



State of Oregon
Department of
Environmental
Quality

STANDARD AIR CONTAMINANT DISCHARGE PERMIT

Department of Environmental Quality
Northwest Region
700 NE Multnomah St., Suite 600
Portland, OR 97232

This permit is being issued in accordance with the provisions of ORS 468A.040 and based on the land use compatibility findings included in the permit record.

ISSUED TO:

American Petroleum Environmental Services, Inc.
11535 N. Force Avenue
Portland, OR 97217

INFORMATION RELIED UPON:

Application No.: 27496 and 28930
Date Received: 9/30/2013 and 1/30/2017
Revised thru 4/17/2017

PLANT SITE LOCATION:

11535 N. Force Avenue
Portland, OR 97217

LAND USE COMPATIBILITY FINDING:

Approving Authority: City of Portland
Approval Date: 12/13/1993

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY

Michael Orman, E.I.T., Northwest Region Air Quality Manager

Dated

Source(s) Permitted to Discharge Air Contaminants (OAR 340-216-8010):

Table 1 Code	Source Description	SIC/NAICS
Part , B, 64	Petroleum Refining and Re-refining of Lubricating oils and greases including asphalt production by distillation and the reprocessing of oils and/or solvents for fuels.	5093/423930

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1.0 GENERAL EMISSION STANDARDS AND LIMITS

- 1.1. Visible Emissions** The permittee must not allow visible emission from any air contaminant sources other than fugitive emission sources to equal or exceed 20%. Opacity must be measured as a six-minute block average using EPA Method 9, a continuous opacity monitoring system (COMS) installed and operated in accordance with the DEQ Continuous Monitoring Manual or 40 CFR part 60, or an alternative monitoring method approved by DEQ that is equivalent to EPA Method 9.
- 1.2. Particulate Matter Emissions** The permittee must comply with the following particulate matter emission limits, as applicable:
- a. Particulate matter emissions from any fuel burning equipment installed, constructed, or modified before April 16, 2015 must not exceed 0.14 grains per dry standard cubic foot, corrected to 12% CO₂ or 50% excess air.
 - b. Particulate matter emissions from any fuel burning equipment installed, constructed, or modified on or after April 16, 2015 must not exceed 0.10 grains per dry standard cubic foot, corrected to 12% CO₂ or 50% excess air.
 - c. Particulate matter emissions from any fuel burning equipment, except natural gas and liquefied petroleum gas fuel burning equipment, must not exceed the emission rate shown in Figure 1 of OAR 340-208-0610 as a function of the maximum heat input when using all other fuels, except natural gas and LPG
 - d. Particulate matter emissions from any air contaminant source installed, constructed, or modified before April 16, 2015 other than fuel burning equipment and fugitive emission sources must not exceed 0.14 grains per dry standard cubic foot.
 - e. Particulate matter emissions from any air contaminant source installed, constructed, or modified on or after April 16, 2015 other than fuel burning equipment and fugitive emission sources must not exceed 0.10 grains per dry standard cubic foot.
- 1.3. Fugitive Emissions** The permittee must take reasonable precautions to prevent fugitive dust emissions, as measured by EPA method 22, by:
- a. Using, where possible, water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;
 - b. Applying water or other suitable chemicals on unpaved roads, materials stockpiles, and other surfaces which can create airborne dusts;
 - c. Enclosing (full or partial) materials stockpiles in cases where application of water or other suitable chemicals are not sufficient to prevent particulate matter from becoming airborne;

