequate or cannot meet applicable standards.

BP OIL COMPANY - TOLEDO REFINERY  
Application No. 04-770  
Page 3 of 16  
October 28, 1992

PERMIT TO INSTALL FEE

In accordance with Ohio Revised Code 3745.11, the specified Permit to Install fee must be remitted within 15 days of the effective date of this permit to install.

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.

APPLICABILITY

This Permit to Install is applicable only to the contaminant sources identified. Separate application must be made to the Director for the installation or modification of any other contaminant sources.

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.

PERMIT TO OPERATE APPLICATION

A Permit to Operate application and a \$15 application fee must be submitted to the appropriate field office for each air contaminant source in this Permit to Install. In accordance with OAC Rule 3745-35-02, the application shall be made at least 90 days prior to start-up of the source.

AIR EMISSION SUMMARY

The air contaminant sources listed below comprise the Permit to Install for BP OIL COMPANY - TOLEDO REFINERY located in Lucas County. The sources listed below shall not exceed the emission limits/control requirements contained in the table. This condition in no way limits the applicability of any other state or federal regulations. Additionally, this condition does not limit the applicability of additional special terms and conditions of this permit.

<u>Ohio EPA Source Number</u>	<u>Source Identification/Description</u>	<u>BAT Determination</u>	<u>Applicable Federal and OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control &amp; Usage Requirements</u>
T166	720,000 Gal Wastewater Storage Tank	EFR Tank With Double Seals, Submerged Fill and Draw-Offs Equipped With Water Seals	3745-31-05 NSPS Subpart Kb, NSPS Subpart QQQ	EFR Tank With Double Seals, Submerged Fill and Draw-offs Equipped With Water Seals. Negligible VOC Emissions
T167	720,000 Gal Wastewater Storage Tank	EFR Tank With Double Seals, Submerged Fill and Draw-offs Equipped With Water Seals	3745-31-05 NSPS Subpart Kb, NSPS Subpart QQQ	EFR Tank With Double Seals, Submerged Fill and Draw-offs Equipped With Water Seals. Negligible VOC Emissions

SUMMARY

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons/Year</u>
Volatile Organic Compounds	Negligible

NSPS REQUIREMENTS

The following sources are subject to the applicable provisions of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60.

<u>Source No.</u>	<u>Source Description</u>	<u>NSPS Regulation (Subpart)</u>
T166	720,000 Gal Wastewater Storage	Kb, QQQ
T167	720,000 Gal Wastewater Storage	Kb, QQQ

The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

1. Construction date (no later than 30 days after such date);
2. Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
3. Actual start-up date (within 15 days after such date); and
4. Date of performance testing (at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency  
Permit Management Unit  
P.O. Box 1049  
Columbus, OH 43266-0149

and

Toledo Pollution Control  
26 Main Street  
Toledo, OH 43605

#### RECORD(S) RETENTION AND AVAILABILITY

All records required by this Permit to Install shall be retained on file for a period of not less than two years unless otherwise indicated by Ohio Environmental Protection Agency. All records shall be made available to the Director, or any authorized representative of the Director, for review during normal business hours.

REPORTING REQUIREMENTS

Unless otherwise specified, reports required by the Permit to Install need only be submitted to Toledo Pollution Control Division, 26 Main Street, Toledo, Ohio 43605.

WASTE DISPOSAL

The owner/operator shall comply with any applicable state and federal requirements governing the storage, treatment, transport and disposal of any waste material generated by the operation of the sources.

MAINTENANCE OF EQUIPMENT

This source and its associated air pollution control system(s) shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers in order to minimize air contaminant emissions.

MALFUNCTION/ABATEMENT

In accordance with OAC Rule 3745-15-06, any malfunction of the source(s) or associated air pollution control system(s) shall be reported immediately to the Toledo Pollution Control Division, 26 Main Street, Toledo, Ohio 43605.

Except as provided by OAC Rule 3745-15-06(A)(3), scheduled maintenance of air pollution control equipment that requires the shutdown or bypassing of air pollution control system(s) must be accompanied by the shutdown of the associated air pollution sources.

AIR POLLUTION NUISANCES PROHIBITED

The air contaminant source(s) identified in this permit may not cause a public nuisance in violation of OAC Rule 3745-15-07.

NINETY DAY OPERATING PERIOD

BP OIL COMPANY - TOLEDO REFINERY  
Application No. 04-770  
Page 7 of 16  
October 28, 1992

The facility will be permitted to operate during a 90-day period in accordance with OAC Rule 3745-35-02(C)(4)(b). The purpose of this period of operation is to fulfill the performance test conditions used in the determination of compliance with the provisions of this Permit to Install or other applicable Ohio EPA rules.

#### MISCELLANEOUS STORAGE TANKS

Unless otherwise indicated, BAT for any miscellaneous storage tanks identified within this permit consists of the use of submerged fill into the storage tanks. The submerged fill pipe(s) are to be installed within six (6) inches of the bottom of the storage tank.

#### CONSTRUCTION COMPLIANCE CERTIFICATION

The applicant shall provide Ohio EPA with written certification (see enclosed form) that the facility has 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.

NEW SOURCE PERFORMANCE STANDARD SUBPART Kb

The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.

In accordance with 40 CFR 60.116b(a) and (b), the owner and operator of the following storage vessel(s) shall keep readily accessible records showing the dimension of each storage vessel and an analysis showing the capacity of each storage vessel for the life of each source.

<u>source number(s):</u>	<u>tank size:</u>
T166	720,000 Gallon
T167	720,000 Gallon

In addition,

- A. In accordance with 40 CFR 60.116b(a) and (c), the owner and operator of the following storage vessel(s) shall maintain a record of the volatile organic liquid (VOL) stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period. Records shall be retained for a minimum of two years.

