

**ASSIGNMENT**  
to  
**GENERAL AIR CONTAMINANT DISCHARGE PERMIT**

Lane Regional Air Protection Agency  
1010 Main St  
Springfield, OR 97477  
(541) 736-1056

**PERMITTEE:**

Morse Bros., Inc. dba Knife River Corporation  
– NW  
32260 Old Highway 34  
Tangent, Oregon 97389

**INFORMATION RELIED UPON:**

Application No.: 64015  
Date Received: 05/14/18

**PLANT SITE LOCATION:**

Knife River Eugene Asphalt  
1001 Division Avenue  
Eugene, Oregon 97404

**LAND USE COMPATIBILITY  
STATEMENT:**

Approving Authority: Lane County  
Approval Date: 09/12/01

**ASSIGNMENT:** The permittee identified above is assigned by the Lane Regional Air Protection Agency to the General ACDP listed below in accordance with ORS 468A.040, LRAPA Title 37 Section 37-0060(2) and based on the land use compatibility findings included in the permit record.



Merlyn L. Hough, Director

MAY 24 2018

Dated

**General Air Contaminant Discharge Permit Issued in Accordance with Section 37-0060:**

General ACDP Number	Expiration Date	Source Category Description	SIC
AQGP-007	04/27/28	Asphalt concrete paving plants, both stationary and portable (Title 37, Table 1, Part B, 7)	2951

**SUPPLEMENTAL INFORMATION:**

<b>Facility contact:</b>		
Name:	Jeff Steyaert	
Title:	Environmental Manager	
Phone number:	541-918-5142	
e-mail address:	jeff.steyaert@kniferiver.com	
<b>Permit Summary:</b>		
Source Test Requirement	Yes	No later than 180 of issuance of this permit and within 5 years of the previous source test
NSPS (40 CFR Part 60)	Yes	Subpart I
NESHAP (40 CFR Part 63)	No	N/A
<b>Reports Required:</b>		
Annual	Yes	February 15 <sup>th</sup>
NSPS	No	N/A
NESHAP	No	N/A
Other	Yes	Annual Burner Tuning, Source Test Protocols and Source Test Reports
Public Notice	Category I	
<b>Application review report:</b>		
LRAPA has reviewed the application for assignment to the General ACDP and determined that the application is complete and the subject facility qualifies for assignment to the General ACDP.		



## GENERAL AIR CONTAMINANT DISCHARGE PERMIT

Lane Regional Air Protection Agency  
1010 Main Street  
Springfield, OR 97477  
Telephone: (541) 736-1056

This permit is issued in accordance with the provisions of ORS 468A.040 and LRAPA 37-0060

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**ISSUED BY THE LANE REGIONAL AIR PROTECTION AGENCY**

*Max Hough for*  
\_\_\_\_\_  
Merlyn Hough, Director

*April 27, 2018*  
\_\_\_\_\_  
Dated

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Asphaltic concrete paving plant, stationary or portable, and associated material handling activities such as storage piles, conveyors, and vehicle traffic. Other equipment may include electric power generators with internal combustion engines. SIC 2951

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## **1.0 PERMIT ASSIGNMENT**

- 1.1 Qualifications** The permittee must meet all of the following conditions in order to qualify for assignment to this General Air Contaminant Discharge Permit (ACDP):
- a. The permittee is performing hot mix asphalt pavement production listed on the cover page of this permit, including supporting activities.
  - b. A Simple or Standard ACDP is not required for the source.
  - c. The source is not having ongoing, recurring or serious compliance problems.
- 1.2 Assignment** LRAPA will assign qualifying permittees to this permit that have and maintain a good record of compliance with LRAPA's regulations and that LRAPA determines would be appropriately regulated by a General ACDP. LRAPA may rescind assignment if the permittee no longer meets the requirements of 37-0025(2), 37-0060 and the conditions of this permit.
- 1.3 Permitted Activities** The permittee is allowed 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, revoked or assignment to this permit is rescinded, as long as the permittee complies with the conditions of this permit. If there are other emissions activities occurring at the site besides those listed on the cover page of this permit, the permittee may be required to obtain an associated General ACDP Attachment or a Simple or Standard ACDP, if applicable.
- 1.4 Relation to local land use laws** This permit is not valid outside of Lane County, or at any location where the operation of the permittee's processes, activities, and insignificant activities would violate any local land use or zoning laws. For operation outside of Lane County, contact Oregon Department of Environmental Quality for any necessary permits or notifications at (503) 229-5359. It is the permittee's sole responsibility to obtain local land use approvals as, or where, applicable before operating this facility at any location.

## **2.0 EMISSION STANDARDS AND LIMITS**

- 2.1 Visible Emissions** The permittee must comply with the following visible emission limit, as applicable:
- a. Visible emissions from sources installed, constructed or last modified prior to June 1, 1970, and located outside a special control area, must not equal or exceed:
    - i. An average of 40 percent opacity through December 31, 2019; and
    - ii. An average of 20 percent opacity on and after January 1, 2020.
  - b. Visible emissions from sources installed, constructed or modified on or after June 1, 1970 must not equal or exceed an average of 20 percent opacity.
  - c. Visible emissions from any source located inside a special control area must not equal or exceed an average of 20 percent opacity.
  - d. The visible emissions limitation in this condition is based upon a period or periods aggregating more than three-minutes in any one hour. Observations recorded at 15-second intervals as specified in LRAPA 32-010(2).
  - e. The visible emissions standard in this condition does not apply to fugitive emissions from the source.
  - f. As used in this condition, "special control area" means an area designated in LRAPA Title 29 or OAR 340-204-0070 and:
    - i. Benton, Clackamas, Columbia, Lane, Linn, Marion, Multnomah, Polk, Washington and Yamhill Counties;
    - ii. Umpqua Basin and Rogue Basin - associated boundaries are defined in OAR 340-204-0010; and
    - iii. Areas within incorporated cities having a population of 4,000 or more, and within three miles of the corporate limits of any such city.
- 2.2 Particulate Matter Emissions - General** The permittee must comply with the following particulate matter emission limits (i.e., total particulate matter, filterable plus condensable), as applicable. This condition does not apply to fugitive emission sources. Particulate matter test methods are discussed in Condition 6.0.