- d. Installing and using hoods, fans, and fabric filters to enclose and vent the handling of dusty materials;
 - e. Installing adequate containment during sandblasting or other similar operations;
 - f. Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne;
 - g. Promptly removing earth or other material that does or may become airborne from paved streets; and
- 1.4. Particulate Matter Fallout** The permittee must not cause or permit the deposition of any particulate matter larger than 250 microns in size at sufficient duration or quantity, as to create an observable deposition upon the real property of another person.
- 1.5. Nuisance and Odors**
- a. The permittee must not cause or allow air contaminants from any source to cause a nuisance. Nuisance conditions will be verified by DEQ personnel.
 - b. The permittee must update, implement and maintain a plan to monitor and minimize odor emissions to the atmosphere during all oil receiving, recycling, storage and transfer processes. The permittee must maintain a copy of the plan on site and follow the plan during all periods of operation. The plan must be submitted to DEQ for approval and the permittee must update the plan when required by DEQ to address any ongoing odor concerns.
- 1.6. Fuels and Fuel Sulfur Content** The permittee is allowed to burn natural gas, butane, propane and the fuel oils listed below:
- a. If the permittee burns any of the fuels listed below, the sulfur content must not exceed:
 - i. 0.3% sulfur by weight for ASTM Grade 1 distillate oil;
 - ii. 0.5% sulfur by weight for ASTM Grade 2 distillate oil;
 - iii. 1.75% sulfur by weight for residual oil;
 - b. The permittee is allowed to use on-specification used oil as fuel which contains no more than 0.5% sulfur by weight. The permittee must obtain analyses from the marketer or, if generated on site, have the used oil analyzed. The permittee must demonstrate that each shipment of oil does not exceed the used oil specifications contained in 40 CFR Part 279.11, Table 1.
 - c. The permittee is not allowed to use any off-specification used oil as defined in 40 CFR 279.11 Table 1, as fuel.

2.0 SPECIFIC PERFORMANCE AND EMISSION STANDARDS

- 2.1. Typically Achievable Control Technology (TACT)**
- In accordance with OAR 340-226-0130, the permittee must comply with the established Typically Achievable Control Technology (TACT) requirements established herein. In order to do so the permittee must:
- Install and operate a thermal oxidizer to control emissions from the PESCO oil refinery, oil heater #3, oil heater #4, sulfonation process and oil polishing system by the date specified in condition 6.1. The thermal oxidizer must be designed, installed and operated to control the full flow from the associated processes that it controls and maintain a minimum of 97% VOC control efficiency.
 - Maintain the thermal oxidizer at a minimum temperature of 1600° F, or the temperature established during the last source test that demonstrated 97% or greater VOC control efficiency, at all times when any of the associated processes are in operation. The oxidizer must be equipped with an audible and visual alarm to alert operators of a low temperature condition.
 - Cease all operations exhausting to the oxidizer within 60 minutes if the thermal oxidizer temperature drops below the levels specified in Condition 2.1b. if the appropriate temperature is not re-attained within that time period.
- 2.2. New Source Performance Standards (NSPS subpart Dc)**
- The permittee must not combust any oil in heaters 3 or 4 (HTR-3 or HTR-4) that contains greater than 0.5 weight percent sulfur.
 - The permittee must sample and analyze the fuel oil in the plant site fuel tank prior to burning the fuel in heaters 3 and 4 (HTR-3 and HTR-4) to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the permittee must sample the fuel oil in the plant site fuel tank after each time oil is added to the tank.
- 2.3. National Emission Standards for Hazardous Air Pollutants (NESHAP Subpart 6J)**
- The permittee must conduct burner tune-up on oil heater 3 (HTR-3) within 60 days of permit issuance, or provide documentation that the initial tune-ups have been completed in accordance with 40 CFR 63.11214 and within the past two years. The permittee must conduct burner tune-up on oil heater 4 (HTR-4) within 60 days of re-commissioning in process, or provide documentation that the tune up has been completed in accordance with 40 CFR 63.11214, and within the past two years.
 - The permittee must conduct burner tune-ups on oil heaters 3 and 4 (HTR-3 and HTR-4) ever two years, beginning with the date of the last tune-up.
 - The tune-ups must consist of the following:

- i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection).
- ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment must be consistent with the manufacturer's specifications, if available.
- iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection).
- iv. Optimize total emissions of CO. This optimization must be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject.
- v. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.

2.4. Fuel Metals and PCB Content

The onsite use of used oil as fuel must not exceed the sulfur content as stated in Condition 1.6, or the following specifications as outlined in 40 CFR Part 279.11, Table 1 and listed below.

Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Flash point	100 °F minimum
Total halogens	4,000 ppm maximum*
PCB content	2 ppm maximum**

Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Flash point	100 °F minimum
Total halogens	4,000 ppm maximum*
PCB content	<2 ppm maximum**

*Used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under 40 CFR 279.10(b).

**The applicable standards for the burning of used oil containing PCB's are imposed by 40 CFR 761.20(e).

3.0 PLANT SITE EMISSION LIMITS

- 3.1. Plant Site Emission Limits (PSEL)** The permittee must not cause or allow plant site emissions to exceed the following:

Pollutant	Limit	Units
PM	24	tons per year
PM ₁₀	14	tons per year
PM _{2.5}	9	tons per year
SO ₂	39	tons per year
NO _x	39	tons per year
CO	99	tons per year
VOC	39	tons per year
GHG (CO ₂ e)	74,000	tons per year

- 3.2. Annual Period** The annual plant site emissions limits apply to any 12-consecutive calendar month period.

4.0 COMPLIANCE DEMONSTRATION AND SOURCE TESTING

- 4.1. Source Testing Requirements** In addition to the testing required by the compliance schedule in Condition 6.0, the permittee must demonstrate that the thermal oxidizer continues to operate at a minimum VOC control efficiency of 97% by conducting a source test for VOC emissions at the inlet and outlet of the oxidizer, every 24 months from the latest valid test, using the following test methods and procedures:
- a. EPA method 25, 25A or 18 must be used for VOC emissions;
 - b. Control device efficiency testing must be conducted while the associated equipment is operating at 90 to 110% of normal maximum production;
 - c. The following parameters must be monitored and recorded during the source test:
 - i. Visible emissions using EPA method 9 within 30 minutes before, during, or 30 minutes after each test run;
 - ii. Process operating parameters for each system exhausted to the oxidizer;

- iii. Thermal oxidizer operating parameters, including temperature and flow rate;
 - iv. Type and amount of product processed thru each process (refinery, sulfonation, oil polishing); and
 - v. Type and quantity of fuel burned in each device (heater 3, heater 4, steam boilers, thermal oxidizer)
- d. All tests must be conducted in accordance with DEQ's Source Sampling Manual and the approved pretest plan. The pretest plan must be submitted at least 30 days in advance and approved by the Regional Source Test Coordinator. Test data and results must be submitted for review to the Regional Source Test Coordinator within 60 days unless otherwise approved in the pretest plan.
- e. Only regular operating staff may adjust the combustion system or production processes and emission control parameters during the source test and within two hours prior to the source test. Any operating adjustments made during the source test, which are a result of consultation with source testing personnel, equipment vendors or consultants, may render the source test invalid.
- f. The permittee must make appropriate repairs to the VOC control system and repeat any source test that does not demonstrate a minimum of 97% VOC control efficiency. The retest must be completed within 90 days of any failed or invalid source test.

4.2. Monitoring Requirements

The permittee must monitor the operation and maintenance of the plant and associated air contaminant control devices as follows:

- a. Temperature of the thermal oxidizer combustion chamber at all times when associated processes are in operation - continuously
- b. Type, quantity, sulfur and metals content of fuels for each oil heater (HTR-3 and HTR-4) – monthly and when oil is added to the fuel tank(s)
- c. Type, quantity, sulfur and metals content of oil entering and exiting the oil polishing system (OPS-1) – weekly (testing of entering and exiting oil must correlate to the same product)
- d. Quantity of sulfur used in the sulfonation process – weekly
- e. Type and quantity of used oil and other products received at the facility - monthly
- f. Type and quantity of each product produced at the facility – monthly
- g. True vapor pressure of petroleum liquids stored in each tank - monthly
- h. Fence line visible observations using EPA method 22 – weekly

- i. Conduct odor monitoring twice weekly according to the odor monitoring plan approved by DEQ
- j. All monitoring necessary to support reporting requirements in Condition 8.0

