

**PROCESS REQUIREMENTS**

1. **Equipment List** – Equipment at this facility consists of:

<b>Equipment {to be Constructed <b>or</b> included in the project}:</b>			
<b>Reference No.</b>	<b>Equipment Description</b>	<b>Rated Capacity</b>	<b>Federal Requirements</b>

<b>[O] Equipment permitted prior to the date of this permit:</b>			
<b>Reference No.</b>	<b>Equipment Description</b>	<b>Rated Capacity</b>	<b>Federal Requirements</b>

<b>[O] Equipment installed prior to the date of this permit:</b>			
<b>Reference No.</b>	<b>Equipment Description</b>	<b>Rated Capacity</b>	<b>Federal Requirements</b>

<b>[O] Equipment exempt from permitting:</b>				
<b>Reference No.</b>	<b>Equipment Description</b>	<b>Rated Capacity</b>	<b>Exemption Citation</b>	<b>[Exemption Date]</b>

Specifications included in the permit under this Condition are for informational purposes only and do not form enforceable terms or conditions of the permit.  
 (9 VAC 5-80-1180 D 3)

2. **Emission Controls** - Particulate emissions from the {drum mixed plant **or** batch mixed asphalt plant (rotary dryer, hot elevator, hot screen, and hot storage bins)} shall be controlled by a fabric filter. The fabric filter shall be provided with adequate access for inspection and shall be in operation when the dryer is operating.  
 (9 VAC 5-80-1180 and 9 VAC 5-50-260)
  
3. **[O] Emission Controls** - Particulate emissions from the lime storage silo shall be controlled by a fabric filter. The fabric filter shall be provided with adequate access for inspection and shall be in operation when receiving lime.  
 (9 VAC 5-80-1180 and 9 VAC 5-50-260)
  
4. **[O] Emissions Controls** – [NO<sub>x</sub>] [and] [VOC] emissions from the rotary dryer shall be controlled by proper operation and maintenance. Operators shall be trained in the proper operation of all such equipment. Training shall consist of a review and familiarization of the manufacturer's operating instructions, at minimum. The permittee shall develop, maintain, and have available to all operators good written operating procedures and a maintenance schedule for the dryer. These procedures shall be based on the manufacturer's recommendations, at minimum. A maintenance schedule for all such equipment shall be established and made available to the Department of Environmental Quality

(DEQ), for review. All records required by this condition shall be kept on site for the most current five year period and made available for inspection by the DEQ.  
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

5. **Fugitive Dust Emissions Control** - Fugitive dust and fugitive emission controls shall include the following, or equivalent, as approved by DEQ:
  - a. Dust from material handling, [Recycled Asphalt Pavement (RAP) screening], [Recycled Asphalt Pavement (RAP) and cold aggregate belt conveyor transfers], [(other dust sources)] and load-outs, shall be controlled by wet suppression or equivalent. The wet suppression spray systems shall be operated at optimum design. [{Pressure gauges **or** flow meters}] shall be installed with adequate access for inspection to indicate system {operating pressures **or** flow rates}.
  - b. **[O]** Dust from the RAP crusher shall be controlled by {the use of spray bars **and/or** reducing the free fall distance of materials at transfer points **and/or** enclosing the conveyor drop points with venting of particulate emissions to a fabric filter}.
  - c. All material being stockpiled shall be kept adequately moist to control dust during storage and handling or covered at all times to minimize emissions.
  - d. Dust from haul roads and traffic areas shall be controlled by the application of asphalt, water, suitable chemicals, or equivalent methods approved by the DEQ.
  - e. Reasonable precautions shall be taken to prevent deposition of dirt on public roads and subsequent dust emissions. [These measures shall include paving the entrance road to the facility for {specify distance on a case by case basis} in from the public road.] [Trucks leaving the site shall have clean wheels achieved by use of a wheel washer **or** equivalent.] Dirt, product, or raw material spilled or tracked onto paved surfaces shall be promptly removed to prevent particulate matter from becoming airborne.