- a. Particulate matter emissions from any air contaminant source, other than fuel burning equipment, installed, constructed, or last modified before June 1, 1970, must not exceed:
  - i. 0.10 grains per dry standard cubic foot if all representative compliance source test results (refer to Condition 2.2d for the definition of ‘representative compliance source test results’) collected prior to April 16, 2015 demonstrate emissions no greater than 0.080 grains per dry standard cubic foot; or
  - ii. If any representative compliance source test results collected prior to April 16, 2015 demonstrate emissions greater than 0.080 grains per dry standard cubic foot, or if there are no representative compliance source test results, then emissions must not exceed:
    - 1. 0.24 grains per dry standard cubic foot on or before December 31, 2019; and
    - 2. 0.15 grains per dry standard cubic foot on or after January 1, 2020;
  - iii. For equipment or mode of operation used less than 876 hours per calendar year, particulate matter emissions must not exceed:
    - 1. 0.24 grains per dry standard cubic foot on or before December 31, 2019; and
    - 2. 0.20 grains per dry standard cubic foot on or after Jan. 1, 2020.
- b. Particulate matter emissions from any air contaminant source, other than fuel burning equipment, installed, constructed, or last modified on or after June 1, 1970 but prior to April 16, 2015, must not exceed:
  - i. 0.10 grains per dry standard cubic foot if all representative compliance source test results collected prior to April 16, 2015, demonstrate emissions no greater than 0.080 grains per dry standard cubic foot; or

- ii. 0.14 grains per dry standard cubic foot if any representative compliance source test results collected prior to April 16, 2015 demonstrate emissions greater than 0.080 grains per dry standard cubic foot, or if there are no representative compliance source test results.
- c. Particulate matter emissions from any air contaminant source, other than fuel burning equipment, installed, constructed or modified on or after April 16, 2015, must not exceed 0.10 grains per dry standard cubic foot.
- d. As used in Conditions 2.2a and 2.2b, representative compliance source test results are data from a source test of the asphalt plant that was conducted:
  - i. Between April 16, 2005 and April 15, 2015; and
  - ii. When the emission unit and pollution control device were operating based on the current configuration.

**2.3 LRAPA Title 33  
Prohibited  
Practices and  
Control of Special  
Classes of  
Industries – Hot  
Mix Asphalt  
Plants**

The permittee must comply with the following particulate matter emission limits, as applicable.

- a. The permittee may not operate the hot mix asphalt plant within any area of Lane County outside of a special control area unless all dusts and gaseous effluents generated by the plant are controlled by a control device or devices with a removal efficiency for particulate matter of at least 80% by weight. Compliance with this standard is demonstrated as follows:
  - i. Conduct a source test for particulate matter using DEQ Method 5 at the inlet and outlet of the control device.
  - ii. If it is not feasible to conduct a particulate matter source test at the inlet to the control device, the permittee must provide LRAPA with documentation demonstrating the control device is designed to meet the standard and also prepare and implement an operation and maintenance plan for ensuring the control device will have at least 80 percent removal efficiency when operated.

- b. The permittee may not operate the hot mix asphalt plant within a special control area without installing and operating systems or processes for the control of particulate emissions so as to comply with the emission limits established by the process weight table for asphalt plants specified in LRAPA Section 33-500 included as a table in Condition 13.0. Compliance is determined through a source test using DEQ Method 5.
- c. As used in Conditions 2.3a and 2.3b above, “special control area” means:
  - i. Any area designated in LRAPA Title 29 or OAR 340-204-0070 (defined in Condition 2.1f above);
  - ii. Any incorporated city or within six miles of the corporate limits of that incorporated city;
  - iii. Any area of the state within one mile of any structure or building used for a residence; and
  - iv. Any area of the state within 2 miles, straight line distance or air miles, of any paved public road, highway, or freeway having 2 or more traffic lanes.
- d. Ancillary air contamination sources from the plant and its facilities which emit air contaminants into the atmosphere such as, but not limited to, the dryer openings, screening and classifying system, hot rock elevator, bins, hoppers, and pug mill mixer, must control air contaminant emissions at all times so as to maintain the highest possible level of air quality and the lowest possible discharge of air contaminants.

**2.4 NSPS Subpart I for Hot Mix Asphalt Facilities - Particulate Matter Emissions Standard** No hot mix asphalt plant for which construction, modification, or reconstruction was commenced after June 11, 1973, may emit filterable particulate matter in excess of 0.04 grains per dry standard cubic foot, as measured by EPA Method 5. Refer to federal NSPS definitions of “*construction, modification, reconstruction and commenced*” in 40 CFR Part 60, Subpart A. For Subpart I sources, both the filterable PM limit (0.04 gr/dscf) and the total PM limit (refer to Condition 2.2) are applicable.

**2.5 Fugitive Emissions** The permittee must comply with the following, as necessary:

- a. The permittee must take reasonable precautions to prevent fugitive particulate matter from becoming airborne from all site operations from which it may be generated. Such reasonable precautions may include, but not be limited to:

- i. Controlling vehicle speeds on unpaved roadways;
  - ii. Application of water or other suitable chemicals on unpaved roads, material stockpiles, and other surfaces which can create airborne dusts;
  - iii. Full or partial enclosure of material stockpiles in cases where application of water or other suitable chemicals are not sufficient to prevent particulate matter from becoming airborne;
  - iv. Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne;
  - v. The prompt removal from paved streets of earth or other material that may become airborne;
  - vi. Alternative precautions approved by LRAPA.
- b. For purposes of this condition, fugitive particulate emissions are visible emissions that leave the permittee's property for a period or periods totaling more than 18 seconds in a six (6)-minute period.
- c. Fugitive particulate emissions are determined by EPA Method 22 at the downwind property boundary.
- d. If requested by LRAPA, the permittee must develop and submit a fugitive emission control plan for LRAPA approval. The plan must include best management practices the permittee will implement to prevent any visible emissions from leaving the property of a source for more than 18 seconds in a six-minute period. The plan must also include monitoring by the permittee, following the procedures of EPA Method 22. Once approved by LRAPA, the permittee must follow the plan.