4.3. PSEL Compliance Monitoring

The permittee must demonstrate compliance with the PSEL for each 12-consecutive calendar month period based on the following calculation for each pollutant:

$$E = \Sigma(EF \times P)/2000 \text{ lbs}$$

where:

$$\begin{aligned} E &= \text{pollutant emissions (ton/yr);} \\ EF &= \text{pollutant emission factor (see Condition 13.0);} \\ P &= \text{process production (see Condition 14.0)} \end{aligned}$$

4.4. Emission Factors

The permittee must use the default emission factors provided in Condition 13.0 for calculating pollutant emissions, unless alternative emission factors are approved in writing by DEQ. The permittee may request or DEQ may require using alternative emission factors provided they are based on actual test data or other documentation (e.g., AP-42 compilation of emission factors) that has been reviewed and approved by DEQ.

4.5. Tank working and breathing loss estimates

The permittee must use the equations in EPA's Compilation of Air Pollutant Emission Factors (AP-42) chapter 7.1 or EPA TANKS emission estimation software (Version 4.09D or later), or other similar software, to estimate the emissions from the storage tanks on site. The estimated emissions must be added to those calculated in Condition 4.3 to demonstrate compliance with the PSEL.

5.0 SPECIAL CONDITIONS

5.1. Special Conditions

- a. The permittee must not combust any material that is considered hazardous waste.
- b. The permittee must inspect all valves, flanges, pumps, piping and any other potential areas of used oil or product leakage weekly and repair any leaks within 5 days of discovery. If it is not possible to repair the leaks within 5 days, the permittee must notify DEQ in writing with reasons why the repair will take longer, how impacts from the leak are being mitigated in the meantime and the projected timeline for repairs. Repairs must be completed as expeditiously as possible. Permittee must also keep a written log for all leak inspections and record the time, date, issue, resolution, and employee name.

- c. The permittee must maintain properly operating pressure vacuum relief valves on all storage and process tanks to minimize volatile emissions from the tanks. The permittee must inspect and test all tank PV valves annually to ensure operation within manufacturers' specifications using procedures recommended by the American Petroleum Institute. The permittee must maintain records of all such inspections and testing.
- d. The permittee must not store any liquid with a true vapor pressure equal or exceeding 27.6 kPa (4.00 psi) at storage temperature in any tank equal or exceeding 75 cubic meters (19,800 gallons) without first meeting the requirements of 40 CFR 60 subpart Kb. Use ASTM method D 2879 or similar method for determining true vapor pressure of stored liquids.
- e. The permittee must not store any liquid with a true vapor pressure equal or exceeding 10.3 kPa (1.5 psi) at storage temperature in tank 12 (tank with capacity exceeding 40,000 gallons, constructed after May 18, 1978) without first meeting the requirements of 40 CFR 60 subpart Ka.

6.0 COMPLIANCE SCHEDULE

6.1. Compliance Schedule

The permittee must provide control for the PESCO refinery, oil heater #3 (HTR-3), oil heater #4 (HTR-4), sulfonation process (SULFO-1) and oil polishing system (OPS-1) in accordance with the following schedule:

- a. By no later than July 25, 2017, the permittee must complete the installation of the thermal oxidizer to control volatile organic compound emissions from: PESCO refinery, oil heater #3 (HTR-3), oil heater #4 (HTR-4), sulfonation process (SULFO-1) and oil polishing system (OPS-1). The permittee must notify DEQ in writing within seven days when the above is completed.
- b. By no later than 60 days after completion of construction and issuance of this permit, the permittee must demonstrate that the PESCO refinery, oil heater #3 (HTR-3), oil heater #4 (HTR-4), sulfonation process (SULFO-1) and oil polishing system (OPS-1) are capable of operating at maximum operating capacity in compliance with Condition 2.1 and verify emission factors used for PSEL compliance by conducting a source test on the thermal oxidizer for Carbon monoxide (CO – EPA method 10), Nitrogen oxides (NOx – EPA method 7E), Sulfur dioxide (SO₂ – EPA method 6C), Volatile organic compounds (VOC – EPA method 25, 25A or 18 – at inlet and outlet), metals emission (all - EPA method 29). The following parameters must be monitored and recorded during the source test:

- i. Visible emissions using EPA method 9 within 30 minutes before, during, or 30 minutes after each test run;
 - ii. Process operating parameters for each system exhausted to the oxidizer;
 - iii. Thermal oxidizer operating parameters, including temperature and flow rate;
 - iv. Type and amount of product process thru each process (refinery, sulfonation, oil polishing); and
 - v. Type and quantity of fuel burned in each device (heater 3, heater 4, steam boilers, thermal oxidizer)
- c. All tests must be conducted in accordance with DEQ's Source Sampling Manual and the approved pretest plan. The pretest plan must be submitted at least 30 days in advance and approved by the Regional Source Test Coordinator. Test data and results must be submitted for review to the Regional Source Test Coordinator within 45 days unless otherwise approved in the pretest plan.
- d. Only regular operating staff may adjust the combustion system or production processes and emission control parameters during the source test and within two hours prior to the source test. Any operating adjustments made during the source test, which are a result of consultation with source testing personnel, equipment vendors or consultants, may render the source test invalid.

7.0 RECORDKEEPING REQUIREMENTS

- 7.1. Operation and Maintenance** The permittee must maintain the following records related to the operation and maintenance of the plant and associated air contaminant control devices:
- a. Thermal oxidizer temperature – continuously
 - b. Results from weekly fence line visible emission observations
 - c. Results from the weekly odor inspections
 - d. Quantity of used oil processed thru each system at the facility (PESCO refinery, sulfonation process, oil polishing system) – monthly and annually
 - e. If used oil is used as fuel, the permittee must obtain analyses from the marketer or, if generated on site, have the used oil analyzed. The permittee must demonstrate that the used oil does not exceed the used oil specifications contained in 40 CFR Part 279.11, Table 1.

f. All records necessary to support reporting requirements in Condition 8.0

- 7.2. Excess Emissions** The permittee must maintain records of excess emissions as defined in OAR 340-214-0300 through 340-214-0340 (recorded on occurrence). Typically, excess emissions are caused by process upsets, startups, shutdowns, or scheduled maintenance. In many cases, excess emissions are evident when visible emissions are greater than 20% opacity as a six-minute block average. If there is an ongoing excess emission caused by an upset or breakdown, the permittee must cease operation of the equipment or facility no later than 48 hours after the beginning of the excess emissions, unless continued operation is approved by DEQ in accordance with OAR 340-214-0330(4).
- 7.3. Complaint Log** The permittee must maintain a log of all written complaints and complaints received via telephone that specifically refer to air pollution concerns associated to the permitted facility. The log must include a record of the permittee's actions to investigate the validity of each complaint and a record of actions taken for complaint resolution.
- 7.4. Retention of Records** Unless otherwise specified, the permittee must retain all records for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application and make them available to DEQ upon request. The permittee must maintain the two (2) most recent years of records onsite.

8.0 REPORTING REQUIREMENTS

- 8.1. Excess Emissions** The permittee must notify DEQ of excess emissions events if the excess emission is of a nature that could endanger public health.
- a. Such notice must be provided as soon as possible, but never more than one hour after becoming aware of the problem. Notice must be made to the regional office identified in Condition 11.0 by email, telephone, facsimile, or in person.
 - b. If the excess emissions occur during non-business hours, the permittee must notify DEQ by calling the Oregon Emergency Response System (OERS). The current number is 1-800-452-0311.
 - c. The permittee must also submit follow-up reports when required by DEQ.
- 8.2. Semi-annual NSPS Dc** The permittee must submit semi-annual reports for the type and quantity of fuel burned in HTR-3 and HTR-4. Semi-annual reports must be submitted by July 31 for the first half of the year (January 1 thru June 30) and with the annual report (February 15) for the second half of the year (July 1 thru December 31).