(9 VAC 5-80-1180, 9 VAC 5-50-260 and 9 VAC 5-50-90)

6. **Monitoring Devices** - Each fabric filter shall be equipped with a device to continuously measure the differential pressure drop across the fabric filter. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the fabric filter is operating.  
(9 VAC 5-80-1180 D)
7. **Monitoring Device Observation** - To ensure good performance, the process/control monitoring device used to continuously measure the differential pressure drop across the fabric filter shall be observed by the permittee with a frequency {of not less than (once per day of operation, etc.) **or** as recommended by the (process/control) manufacturer}. The permittee shall keep a log of the observations from the process/control monitoring device.  
(9 VAC 5-80-1180 D)
8. **[O] Monitoring** - Daily periodic inspections shall be performed to check that water is flowing to discharge spray nozzles in the wet suppression system for the {Facility Name} Plant's RAP [(Unit Ref. #)] crusher, screen, and belt conveyors. The permittee must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The permittee must record each inspection and any corrective actions taken, in the logbook (in written or electronic format) required under 40 CFR 60.676(b).  
(9 VAC 5- 80-1180 D, 9 VAC 5-50-400, 9 VAC 5-50-410)

9. **[O] Monitoring** -The permittee shall perform visible emissions observations on the RAP crusher at least once daily, each day the RAP crusher unit is operated. Each visible emissions observation shall be performed for a sufficient period of time to identify the presence of visible emissions. If visible emissions for the RAP crusher do not exceed {15 percent opacity (for RAP crusher units built after 1983 but before 2008) **or** 12 percent opacity (for RAP crusher units built after 2008)}, no action shall be required. However, if the observed visible emissions appear to exceed {15 percent opacity (for RAP crusher units built after 1983 but before 2008) **or** 12 percent opacity (for RAP crusher units built after 2008)}, a visible emission evaluation (VEE) shall be conducted using 40 CFR Part 60, Appendix A, Method 9 for a period of not less than 6-minutes. If the average opacity exceeds 20%, modifications and/or repairs shall be performed to correct the problem and the corrective measures shall be recorded. If such corrective action fails to remedy the opacity problem, a VEE in accordance with 40 CFR Part 60, Appendix A, Method 9, shall be performed for a period of at least 18 minutes to determine compliance with the opacity limits specified in Condition[s] {condition number}. The visible emissions observer shall be Method 9 certified.  
(9 VAC 5- 80-1180 D and 9 VAC 5-50-410)

### **OPERATING LIMITATIONS**

10. **[O] Operating Hours** - The {process} shall not operate more than {value} hours per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.  
(9 VAC 5-80-1180)
11. **Production** - The production of asphalt shall not exceed {value} tons per year, calculated monthly as the rolling 12-month average of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.  
(9 VAC 5-80-1180)
12. **[O] Production** - The production of RAP through the {Facility Name} RAP crushing plant (Unit Ref. #) shall not exceed {value} tons per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.  
(9 VAC 5-80-1180)
13. **[O] Throughput** - The throughput of lime to the storage silo shall not exceed {value} tons per year, calculated monthly as the rolling 12-month average of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.  
(9 VAC 5-80-1180)
14. **Fuel** - The approved fuel[s] for the (process) {is **or** are} {distillate oil, on-specification used oil, liquefied petroleum gas (LPG), natural gas, **or** other}. A change in the fuel may require a permit to modify and operate.  
(9 VAC 5-80-1180)
15. **Fuel Throughput** - The (process) shall consume no more than [ {value} gallons of distillate oil, , {value} gallons of on specification used oil, {value} gallons of LPG, {value} x 10<sup>6</sup> cubic feet of natural gas, other] per year, calculated monthly as the rolling 12-month average of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by

adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.  
(9 VAC 5-80-1180 [and 9 VAC 5-50-260])

16. **Fuel** - The {distillate oil, on specification used oil, LPG, natural gas, **or** other} shall meet the specifications below:

**[O]** DISTILLATE OIL which meets the ASTM D396 specification for numbers 1 or 2 fuel oil:  
Maximum sulfur content per shipment: 0.05 %

**[O]** NATURAL GAS:  
Minimum heat content: 1,000 Btu/cf HHV  
as determined by ASTM D1826, D2382, or a DEQ-approved equivalent method

**[O]** LPG, including butane and propane, which meets ASTM specification D1835

**[O]** ON SPECIFICATION USED OIL:  
Maximum sulfur content (weight percent) 0.5%S  
Maximum halogen (as chlorine) content (parts per million) 1000 ppm  
Chromium (parts per million) 10 ppm  
Lead (parts per million) 100 ppm  
Arsenic (parts per million) 5 ppm  
Cadmium (parts per million) 2 ppm  
Flash point (minimum) 100 °F

The on specification used oil shall contain no detectable levels (<2 ppm) of polychlorinated biphenyls (PCB).

(9 VAC 5-80-1180 [and 9 VAC 5-50-260])

17. **[O]** *[If using distillate oil]* **Fuel Certification** - The permittee shall obtain a certification from the fuel supplier with each shipment of distillate oil. Each fuel supplier certification shall include the following:
- The name of the fuel supplier;
  - The date on which the distillate oil was received;
  - The quantity of distillate oil delivered in the shipment;
  - A statement that the distillate oil complies with the American Society for Testing and Materials specifications (ASTM D396) for numbers {1 **or** 2} fuel oil, and
  - The sulfur content of the distillate oil.

Fuel sampling and analysis, independent of that used for certification, as may be periodically required or conducted by DEQ [or as required by Condition {condition number}] may be used to determine compliance with the fuel specifications stipulated in Condition {condition number}. Exceedance of these specifications may be considered credible evidence of the exceedance of emission limits.  
(9 VAC 5-80-1180 [and 9 VAC 5-50-410])

18. **[O]** *[If using on spec used oil]* **Fuel Certification** - The permittee shall {obtain a certification from the on specification used oil supplier, including sampling and analysis representative of each shipment purchased **or** perform analyses of used oil generated}. Each on specification used oil {supplier certification **or** analyses} shall include the following:

- a. The name of the fuel supplier (optional if generator);
- b. The date on which the on specification used oil was received (optional if generator);
- c. The quantity of on specification used oil delivered in the shipment (optional if generator);
- d. The sulfur content of the on specification used oil, and
- e. Documentation of the used oil analysis or other information used to make the determination that the oil meets the allowable levels for on specification used oil.

Fuel sampling and analysis, independent of that used for certification, as may be periodically required or conducted by DEQ [or as required by Condition {condition number}] may be used to determine compliance with the fuel specifications stipulated in Condition {condition number}. Exceedance of these specifications may be considered credible evidence of the exceedance of emission limits. (9 VAC 5-80-1180 [and 9 VAC 5-50-410])

19. **[O] Requirements by Reference** - Except where this permit is more restrictive than the applicable requirement, the NSPS equipment as described in Condition 1 shall be operated in compliance with the requirements of 40 CFR 60, Subpart {Subpart ID}. (9 VAC 5-80-1180 and 9 VAC 5-50-410)

#### **EMISSION LIMITS**

20. **Emission Limits** – Combined emissions from the RAP Plant (RAP feeder, RAP conveyors and RAP screen) shall not exceed the limits specified below:

Particulate Matter (PM)	{value} lbs/hr	{value} tons/yr
PM-10	{value} lbs/hr	{value} tons/yr
PM 2.5	{value} lbs/hr	{value} tons/yr

**[O]** [Use this paragraph if you have annual limits] These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition(s) {condition number(s)}. (9 VAC 5-80-1180 [and 9 VAC 5-50-260])

21. **Emission Limits** - Emissions from the operation of the rotary dryer filter exhaust stack shall not exceed the limits specified below:

Particulate Matter (PM)	[0.04 gr/dscf]	{value} tons/yr
PM-10	{value} lbs/hr	{value} tons/yr
PM 2.5	{value} lbs/hr	{value} tons/yr
Sulfur Dioxide	{value} lbs/hr	{value} tons/yr
Nitrogen Oxides (as NO <sub>2</sub> )	{value} lbs/hr	{value} tons/yr
Carbon Monoxide	{value} lbs/hr	{value} tons/yr
Volatile Organic Compounds	{value} lbs/hr	{value} tons/yr

**[O]** *[Use this paragraph if you have annual limits]* These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition(s) {condition number(s)}.  
(9 VAC 5-80-1180 [and 9 VAC 5-50-260])

22. **[O] Emission Limits** - Emissions from the operation of the asphalt heater exhaust stack shall not exceed the limits specified below:

Particulate Matter (PM)	{value} lbs/hr	{value} tons/yr
PM-10	{value} lbs/hr	{value} tons/yr
PM 2.5	{value} lbs/hr	{value} tons/yr
Sulfur Dioxide	{value} lbs/hr	{value} tons/yr
Nitrogen Oxides (as NO <sub>2</sub> )	{value} lbs/hr	{value} tons/yr
Carbon Monoxide	{value} lbs/hr	{value} tons/yr
Volatile Organic Compounds	{value} lbs/hr	{value} tons/yr

**[O]** *[Use this paragraph if you have annual limits]* These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition(s) {condition number(s)}.  
(9 VAC 5-80-1180 [and 9 VAC 5-50-260])

23. **[O] Facility wide Emission Limits** - Total emissions from the hot mix asphalt plant shall not exceed the limits specified below:

Particulate Matter (PM)	{value} lbs/hr	{value} tons/yr
PM-10	{value} lbs/hr	{value} tons/yr
PM 2.5	{value} lbs/hr	{value} tons/yr
Sulfur Dioxide	{value} lbs/hr	{value} tons/yr
Nitrogen Oxides (as NO <sub>2</sub> )	{value} lbs/hr	{value} tons/yr
Carbon Monoxide	{value} lbs/hr	{value} tons/yr
Volatile Organic Compounds	{value} lbs/hr	{value} tons/yr

**[O]** *[Use this paragraph if you have annual limits]* These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition(s) {condition number(s)}.  
(9 VAC 5-80-1180)

24. **Visible Emission Limit** - Visible emissions from the hot mix asphalt load-out, transfer station, and storage silos fabric filter exhaust shall not exhibit 20 percent opacity or greater when product

containing at least 10 percent recycled asphaltic material is being produced and shall not exceed 5 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A) at other times. [This condition applies at all times except during startup, shutdown, and malfunction.] (9 VAC 5-80-1180 [, 9 VAC 5-50-260] [and] [9 VAC 5-50-410])

25. **Visible Emission Limit** - Visible emissions from the asphalt heater, aggregate handling equipment, and fugitive emission sources shall not exceed 10 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). [This condition applies at all times except during startup, shutdown, and malfunction.] (9 VAC 5-80-1180 [, 9 VAC 5-50-260] [and] [9 VAC 5-50-410])
26. **[O] Visible Emission Limit** - Visible emissions from RAP crushing shall not exceed {15 percent opacity (for units built after 1983 but before 2008) **or** 12 percent opacity (for units built after 2008)} as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). [This condition applies at all times except during startup, shutdown, and malfunction.] (9 VAC 5-80-1180 [, 9 VAC 5-50-260] [and] [9 VAC 5-50-410])
27. **[O] Visible Emission Limit** - Visible emissions from the lime storage silo fabric filter shall not exceed 5 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). [This condition applies at all times except during startup, shutdown, and malfunction.] (9 VAC 5-80-1180 [and 9 VAC 5-50-260])

## **RECORDS**

28. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the {Regional Office}. These records shall include, but are not limited to:
  - a. **[O]** Annual hours of operation of {process}, calculated monthly as the rolling 12-month average of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
  - b. Annual production of asphalt, calculated monthly as the rolling 12-month average of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
  - c. **[O]** Annual production of RAP through the RAP crushing plant, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
  - d. Annual throughput of {fuel type} in the rotary dryer and asphalt heater, calculated monthly as the rolling 12-month average of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
  - e. **[O]** Annual throughput of lime, calculated monthly as the rolling 12-month average of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
  - f. All fuel supplier certifications.