- 2.6 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.
- 2.7 Nuisance and Odors** The permittee must not cause or allow air contaminants from any source to cause a nuisance. Nuisance conditions will be verified by LRAPA personnel.
- 2.8 Fuels and Fuel Sulfur Content** If the permittee burns any of the fuels listed below, the sulfur content must not exceed:

- a. 0.0015% sulfur by weight (15 ppm) for ultra-low sulfur diesel;
- b. 0.3% sulfur by weight (3,000 ppm) for ASTM Grade 1 distillate oil;
- c. 0.5% sulfur by weight (5,000 ppm) for ASTM Grade 2 distillate oil or on-specification used oil. The permittee must obtain analyses from the marketer or, if generated on site, have the used oil analyzed, so that the permittee can demonstrate that the used oil does not exceed the used oil specifications contained in 40 CFR Part 279.11, Table 1. Used oil exceeding the used oil specifications in 40 CFR Part 279.11, Table 1 must not be burned;
- d. 1.75% sulfur by weight for residual oil;

**2.9 Recycled Asphalt Pavement (RAP) and/or Recycled Asphalt Shingles (RAS)**

Prior to using recycled asphalt pavement (RAP) or recycled asphalt shingles (RAS) as a component of hot mix production, the permittee must first notify LRAPA and obtain LRAPA's written approval for its use. RAP and RAS may have different performance characteristics, so approvals for their use must be addressed individually.

- a. The permittee must not exceed the amount of RAP or RAS approved by LRAPA without obtaining additional approval for the increase.
- b. Prior to approval, LRAPA may require the permittee to perform emissions testing to demonstrate compliance with the emission limits in this permit while running the maximum projected RAP/RAS percentage.
- c. Application for RAP/RAS use or increased use must be made to the LRAPA office in Condition 9.2.
- d. The permittee must maintain records demonstrating that RAS used at the asphalt plant does not contain asbestos, for a period of five (5) years.

**2.10 RICE Generator Limitation**

If the permittee's asphalt plant is powered by a reciprocating internal combustion engine (RICE) generator rated at  $\geq 500$  horsepower, the permittee must separately obtain LRAPA approval to operate the RICE unit through assignment to a General ACDP Attachment or receipt of a Standard ACDP (as applicable – consult LRAPA) if it is considered to be a "stationary source." A portable RICE generator is a stationary source if it is not a "nonroad engine" as defined in 40 CFR 1068.30. A portable generator is a stationary source under the following conditions:

- a. The RICE unit will remain and be operated at the same location for more than 12 consecutive months; OR
- b. The RICE unit meets all of the criteria below and is considered a “seasonal stationary source:”
  - i. An engine is a seasonal source if it remains at one location during the full annual operating period of the source and operates at that single location for approximately three (3) (or more) months each year.
  - ii. A seasonal source is a stationary source if it remains and operates in a single location on a permanent basis (i.e., at least two (2) years).
- c. As used above, a location is any single site at a building, structure, facility, or installation. Any engine that replaces an engine at a location and performs the same or similar function will be included in the calculation of consecutive time period.
- d. The permittee must apply for a stationary source RICE generator permit in accordance with Condition 8.8 at least 60 days before the facility becomes a stationary source.

### **3.0 OPERATION AND MAINTENANCE REQUIREMENTS**

- 3.1 Operation of Pollution Control Devices and Processes**

The permittee must operate and maintain all air pollution control devices and emission reduction processes at the facility at the highest reasonable efficiency and effectiveness to minimize emissions. Air pollution control devices and components must be in operation and functioning properly at all times when the permittee is operating the process from which the pollution control device controls emissions.
- 3.2 Baghouse/Fabric Filter Operation and Maintenance**

If the facility is controlled by a baghouse control device, the permittee must comply with the following baghouse/fabric filter operation and maintenance requirements:

  - a. When replacing fabric filters/bags in the baghouse, the permittee may not substitute a filter with lower control efficiency specifications than specified in the engineering design specifications for the unit.
  - b. Emission Action Level - The permittee must operate/maintain the pressure drop across the baghouse within the operational range of the manufacturer’s design

specification (or current engineering evaluation):

- i. The permittee must install, operate and maintain a differential pressure monitoring gauge (e.g. magnehelic) on the asphalt plant's baghouse to measure differential pressure across the control device. The monitoring gauge must be installed and operating within 60 days of assignment to this permit.
- ii. The permittee must post the differential pressure specification range on the baghouse at a location near the differential pressure gauge.
- iii. The permittee must investigate and commence corrective action measures within 24 hours of documenting system operation outside of the differential pressure range.
- iv. Note: An operating pressure outside the differential pressure emission action level is not a violation of this permit condition; however, it is a violation of this permit condition if the permittee fails to investigate and act to return the pressure drop across the baghouse to a level within the differential pressure specification range within 24 hours of learning of the event.

### **3.3 Wet Scrubber Operation and Maintenance**

If the facility is controlled by a wet scrubber control device, the permittee must comply with the following scrubber operation and maintenance requirements:

- a. Emission Action Level - The permittee must operate/maintain the pressure drop across the scrubber within the operational range of the manufacturer's design specification (or current engineering evaluation):
  - i. The permittee must install, operate and maintain a differential pressure monitoring gauge (e.g. magnehelic) on the facility's scrubber to measure differential pressure across the control device. The monitoring gauge must be installed and operating within 60 days of assignment to this permit.
  - ii. The permittee must post the differential pressure specification range on the scrubber at a location near the differential pressure gauge.
  - iii. The permittee must investigate and commence corrective action measures within 24 hours of

documenting system operation outside of the differential pressure range.

- iv. Note: An operating pressure outside this differential pressure emission action level is not a violation of this permit condition; however, it is a violation of this permit condition if the permittee fails to investigate and act to return the pressure drop across the scrubber to a level within the operational range of the manufacturer's design specification (or current engineering evaluation) within 24 hours of learning of the event.

- b. Emission Action Level - The permittee must operate/maintain the scrubber's water pressure or flow rate (as measured) within the operational range of the manufacturer's design specification (or current engineering evaluation):

- i. The permittee must install and operate a pressure gauge or flow meter on the scrubber to display the scrubber's water pressure or flow rate.
- ii. The permittee must post the intended water pressure or flow rate design specification range on the scrubber at a location near the respective measuring device.
- iii. The permittee must investigate and commence corrective action measures within 24 hours of documenting system operation outside of the intended water pressure or flow rate range.
- iv. Note: The water pressure or flow rate falling outside this emission action level is not a violation of this permit condition; however, it is a violation of this permit condition if the permittee fails to investigate and act to correct the deviation within 24 hours of learning of the event.

### **3.4 Work Practices**

The permittee must perform the following work practice actions:

- a. The permittee must regularly tune the burner of the asphalt plant to minimize exhaust gas pollutant emissions and increase efficiency. The permittee must perform burner tuning at the following minimum frequencies and in accordance with the following criteria:
  - i. At least once in any year in which the asphalt plant is relocated. In such instances burner tuning is to be

performed within 30 days following the relocation. In instances when a plant is relocated multiple times within a year, tuning is only required following the initial relocation during the calendar year.