8.3. Annual Report

For each year this permit is in effect, the permittee must submit to DEQ by **February 15** two (2) copies of the following information for the previous calendar year:

- a. Operating parameters:
 - i. Type and quantity of fuel burned in each device (HTR-3, HTR-4, TO-1, steam boilers, other) – monthly and annually
 - ii. Used products received on site including, but not limited to used oil, waste water, used filters – monthly and annually
 - iii. Maximum sulfur content of oil burned in HTR-3 and HTR-4 – monthly and annually
 - iv. Used oil processed thru each process (PESCO, Sulfo, OPS) – monthly and annually
 - v. Amount of sulfur received on site for sulfonation system- monthly and annually
 - vi. True vapor pressure of petroleum liquids stored in each tank – monthly
- b. A summary of annual pollutant emissions determined each month in accordance with Condition 4.3.
- c. Records of all planned and unplanned excess emissions events.
- d. Summary of complaints relating to air quality received by permittee during the year.
- e. Summary of all tank pressure vacuum relief valve inspections and testing.
- f. List permanent changes made in plant equipment, production levels, and pollution control equipment which affected air contaminant emissions.
- g. List major maintenance performed on pollution control equipment.

8.4. Greenhouse Gas Registration and Reporting

If the calendar year emission rate of greenhouse gases (CO₂e) is greater than or equal to 2,756 tons (2,500 metric tons), the permittee must register and report its greenhouse gas emissions to DEQ in accordance with OAR 340-215.

8.5. Notice of Change of Ownership or Company Name

The permittee must notify DEQ in writing using a Departmental “Transfer Application Form” within 60 days after the following:

- a. Legal change of the name of the company as registered with the Corporations Division of the State of Oregon; or
- b. Sale or exchange of the activity or facility.

- 8.6. Construction or Modification Notices** The permittee must notify DEQ in writing using a Departmental “Notice of Intent to Construct Form,” or other permit application form and obtain approval in accordance with OAR 340-210-0205 through 340-210-0250 before:
- a. Constructing, installing, or establishing a new stationary source that will cause an increase in any regulated pollutant emissions;
 - b. Making any physical change or change in operation of an existing stationary source that will cause an increase, on an hourly basis at full production, in any regulated pollutant emissions; or
 - c. Constructing or modifying any air pollution control equipment.

9.0 ADMINISTRATIVE REQUIREMENTS

- 9.1. Permit Renewal Application** The permittee must submit the completed application package for renewal of this permit **180 days prior to the expiration date**. Two (2) copies of the application must be submitted to the DEQ Permit Coordinator listed in Condition 11.0.
- 9.2. Permit Modifications** Application for a modification of this permit must be submitted within **60 days** prior to the source modification. When preparing an application, the applicant should also consider submitting the application 180 days prior to allow DEQ adequate time to process the application and issue a permit before it is needed. A special activity fee must be submitted with an application for the permit modification. The fees and two (2) copies of the application must be submitted to the DEQ Business Office.

10.0 FEES

- 10.1. Annual Compliance Fee** The permittee must pay the annual fee specified in OAR 340-216-8020, Table 2, Part 2 for a Standard ACDP on **December 1** of each year this permit is in effect. An invoice indicating the amount, as determined by DEQ regulations will be mailed prior to the above date. **Late fees in accordance with Part 4 of the table will be assessed as appropriate.**
- 10.2. Change of Ownership or Company Name Fee** The permittee must pay the non-technical permit modification fee specified in OAR 340-216-8020, Table 2, Part 3(a) with an application for changing the ownership or the name of the company.
- 10.3. Special Activity Fees** The permittee must pay the special activity fees specified in OAR 340-216-8020, Table 2, Part 3 (b through k) with an application to modify the permit.