- g. Operation and control device monitoring records for the {process **or** air pollution control device} as required in Condition {condition number}.
- h. Results of all visible emission evaluations and stack testing.
- i. Scheduled and unscheduled maintenance and operator training.
- j. **[O]** A record of each visible emissions observation shall be maintained and shall include, at a minimum, the date, time, name of the emission unit, the applicable visible emissions requirement, the results of the observation, and the name of the observer.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9 VAC 5-80-1180 and 9 VAC 5-50-50)

### **INITIAL COMPLIANCE DETERMINATION**

29. **[O] Stack Test** - Initial performance tests shall be conducted for PM from the {process/stack} using reference method 5 to determine compliance with the emission limits. The tests shall be performed [and] [reported] [and] [demonstrate compliance] within 60 days after achieving the maximum production rate at which the facility will be operated but in no event later than 180 days after start-up of the permitted facility. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30, and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410. The details of the tests are to be arranged with the {Regional Office}. The permittee shall submit a test protocol at least 30 days prior to testing. One copy of the test results shall be submitted to the {Regional Office} within {45 **or** 60 **or** 180} days {after test completion **or** of start-up} [and shall conform to the test report format enclosed with this permit].  
(9 VAC 5-80-1200, 9 VAC 5-50-30 [, and 9 VAC 5-50-410])

30. **[O] Visible Emissions Evaluation** - [Concurrently with the initial performance tests,] Visible Emission Evaluations (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9, shall [also] be conducted [by the permittee] [on the following equipment: ]. [Each test shall consist of 30 sets of 24 consecutive observations (at 15 second intervals) to yield a six minute average.] [Each test shall consist of ten sets of 24 consecutive observations (at 15 second intervals) to yield a six minute average.] The details of the tests are to be arranged with the {Regional Office}. The permittee shall submit a test protocol at least 30 days prior to testing. The evaluation shall be performed, [and] [reported] [and][demonstrate compliance] within 60 days after achieving the maximum production rate at which the {Regional Office} facility will be operated but in no event later than 180 days after start-up of the permitted facility. Should conditions prevent concurrent opacity observations, the DEQ shall be notified in writing, within seven days, and visible emissions testing shall be rescheduled within 30 days. Rescheduled testing shall be conducted under the same conditions (as possible) as the initial performance tests. One copy of the test result shall be submitted to the {Regional Office} within {45 **or** 60 **or** 180} days {after test completion **or** of start-up} [and shall conform to the test report format enclosed with this permit].  
(9 VAC 5-80-1200, 9 VAC 5-50-30 [, and 9 VAC 5-50-410])

### **CONTINUING COMPLIANCE DETERMINATION**

31. **Stack Tests** - Upon request by the DEQ, the permittee shall conduct additional performance tests for particulate matter from the asphalt plant fabric filter to demonstrate compliance with the emission limits contained in this permit. The details of the tests shall be arranged with the DEQ.  
(9 VAC 5-80-1120 and 9 VAC 5-50-30 G)
32. **Visible Emissions Evaluation** - Upon request by the DEQ, the permittee shall conduct additional visible emission evaluations from the asphalt plant's affected facility, hot mix asphalt load-out, transfer

station, aggregate handling equipment and fugitive emission sources to demonstrate compliance with the visible emission limits contained in this permit. The details of the tests shall be arranged with the DEQ.

(9 VAC 5-80-1120 and 9 VAC 5-50-30 G)