- ii. At least once in any year if the previous calendar year's asphalt production was  $\geq 50,000$  tons.
  - iii. Plants with less than 50,000 tons of annual production must perform burner tuning within three years of the last burner tuning.
  - iv. For each required burner tuning event, the permittee must perform the tuning in accordance with the criteria identified in LRAPA/DEQ report form AQGP-T07 (form available on LRAPA website: <http://www.lrapa.org/DocumentCenter/View/3382/AQGP-T07-Asphalt-Testing---fillable>)
  - v. The permittee must submit the completed AQGP-T07 report form to the LRAPA office (see Condition 9.2) by July 15<sup>th</sup> of the year in which the tuning was performed.
  - vi. Tuning is not required during a year in which a valid source test is performed in accordance with Condition 6.1, if testing demonstrates plant CO and NO<sub>x</sub> emissions are equal to or less than the respective emission factors in Condition 15.0. The permittee must perform burner tuning within 30 calendar days of receiving valid source test results that show an emission rate for either of these pollutants that is higher than the respective emission factor or factors in Condition 15.0.
  - vii. If multiple tuning actions are triggered by the conditions above, only one tuning is required in that year. Tuning must be performed at the time of the earliest tuning triggering event.
- b. If the permittee operates an asphalt plant that uses a baghouse control device, the permittee must dye test the baghouse of the plant at the following minimum frequencies:
- i. Each year at the beginning of the paving season; and
  - ii. Within 10 days following each plant relocation.

- c. LRAPA may approve an extension of a tuning or dye test deadline stated in this permit condition if the permittee provides adequate justification for the extension:
  - i. Extension requests must be submitted to LRAPA in writing;
  - ii. LRAPA will notify the permittee in writing of approval or disapproval of the request for an extension as soon as practicable;
  - iii. Unless and until an extension of a test deadline is approved by LRAPA, the permittee must meet the deadline requirements of this condition.

## 4.0 PLANT SITE EMISSION LIMITS

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

Pollutant	Limit	Units
PM	24	tons per year
PM <sub>10</sub>	14	tons per year
PM <sub>2.5</sub>	9	tons per year
SO <sub>2</sub>	39	tons per year
NO <sub>x</sub>	39	tons per year
CO	99	tons per year
VOC	39	tons per year
GHGs (CO <sub>2</sub> e)	74,000	tons per year

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

## 5.0 PSEL COMPLIANCE DEMONSTRATION

- 5.1 **PSEL Compliance Monitoring** a. The permittee must demonstrate compliance with the PSELs for each 12-consecutive calendar month period based on the following calculation for each pollutant except GHG:

$$E = \Sigma(EF \times P)/2000$$

Where:

- E = pollutant emissions (ton/year);
- EF = pollutant emission factor (see Condition 15.0);
- P = process production (tons of hot mix asphalt produced and 1000 gallons of fuel oil burned for the generators)

b. Emissions calculations requirements:

- i. Using the compliance calculation procedures of Condition 5.1, the permittee must demonstrate compliance with the 12-month PSEL limitations of Condition 4.1. The permittee must calculate emission rates for each pollutant for each 12-consecutive calendar month period, however calculations are not required when total hot mix production during a 12-consecutive calendar month period is less than or equal to levels in Condition 14.1, as applicable.

**5.2 Emission Factors**

The permittee must use the default emission factors provided in Condition 15.0 for calculating pollutant emissions, unless alternative emission factors are approved in writing by LRAPA. The permittee may request, or LRAPA may require, the use of alternative emission factors provided they are based on actual source test data or other documentation (e.g., AP-42 compilation of emission factors) that has been reviewed and approved by LRAPA.

**6.0 SOURCE TESTING REQUIREMENTS**

**6.1 Source Testing Requirements**

The permittee must demonstrate that the asphalt plant is capable of operating at its normal maximum operating capacity in compliance with the applicable limit(s) in Conditions 2.2, 2.3 and 2.4 by conducting a source test for particulate matter (PM) emissions as specified below. If the plant fails to demonstrate compliance with Conditions 2.2, 2.3 and 2.4, as applicable, during the initial source test, the permittee must retest by a date specified by LRAPA.

- a. New Plants or Existing Plants beginning operations in Lane County without first being assigned to a valid DEQ permit: The permittee must source test the facility within 60 days of achieving the maximum production rate at which the plant will be operated, but not later than 180 days after initial startup.

- b. Existing Plants - The permittee must demonstrate compliance through a source test every five (5) years as follows, except as provided in Conditions 6.1b.v or 6.1b.vi:
- i. Each source test must be performed within five (5) years of the previous source test.
  - ii. Testing must be performed within one (1) year of being assigned to this permit, if the plant has not performed a source test within the past five (5) years.
  - iii. If, during the permit period, the permittee replaces the asphalt plant's primary pollution control device or the asphalt plant in its entirety (per Condition 8.8), the permittee must perform a source test within 60 days of achieving the maximum production rate at which the asphalt plant will be operated, but not later than 180 days after initial startup of the modified or new plant.
  - iv. If LRAPA requires the permittee to perform an additional source test (e.g., testing to establish compliance during a higher RAP rate usage), the subsequent test must be performed within five (5) years of the additional test.
  - v. The permittee may source test only once during the permit term if production remains less than 20,000 tons per calendar year for the duration of the permit. To qualify for this exemption, the initial source test must be performed within five (5) years after being assigned to the permit. The permittee is subject to additional testing if the plant fails the initial source test or plant production exceeds 20,000 tons in any calendar year. If production exceeds 20,000 tons in any calendar year after the initial source test, the subsequent test must be performed within five (5) years of the initial test.
  - vi. The permittee may source test only once during the permit term if the average result from the initial test (e.g., a three-run average value) demonstrates that emissions are 60% or less of the applicable limit(s) in Conditions 2.2, 2.3 and 2.4. To qualify for this exemption, the initial test must be

performed within five (5) years after being assigned to the permit.