11.0 DEQ CONTACTS / ADDRESSES

- 11.1. Business Office** The permittee must submit payments for invoices, applications to modify the permit, and any other payments to DEQ's Business Office:
Department of Environmental Quality
Accounting / Revenue
700 NE Multnomah St., Suite 600
Portland, Oregon 97232
- 11.2. Permit Coordinator** The permittee must submit all notices and applications that do not include payment to the DEQ's Permit Coordinator:
Department of Environmental Quality
Air Quality Program
700 NE Multnomah St., Suite 600
Portland, Oregon 97232
- 11.3. Report Submittals** Unless otherwise notified, the permittee must submit all reports (annual reports, source test plans and reports, etc.) to DEQ's Region. If you know the name of the Air Quality staff member responsible for your permit, please include it:

Department of Environmental Quality
Air Quality Program
700 NE Multnomah St., Suite 600
Portland, Oregon 97232
- 11.4. Web Site** Information about air quality permits and DEQ's regulations may be obtained from the DEQ web page at www.deq.state.or.us

12.0 GENERAL CONDITIONS AND DISCLAIMERS

- 12.1. Permitted Activities** This permit allows the permittee to discharge air contaminants from processes and activities related to the air contaminant source(s) listed on the first page of this permit until this permit expires, is modified, or is revoked.
- 12.2. Other Regulations** In addition to the specific requirements listed in this permit, the permittee must comply with all other legal requirements enforceable by DEQ.
- 12.3. Conflicting Conditions** In any instance in which there is an apparent conflict relative to conditions in this permit, the most stringent conditions apply.

- 12.4. Masking of Emissions** The permittee must not cause or permit the installation of any device or use any means designed to mask the emissions of an air contaminant that causes or is likely to cause detriment to health, safety, or welfare of any person or otherwise violate any other regulation or requirement.
- 12.5. DEQ Access** The permittee must allow DEQ's representatives access to the plant site and pertinent records at all reasonable times for the purposes of performing inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emissions discharge records and conducting all necessary functions related to this permit in accordance with ORS 468-095.
- 12.6. Permit Availability** The permittee must have a copy of the permit available at the facility at all times.
- 12.7. Open Burning** The permittee may not conduct any open burning except as allowed by OAR 340, division 264.
- 12.8. Asbestos** The permittee must comply with the asbestos abatement requirements in OAR 340, division 248 for all activities involving asbestos-containing materials, including, but not limited to, demolition, renovation, repair, construction, and maintenance.
- 12.9. Property Rights** The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.
- 12.10. Permit Expiration**
- a. A source may not be operated after the expiration date of the permit, unless any of the following occur prior to the expiration date of the permit:
 - i. A timely and complete application for renewal or for an Oregon Title V Operating Permit has been submitted, or
 - ii. Another type of permit (ACDP or Oregon Title V Operating Permit) has been issued authorizing operation of the source.
 - b. For a source operating under an ACDP or Oregon Title V Operating Permit, a requirement established in an earlier ACDP remains in effect notwithstanding expiration of the ACDP, unless the provision expires by its terms or unless the provision is modified or terminated according to the procedures used to establish the requirement initially.
- 12.11. Permit Termination, Revocation, or Modification** DEQ may modify or revoke this permit pursuant to OAR 340-216-0082 and 340-216-0084.

13.0 EMISSION FACTORS

Emissions device or activity	Pollutant	Emission Factor (EF)	EF units	EF Reference	
Heater #3 (HTR-3)	PM/PM ₁₀ /PM _{2.5}	3.3/2.3/1.6	Lbs/kgal #2 oil	DEQ AQ-EF04	
	CO	5			
	NO _x	20			
	SO ₂	71			
	VOC	0.2			
Heater #4 (HTR-4)	PM/PM ₁₀ /PM _{2.5}	3.3/2.3/1.6	Lbs/kgal #2 oil	DEQ AQ-EF04	
	CO	5			
	NO _x	20			
	SO ₂	71			
	VOC	0.2			
Thermal oxidizer (TO-01)	PM/PM ₁₀ /PM _{2.5}	2.5	Lbs/mmcf NG	DEQ AQ-EF05	
	CO	84			
	NO _x	100			
	SO ₂	1.7			
	VOC	5.5			
Refinery (PESCO)	CO	0.066	Lbs/hr	Engineering estimate	
	NO _x	0.063	Lbs/hr		
	VOC	1.443	Lbs/hr (uncontrolled)		
oil polishing system (OPS-1)	PM/PM ₁₀ /PM _{2.5}	2.5	Lbs/mmcf NG	DEQ AQ-EF05	
	CO	84			
	NO _x	100			
	SO ₂	6.95*			Lbs/kgal oil processed
	VOC	5.5			Lbs/mmcf NG
Sulfonation process (SULFO-1)	PM/PM ₁₀ /PM _{2.5}			Assumed included in other calculations	
	CO				
	NO _x				
	SO ₂				
	VOC				
Steam boilers (B-1 and B-2) [Used to heat molten sulfur tank]	PM/PM ₁₀ /PM _{2.5}	2.5	Lbs/mmcf NG	DEQ AQ-EF05	
	CO	84			
	NO _x	100			
	SO ₂	1.7			
	VOC	5.5			
Storage tanks	VOC	AP-42 chapter 7.1; EPA Tanks software; or similar calculation method			