<u>source number(s):</u>	<u>tank size:</u>
T166	720,000 Gallon
T167	720,000 Gallon

ADDITIONAL SPECIAL TERMS AND CONDITIONS

NSPS Subpart Kb  
Control Requirements

1. The external floating roof must meet the following specifications:
  - A. 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.

- i. The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in 60.113b(4), the seal shall completely cover the annular space between the edge of the floating roof and tank wall.
  - ii. 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 60.113b(b)(4).
- B. 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.
- C. 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.

#### Testing and Procedures

1. After installing the control equipment required to meet 60.112b(a)(2)(external floating roof), the owner or operator shall:

- A. 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 frequency.
- i. 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.
  - ii. 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.
  - iii. If any source 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 paragraphs (1)(A)(i) and (1)(A)(ii) of this section.
- B. Determine gap widths and areas in the primary and secondary seals individually by the following procedures:
- i. Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.
  - ii. 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.
  - iii. The total surface area of each gap described in paragraph (1)(B)(ii) of this section 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.

- C. 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 seal by the nominal diameter of the tank and compare each ratio to the respective standards in paragraphs (1)(D) of this section.
- D. Make necessary repairs or empty the storage vessel within 45 days of identification in any inspection for seals not meeting the requirements listed in (1)(D)(i) and (ii) of this section:
- i. The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed  $212 \text{ Cm}^2$  per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm.
    - a. One end of the mechanical shoe is to extend into the stored liquid, and the other end is to extend a minimum vertical distance of 61 cm above the stored liquid surface.
    - b. There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.
  - ii. The secondary seal is to meet the following requirements:
    - a. The secondary seal is to 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 paragraph (1)(B)(iii) of this section.
    - b. The accumulated area of gaps between the tank wall and the secondary seal shall not exceed  $21.2 \text{ cm}^2$  per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm.
    - c. There are to be no holes, tears, or other openings in the seal or seal fabric.

iii. If a failure that is detected during inspections required in paragraph (b)(1) of 60.113b(b) cannot be repaired within 45 days and if the vessel cannot be emptied 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 60.115b(b)(4). Such an 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.

E. Notify the Administrator 30 days in advance of any gap measurements required by paragraph (1)(A) of this section to afford the Administrator the opportunity to have an observer present.

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

i. 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 owner or operator 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.

ii. For all inspections required by paragraph (1)(F) of this section, the owner or operator 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 paragraph (1)(F) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance of refilling the tank, the owner or operator 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.

Reporting and Recordkeeping

1. After installing control equipment in accordance with 61.112b(a)(2) (external floating roof), the owner or operator shall meet the following requirements.
  - A. Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of 60.112b(a)(2) and 60.113b(b)(2), (b)(3), and (b)(4). This report shall be an attachment to the notification required by 60.7(a)(3).
  - B. Within 60 days of performing the seal gap measurements required by 60.113b(b)(1), furnish the Administrator with a report that contains:
    - i. The date of measurement
    - ii. The raw data obtained in the measurement
    - iii. The calculations described in 60.113b(b)(2) and (b)(3).
  - C. Keep a record of each gap measurement performed as required by 60.113b(b). Each record shall identify the storage vessel in which the measurement was performed and shall contain:
    - i. The date of measurement.
    - ii. The raw data obtained in the measurement.
    - iii. The calculations described in 60.113b(b)(2) and (b)(3).
  - D. After each seal gap measurement that detects gaps exceeding the limitations specified by 60.113b(b)(4), submit a report to the Administrator within 30 day of the inspection. The report will identify the vessel and contain the information specified in paragraph (1)(B) of this section and the date the vessel was emptied or the repairs made and date of repair.

Monitoring of Operations

1. The owner or operator shall keep copies of all records required by this section, except for the record required by paragraph (2) of this section, for at least 2 years. The record required by paragraph (2) of this section will be kept for the life of the source.
2. The owner or operator of each storage vessel as specified in 60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. Each storage vessel with a design capacity less than 75 cubic meters is subject to no provision of this subpart other than those required by this paragraph.
3. Except as provided in paragraphs (6) and (7) of this section, the owner or operator 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 greater than or equal to 3.5 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 greater than or equal to 15.0 kPa shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of the VOL during the respective storage period.
4. Except as provided in paragraph (7) of this section, the owner or operator 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. Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below.
  - A. 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.

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

i. 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 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).

ii. 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 determinations 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.

C. For other liquids, the vapor pressure:

i. May be obtained from standard reference texts, or

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

iii. Measured by an appropriate method approved by the Administrator; or

iv. Calculated by an appropriate method approved by the Administrator.

6. The owner or operator 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 paragraph (5) of this section.

- B. For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in 60.112b(b), 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 60.17)
  - ii. ASTM Method D323-82 (incorporated by reference--see 60.17); or
  - iii. As measured by an appropriate method as approved by the Administrator.
7. The owner or operator of each vessel equipped with a closed vent system and control device meeting the specifications of 60.112b id exempt from the requirements of paragraphs (3) and (4) of this section.

NSPS Subpart QQQ

1. Each tank drain shall be equipped with water seal controls.
2. Each drain in active service shall be checked by visual or physical inspection initially and monthly thereafter for indications of low water levels or other conditions that would reduce the effectiveness of the water seal controls.
3. Whenever low water levels or missing or improperly installed caps or plugs are identified, water shall be added or first efforts at repair shall be made as soon as practical, but not later than 24 hours after detection.