- c. Source tests must be performed while the plant is operating within 10% of its normal maximum operating capacity. Normal maximum operating capacity is either:
  - i. The plant's maximum operating rated capacity; or
  - ii. The maximum rate which the permittee expects to achieve within the term of the Air Contaminant Discharge Permit.
  - iii. LRAPA may require a retest if the asphalt plant will be operated at a higher rate than the operating rate achieved during the source test.
- d. The permittee must test stack emissions for particulate matter (total) using DEQ Methods 1-5; EPA Methods 1-5 and 202 are acceptable alternatives. A source test consists of three (3) replicate test runs conducted under similar plant operating conditions. Minimum sample durations must be 60 minutes per test run and minimum sample gas volumes of 31.8 dry standard cubic feet per test run must be collected. Any deviations must be approved in the LRAPA source test plan review letter prior to the testing.
- e. The following parameters must be monitored and recorded during the source test:
  - i. Stack gas oxygen and carbon dioxide concentration (% on a dry basis);
  - ii. Visible emissions (VE) as measured by EPA Method 9. VE must be monitored for a period of at least six (6) minutes, during or within 30 minutes of each PM test run (i.e., before or after each run);
  - iii. NO<sub>x</sub> emissions (ppm, dry basis) as measured by EPA Method 7E (only during the initial source test after assignment to the permit);
  - iv. CO emissions (ppm, dry basis) as measured by EPA Method 10 (only during the initial source test after assignment to the permit);
  - v. Asphalt production rate (tons/hour);
  - vi. The asphalt mix temperature;
  - vii. % asphalt oil in mix;

- viii. RAP (recycled asphalt pavement) content as a percent of mix production, if used;
  - ix. RAS (recycled asphalt shingles) content as a percent of mix production, if used;
  - x. Fuel usage (e.g., gal, ft<sup>3</sup>, therms);
  - xi. The pressure drop across the control device (e.g., baghouse, scrubber, multiclone);
  - xii. Water pressure or flow rate at the inlet to the scrubber (for plants controlled by a wet scrubber); and
  - xiii. Other parameters as specified in the test plan review letter.
- f. A pretest plan must be submitted to LRAPA at least 15 days prior to the test date and be approved by the Source Test Coordinator. All tests must be conducted in accordance with DEQ's Source Sampling Manual and the approved pretest plan. Test data and results must be submitted for review to the Source Test Coordinator within 60 days of the test date unless otherwise approved in the pretest plan. The pretest plan and test report are to be submitted to the LRAPA office identified in Condition 9.2.
- g. Only regular operating staff may adjust the combustion system or production processes and emission control parameters during the source test and within two (2) hours prior to the tests. Any operating adjustments made during the source test, which are a result of consultation during the tests with source testing personnel, equipment vendors or consultants, may render the source test invalid.
- h. Unless otherwise specified by permit, state rule, federal regulation, or LRAPA letter, each source test must consist of at least three (3) test runs and the emission results reported as the arithmetic average of all valid test runs. If for reasons beyond the control of the permittee (e.g., forced shutdown, extreme meteorological conditions, failure of an irreplaceable portion of the sample train) a test run is invalidated and cannot be replaced by a valid test run, LRAPA may consider accepting two (2) test runs for demonstrating compliance with the emission limit or DEQ Source Sampling Manual standard. However, all test runs, including those deemed invalid, are to be included in

the test report.

- i. LRAPA may approve an extension of a testing deadline stated in this permit condition if the permittee provides adequate justification for the extension (extensions will not be granted for the initial NSPS Subpart A required testing).
  - i. Extension requests must be submitted to LRAPA in writing and must include adequate justification for the request and the following information:
    1. Reason for the extension request;
    2. Hours of production for each of the previous calendar 12 months; and
    3. Asphalt production for each of the previous 12 months of plant operation.
  - ii. The decision to grant an extension to a performance test deadline is solely within the discretion of LRAPA. Situations that may warrant an extension include but are not limited to: the plant being out of use for an extended period of time; the plant being located out of state; and/or the plant being inoperable due to process or control device breakdowns.
  - iii. LRAPA will notify the permittee in writing of approval or disapproval of the request for an extension as soon as practicable.
  - iv. Unless and until an extension of a performance test deadline is approved by LRAPA, the permittee must comply with the testing deadline requirements of this condition.
- j. Any required source test that is declared invalid by LRAPA, or fails to demonstrate compliance with the applicable limits in Conditions 2.2, 2.3 and 2.4, must be repeated. The permittee or its agent must submit a new pretest plan to LRAPA for approval within 30 calendar days from the date LRAPA declares a source test invalid or the permittee receives source test results that fail to demonstrate compliance with the applicable limits.

## **7.0 RECORDKEEPING REQUIREMENTS**

- 7.1 Baghouse Design Specification Records** If the facility is controlled by a baghouse, the permittee must keep readily accessible records documenting the engineering design specifications for the facility's baghouse. These records must be kept for the life of the control device.
- 7.2 Bag/Fabric Filter Replacement Records** The permittee must keep readily accessible records documenting the design/performance specifications for all replacement fabric filters for use in the baghouse.
- 7.3 Baghouse O&M Monitoring & Recordkeeping** The permittee must maintain the following records related to baghouse/fabric filter control device operation:
- a. The differential pressure across the baghouse fabric filter at least once each calendar week when the plant is operating.
  - b. The date and time corrective action commenced for noted operations outside of the baghouse differential pressure operating range.
  - c. A summary of the results (i.e. leaks found, # bags replaced, etc.) of each dye test performed (see Condition 3.4b).
- 7.4 Wet Scrubber Design Specification Records** If the facility is controlled by a wet scrubber, the permittee must keep readily accessible records documenting the engineering design specifications for the facility's wet scrubber. These records must be kept for the life of the control device.
- 7.5 Wet Scrubber Weekly Monitoring** The permittee must maintain the following weekly records related to the facility's wet scrubber control device operation:
- a. The differential pressure across the scrubber at least once each calendar week when the plant is operating;
  - b. The scrubber's water pressure or flow rate at least once each calendar week the plant is operating;
  - c. The date and time corrective action commenced for noted operations outside of the scrubber differential pressure or flow rate operating range.
- 7.6 Monitoring & Recordkeeping - Operation and Maintenance** The permittee must monitor and maintain the following records related to the operation and maintenance of the plant and associated air contaminant control devices as follows:



Monitored Parameter	Frequency
a. Certificate of analysis for used oil fuel demonstrating that fuel is on-specification.	Per shipment or batch
b. Type and quantity of fuels used for the asphalt plant.	Monthly
c. Type and quantity of fuels used for the generator, if applicable.	Monthly
d. Fuel oil sulfur content - If fuel oil is burned, the permittee must either obtain a certificate from the vendor stating that fuel sulfur content complies with the limits in Condition 2.8 or have a sample of the fuel analyzed in accordance with the appropriate ASTM analytical procedures. If the permittee has samples analyzed for sulfur, a sample must be collected from the holding tank immediately after each shipment of oil is added to the tank.	Per shipment
e. Total hot mix produced.	Monthly
f. Calculate the 12-month annual emission rates to demonstrate compliance with the PSEs stated in Condition 4.1 and for periods when hot mix production levels exceed the amounts shown in Condition 14.1 and as applicable (see compliance determination method in Condition 5.1).	Monthly
g. Monitor and record the hours of operation of the hot mix plant that occurs in each calendar month.	Monthly
h. 12-calendar month rolling summation of monthly asphalt production.	Monthly
i. All operating and production parameters to be reported to LRAPA annually as required in Condition 8.3.	As Required
j. A record of any maintenance to the air contaminant control system.	Each Occurrence

- 7.7 Excess Emissions** The permittee must maintain records of excess emissions as defined in LRAPA Title 36 (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 for three (3) minutes or more in any 60-minute period. If there is an ongoing excess emission caused by an upset or breakdown, the permittee must immediately take corrective action or 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 LRAPA in accordance with LRAPA 36-020(4).
- 7.8 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.
- 7.9 Retention of Records** Unless otherwise specified, the permittee must retain all records in hard copy or electronic form 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 LRAPA 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 LRAPA by telephone or in person of any excess emissions which are 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.
  - b. If the excess emissions occur during non-business hours, the permittee must notify LRAPA 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 LRAPA.

**8.2 Burner Tuning**

The permittee must report the results of any burner tune-ups performed during a year by July 15th as required by Condition 3.4a.iv.

**8.3 Annual Report**

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

- a. Operating parameters:
  - i. Type and quantity of fuels used for the asphalt plant.
  - ii. Type and quantity of fuels used for the generator, if applicable.
  - iii. Total hot mix asphalt produced during each calendar month during the previous calendar year.
  - iv. Hours of operation of the hot mix plant that occurred in each calendar month during the previous calendar year.
  - v. A calculation of annual emission rates to demonstrate compliance with the PSELs stated in Condition 4.1 and for periods when hot mix production levels exceed the amounts shown in Condition 14.1 and as applicable (see compliance determination method in Condition 5.1).
  - vi. Highest RAP/RAS percentage in any hot mix formula during the previous calendar year.
- b. Records of all planned and unplanned excess emissions events.
- c. Summary of complaints relating to air quality received by permittee during the year and any corrective actions taken in response to the complaints.
- d. List permanent changes made in plant process, production levels, and pollution control equipment which affected air contaminant emissions.
- e. List major maintenance performed on pollution control equipment.
- f. Dates the asphalt plant was tuned in accordance with Condition 3.4.
- g. For baghouse controlled plants, provide records of each dye test performed (see Condition 3.4b), including a summary of results.

- h. Locations where the asphalt plant was operated in the Lane County.
  - i. If the permittee’s asphalt plant is portable and powered by a generator, provide a statement describing the facility’s compliance status with the RICE generator limitation of Condition 2.10.
  
- 8.4 Greenhouse Gas Registration and Reporting**

If the calendar year emission rate of greenhouse gases (CO<sub>2</sub>e) is greater than or equal to 2,756 tons (2,500 metric tons), the permittee must register and report its greenhouse gas emissions with LRAPA in accordance with OAR 340-215.
  
- 8.5 Initial Startup Notice**

The permittee must notify LRAPA in writing of the date a new asphalt plant is started up. The notification must be submitted no later than seven (7) days after startup.
  
- 8.6 Portable Plants - Relocation Notice**

If the asphalt plant is portable, the permittee must not install or operate the asphalt plant or any portion of the facility at any new site without first providing written notice to the LRAPA office. The written notice must include the date of the proposed move, approximate dates of operation, a detailed map showing access to the new site, and a description of the air pollution controls and procedures to be installed, operated, and practiced at the new site. Additional permits may be required if the permittee operates individual components of the asphalt plant at more than one site at a time.
  
- 8.7 Notice of Change of Ownership or Company Name**

The permittee must notify LRAPA in writing using a “Permit 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.
  
- 8.8 Construction or Modification Notices**

The permittee must notify LRAPA in writing using a “Notice of Construction Form,” or “Permit Application Form,” and obtain approval in accordance with LRAPA Title 34 before:

  - a. Constructing or installing any new source of air contaminant emissions, including air pollution control equipment;
  - b. Modifying or altering an existing source that may significantly affect the emission of air contaminants;
  - c. Making any physical change which increases emissions;

- d. Changing the method of operation, the process, or the fuel use, or increasing the normal hours of operation that result in increased emissions; or
- e. Relocating an existing stationary source or any portion of an existing stationary source.

**8.9 Where to Send Reports and Notices**

The reports, with the permit number prominently displayed, must be sent to the LRAPA as identified in Condition 9.2. For portable sources operating outside Lane County, the reports must be sent to the DEQ regional office located nearest to the company's office of record.

**8.10 NSPS Notifications**

The permittee must provide the following notifications to the U.S. EPA for any new asphalt plant or any existing asphalt plant that becomes subject to 40 CFR Part 60, Subpart I, Standards of Performance for Hot Mix Asphalt Facilities:

- a. The actual date of initial plant startup, postmarked within 15 days after such date.
- b. Notification of any physical or operational changes to an "existing" facility which increase the emission rate of particulate matter, postmarked 60 days or as soon as practicable before the change is commenced.
- c. The scheduled date of the required source test and opacity observations, postmarked not less than 30 days prior to such date.
- d. A written report of the source test results.
- e. The notifications listed above must be submitted to EPA at the following address:

Director  
Air and Waste Management Program  
U.S. Environmental Protection Agency  
Mail Stop OAQ-107  
1200 Sixth Avenue  
Seattle, WA 98101-3188

**9.0 ADMINISTRATIVE REQUIREMENTS**

**9.1 Reassignment to the General ACDP**

The permittee must complete an application for reassignment to this permit within 60 days after the permit is reissued. LRAPA will notify the permittee when the permit is reissued. The application must be sent to the LRAPA office.