*Assumes an input sulfur content of 875 ppm, output sulfur content of 300 ppm, sulfur remaining in system is 0.0575 wt percent of the total oil input. If any of the assumptions are found to be incorrect (such as input sulfur content being higher, or output sulfur content being lower) the material balance calculations for sulfur dioxide will need to be adjusted accordingly to determine SO₂ emissions. Refer to emission detail sheets for calculations.

14.0 PROCESS/PRODUCTION RECORDS

Emissions device or activity	Process or production parameter	Frequency
Heater #3 (HTR-3)	Fuel burned and sulfur content (type, gals and percent)	Monthly and annually
Heater #4 (HTR-4)	Fuel burned and sulfur content (type, gals and percent)	Monthly and annually
Thermal oxidizer (TO-01)	Natural gas burned (mmcf)	Monthly and annually
Refinery (PESCO)	Oil processed (gal)	Monthly and annually
oil polishing system (OPS-1)	Oil processed (gal)	Monthly and annually
Sulfonation process (SULFO-1)	Oil processed (gal)	Monthly and annually
Steam boilers (B-1 and B-2)	Natural gas burned (mmcf)	Monthly and annually
Each Storage tank	Throughput (gal)	Monthly and annually

15.0 ABBREVIATIONS, ACRONYMS, AND DEFINITIONS

ACDP	Air Contaminant Discharge Permit	NSR	New Source Review
		O ₂	oxygen
ASTM	American Society for Testing and Materials	OAR	Oregon Administrative Rules
		ORS	Oregon Revised Statutes
AQMA	Air Quality Maintenance Area	O&M	operation and maintenance
calendar year	The 12-month period beginning January 1st and ending December 31 st	Pb	lead
		PCD	pollution control device
CFR	Code of Federal Regulations	PM	particulate matter
CO	carbon monoxide	PM ₁₀	particulate matter less than 10 microns in size
CO _{2e}	carbon dioxide equivalent	PM _{2.5}	particulate matter less than 2.5 microns in size
DEQ	Oregon Department of Environmental Quality	ppm	part per million
dscf	dry standard cubic foot	PSD	Prevention of Significant Deterioration
EPA	US Environmental Protection Agency	PSEL	Plant Site Emission Limit
FCAA	Federal Clean Air Act	PTE	Potential to Emit
Gal	gallon(s)	RACT	Reasonably Available Control Technology
GHG	greenhouse gas	scf	standard cubic foot
gr/dscf	grains per dry standard cubic foot	SER	Significant Emission Rate
HAP	Hazardous Air Pollutant as defined by OAR 340-244-0040	SIC	Standard Industrial Code
		SIP	State Implementation Plan
I&M	inspection and maintenance	SO ₂	sulfur dioxide
lb	pound(s)	Special Control Area	as defined in OAR 340-204-0070
MMBtu	million British thermal units	VE	visible emissions
NA	not applicable	VOC	volatile organic compound
NESHAP	National Emissions Standards for Hazardous Air Pollutants	year	A period consisting of any 12-consecutive calendar months
NO _x	nitrogen oxides		
NSPS	New Source Performance Standard		