- a. If LRAPA is delinquent in renewing the permit, the existing permit will remain in effect and the permittee must comply with the conditions of the permit until such time that the permit is reissued and the source is reassigned to the permit.
- b. The permittee may submit an application for either a Simple or Standard ACDP at any time, but the permittee must continue to comply with the General ACDP unless LRAPA issues a Simple or Standard ACDP to the permittee.
- c. If a complete application for reassignment to the General ACDP or Simple or Standard ACDP is filed with LRAPA in a timely manner, the permit will not be deemed to expire until final action has been taken on the application.

**9.2 LRAPA Address** All reports, notices, and applications should be directed to the LRAPA office. The LRAPA address is as follows:

Lane Regional Air Protection Agency  
 1010 Main Street  
 Springfield, OR 97477  
 Telephone 541-736-1056

**9.3 LRAPA Contacts** Information about air quality permits and LRAPA’s regulations may be obtained from LRAPA’s web page at [www.lrapa.org](http://www.lrapa.org).

**10.0 FEES**

**10.1 Annual Compliance Fee** The permittee must pay the annual Compliance Determination Fee specified in LRAPA 37-8020, Table 2, Part 2(c) for a Class Three General ACDP by **December 1** of each year this permit is in effect. An invoice indicating the amount, as determined by LRAPA regulations, will be mailed to the permittee prior to the above date.

**10.2 Change of Ownership or Company Name Fee** The non-technical permit modification fee specified in LRAPA 37-8020, Table 2, Part 3(a) is due with an application for changing the ownership or the name of the company of a source assigned to this permit.

**10.3 Where to Submit Fees** Fees must be submitted to:  
 Lane Regional Air Protection Agency  
 1010 Main Street  
 Springfield, OR 97477

## **11.0 GENERAL CONDITIONS AND DISCLAIMERS**

- 11.1 Other Regulations** In addition to the specific requirements listed in this permit, the permittee must comply with all other legal requirements enforceable by LRAPA.
- 11.2 Conflicting Conditions** In any instance in which there is an apparent conflict relative to conditions in this permit, the most stringent conditions apply.
- 11.3 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.
- 11.4 LRAPA Access** The permittee must allow LRAPA'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.
- 11.5 Permit Availability** The permittee must have a copy of the permit available at the facility at all times.
- 11.6 Open Burning** The permittee may not conduct any open burning except as allowed by LRAPA Title 47.
- 11.7 Asbestos** The permittee must comply with the asbestos abatement requirements in LRAPA Title 43 for all activities involving asbestos-containing materials, including, but not limited to, demolition, renovation, repair, construction, and maintenance.
- 11.8 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.
- 11.9 Termination, Revocation, or Modification** LRAPA may modify or revoke this permit pursuant to LRAPA 37-0060(3) and 37-0082.

## 12.0 ABBREVIATIONS, ACRONYMS, AND DEFINITIONS

ACDP	Air Contaminant Discharge Permit	NSR	New Source Review
ASTM	American Society for Testing and Materials	O <sub>2</sub>	oxygen
AQMA	Air Quality Maintenance Area	OAR	Oregon Administrative Rules
bb1	barrel (42 gal)	ORS	Oregon Revised Statutes
calenda r year	The 12-month period beginning January 1st and ending December 31st	O&M	operation and maintenance
CFR	Code of Federal Regulations	Pb	lead
CO	carbon monoxide	PCD	pollution control device
date	mm/dd/yy	PM	particulate matter
DEQ	Oregon Department of Environmental Quality	PM <sub>2.5</sub>	Particulate matter less than 2.5 microns in size
dscf	dry standard cubic foot	PM <sub>10</sub>	particulate matter less than 10 microns in size
EPA	US Environmental Protection Agency	ppm	part per million
FCAA	Federal Clean Air Act	ppmv	part per million by volume
gal	gallon(s)	PSD	Prevention of Significant Deterioration
GHGs	Greenhouse gasses in CO <sub>2</sub> equivalent	PSEL	Plant Site Emission Limit
gr/dscf	grains per dry standard cubic foot	PTE	Potential to Emit
HAP	Hazardous Air Pollutant as defined by LRAPA Title 44	RACT	Reasonably Available Control Technology
hr	hour	RAP	Recycled asphalt pavement
ID	identification number	RAS	Recycled asphalt shingle
I&M	inspection and maintenance	scf	standard cubic foot
lb	pound(s)	SER	Significant Emission Rate
LRAP A	Lane Regional Air Protection Agency	SERP	Source Emission Reduction Plan
Mgals	1000 gallons	SIC	Standard Industrial Code
MMBtu	million British thermal units	SIP	State Implementation Plan
u		SO <sub>2</sub>	sulfur dioxide
MMcf	million cubic feet	Special Control Area	as defined in LRAPA Title 29 or OAR 340-204-0070
NA	not applicable	UGA	Urban Growth Area
NESH AP	National Emissions Standards for Hazardous Air Pollutants	VE	visible emissions
NG	Natural gas	VOC	volatile organic compound
NO <sub>x</sub>	nitrogen oxides	year	A period consisting of any 12- consecutive calendar months
NSPS	New Source Performance Standard		

### 13.0 PROCESS WEIGHT EMISSION LIMITS<sup>1</sup>

Process Weight/hr (lbs.)	Maximum Weight Discharge/hr (lbs.)
50	0.24
100	0.46
150	0.66
200	0.85
250	1.03
300	1.20
350	1.35
400	1.50
450	1.63
500	1.77
550	1.89
600	2.01
650	2.12
700	2.24
750	2.34
800	2.43
850	2.53
900	2.62
950	2.72
1,000	2.80
1,100	2.97
1,200	3.12
1,300	3.26
1,400	3.40
1,500	3.54
1,600	3.66
1,700	3.79
1,800	3.91
1,900	4.03
2,000	4.14
2,100	4.24
2,200	4.34
2,300	4.44
2,400	4.54
2,500	4.64

Process Weight/hr (lbs.)	Maximum Weight Discharge/hr (lbs.)
2,600	4.74
2,700	4.84
2,800	4.92
2,900	5.02
3,000	5.10
3,100	5.18
3,200	5.27
3,300	5.36
3,400	5.44
3,500	5.52
3,600	5.61
3,700	5.69
3,800	5.77
3,900	5.85
4,000	5.93
4,100	6.01
4,200	6.08
4,300	6.15
4,400	6.22
4,500	6.30
4,600	6.37
4,700	6.45
4,800	6.52
4,900	6.60
5,000	6.67
5,500	7.03
6,000	7.37
6,500	7.71
7,000	8.05
7,500	8.39
8,000	8.71
8,500	9.03
9,000	9.36
9,500	9.67
10,000	10.00

Process Weight/hr (lbs.)	Maximum Weight Discharge/hr (lbs.)
11,000	10.63
12,000	11.28
13,000	11.89
14,000	12.50
15,000	13.13
16,000	13.74
17,000	14.36
18,000	14.97
19,000	15.58
20,000	16.19
30,000	22.22
40,000	28.3
50,000	34.3
60,000 or more	40.0

<sup>1</sup> LRAPA 33-500, see Condition 2.3b.

## 14.0 ALTERNATIVE PRODUCTION LIMITS FOR DETERMINING COMPLIANCE WITH THE PSEL

### 14.1 Operational limitation

The permittee does not have to do emission calculations if the production/operational limitations during any 12-consecutive month period are below the levels shown below (as applicable):

Plant Operational Description	Maximum 12-month asphalt production/generator fuel usage			
	0 gal fuel oil	25,000 gal oil	50,000 gal oil	75,000 gal oil
Batch Plant – natural gas-fired w/baghouse	720,000 tons/yr	720,000 tons/yr	720,000 tons/yr	720,000 tons/yr
Batch Plant – natural gas-fired w/scrubber	340,000 tons/yr	340,000 tons/yr	340,000 tons/yr	340,000 tons/yr
Batch Plant – oil-fired w/baghouse	650,000 tons/yr	520,000 tons/yr	390,000 tons/yr	270,000 tons/yr
Batch Plant – oil-fired w/scrubber	340,000 tons/yr	330,000 tons/yr	320,000 tons/yr	270,000 tons/yr
Drum Plant – natural gas-fired w/baghouse	810,000 tons/yr	810,000 tons/yr	810,000 tons/yr	810,000 tons/yr
Drum Plant – natural gas-fired w/scrubber	850,000 tons/yr	850,000 tons/yr	850,000 tons/yr	850,000 tons/yr
Drum Plant – oil-fired w/baghouse	810,000 tons/yr	770,000 tons/yr	730,000 tons/yr	690,000 tons/yr
Drum Plant – oil-fired w/scrubber	850,000 tons/yr	800,000 tons/yr	760,000 tons/yr	720,000 tons/yr

## 15.0 EMISSION FACTORS

Emissions device type or activity	Pollutant	Emission Factor (EF) <sup>2</sup>	Emission factor units
<b>Batch Plant – natural gas, propane, and butane fired</b>	PM – w/baghouse	0.042	lbs/ton of production
	PM <sub>10</sub> – w/baghouse	0.027	lbs/ton of production
	PM <sub>2.5</sub> – w/baghouse	0.025	lbs/ton of production
	PM – w/scrubber	0.14	lbs/ton of production
	PM <sub>10</sub> – w/scrubber	0.034	lbs/ton of production
	PM <sub>2.5</sub> – w/scrubber	0.018	lbs/ton of production
	SO <sub>2</sub>	0.0046	lbs/ton of production
	NO <sub>x</sub>	0.025	lbs/ton of production
	CO	0.1	lbs/ton of production
	VOC	0.0082	lbs/ton of production
<b>Batch Plant – oil fired</b>	PM – w/baghouse	0.042	lbs/ton of production
	PM <sub>10</sub> – w/baghouse	0.027	lbs/ton of production
	PM <sub>2.5</sub> – w/baghouse	0.025	lbs/ton of production
	PM – w/scrubber	0.14	lbs/ton of production
	PM <sub>10</sub> – w/scrubber	0.034	lbs/ton of production
	PM <sub>2.5</sub> – w/scrubber	0.018	lbs/ton of production
	SO <sub>2</sub>	0.088	lbs/ton of production
	NO <sub>x</sub>	0.08	lbs/ton of production
	CO	0.1	lbs/ton of production
	VOC	0.0082	lbs/ton of production
<b>Drum Plant – natural gas, propane, and butane fired</b>	PM – w/baghouse	0.033	lbs/ton of production
	PM <sub>10</sub> – w/baghouse	0.023	lbs/ton of production
	PM <sub>2.5</sub> – w/baghouse	0.022	lbs/ton of production
	PM – w/scrubber	0.045	lbs/ton of production

<sup>2</sup> AP-42 section 11.1

Emissions device type or activity	Pollutant	Emission Factor (EF) <sup>2</sup>	Emission factor units
	PM <sub>10</sub> – w/scrubber	0.025	lbs/ton of production
	PM <sub>2.5</sub> – w/scrubber	0.021	lbs/ton of production
	SO <sub>2</sub>	0.0034	lbs/ton of production
	NO <sub>x</sub>	0.026	lbs/ton of production
	CO	0.1	lbs/ton of production
	VOC	0.032	lbs/ton of production
<b>Drum Plant – oil fired</b>	PM – w/baghouse	0.033	lbs/ton of production
	PM <sub>10</sub> – w/baghouse	0.023	lbs/ton of production
	PM <sub>2.5</sub> – w/baghouse	0.022	lbs/ton of production
	PM – w/scrubber	0.045	lbs/ton of production
	PM <sub>10</sub> – w/scrubber	0.025	lbs/ton of production
	PM <sub>2.5</sub> – w/scrubber	0.021	lbs/ton of production
	SO <sub>2</sub>	0.011	lbs/ton of production
	NO <sub>x</sub>	0.055	lbs/ton of production
	CO	0.1	lbs/ton of production
	VOC	0.032	lbs/ton of production
<b>Generator(s) (oil-fired)</b>	PM/PM <sub>10</sub> /PM <sub>2.5</sub>	42.5	lbs/Mgals of fuel burned
	SO <sub>2</sub>	39.7	lbs/Mgals of fuel burned
	NO <sub>x</sub>	604	lbs/Mgals of fuel burned
	CO	130	lbs/Mgals of fuel burned
	VOC	49.3	lbs/Mgals of fuel burned
<b>Generator(s) (natural gas, propane, and butane-fired)</b>	PM/PM <sub>10</sub> /PM <sub>2.5</sub>	10	lbs/MMcf of NG burned
	SO <sub>2</sub>	0.6	lbs/MMcf of NG burned
	NO <sub>x</sub>	2,840	lbs/MMcf of NG burned
	CO	399	lbs/MMcf of NG burned
	VOC	116	lbs/MMcf of NG burned