

AIR QUALITY STANDARD PERMIT FOR HOT MIX ASPHALT PLANTS

Effective Date July 10, 2003

This air quality standard permit authorizes the air emissions from the operation of hot mix asphalt plants that meet the conditions listed in section (1) and section (2) and either section (3) for temporary plant sites or section (4) for permanent plant sites. This standard permit does not relieve the owner or operator from complying with any other applicable provision of the Texas Health and Safety Code, Texas Water Code, or rules of the Texas Commission on Environmental Quality.

(1) General Requirements

- (A) For the purposes of this standard permit, a hot mix asphalt plant is defined as a facility that produces or will produce one or more of the following: standard hot mix asphalt, asphalt mixes made with Performance Grade (PG) binders, asphalt mixes made with crumb rubber, and pre-coat aggregate.
- (B) For the purposes of this standard permit, a site is defined as one or more contiguous or adjacent properties which are under common control of the same person (or persons under common control).
- (C) Any hot mix asphalt plant that is authorized under this standard permit shall comply with all applicable requirements of the EPA regulations in 40 CFR Part 60, including but not limited to:
 - (i) Subpart A, General Provisions;
 - (ii) Subpart I, Standards of Performance for New Stationary Sources for Hot Mix Asphalt Facilities;
 - (iii) Subpart K, Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 1, 1973, and Prior to May 19, 1978;
 - (iv) Subpart Ka, Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984; and
 - (v) Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984.
- (D) Any hot mix asphalt plant authorized under this standard permit shall be registered in accordance with 30 TAC § 116.611, Registration to Use a Standard

Permit. Owners or operators shall submit a completed current PI-1S, Table 22, Table 29 if requesting authorization for an engine, and Hot Mix Asphalt Standard Permit Checklist. Facilities which meet the conditions of this standard permit do not have to meet the emissions and distance limitations listed in 30 TAC § 116.610(a)(1), Applicability.

- (E) Registration applications for hot mix asphalt plants shall comply with 30 TAC § 116.614, Standard Permit Fees, except for a temporary plant that has been previously registered with the commission for this standard permit, and supplies asphalt to a public works project and is located in or contiguous to the right of way of a public works project.
- (F) Facilities located in counties subject to 30 TAC Chapter 101, Subchapter H, Division 3; Chapter 116 Subchapter B Division 5; and Chapter 117, shall comply with all applicable requirements in 30 TAC Chapter 101, Subchapter H, Division 3; Chapter 116 Subchapter B Division 5; and Chapter 117.
- (G) For all facilities that are authorized by this standard permit, aggregate materials (rock, sand, etc.) received at the plant site shall be used at that site and shall not be transported to another site unless the material is left from a temporary project and removed from the site when the plant vacates the site. The storage of raw aggregate materials at the site for use at other sites requires a separate authorization under 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification, 30 TAC Chapter 106, Permits by Rule, or other appropriate authorization.
- (H) Except for those periods described in 30 TAC § 101.201 Emissions Event Reporting and Recordkeeping Requirements and 30 TAC § 101.211 Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; visible fugitive emissions from recycled asphalt product (RAP) breakers, screens, transfer points on belt conveyors, stockpiles, work areas and any in-plant roads associated with the facility shall not leave the property for a period exceeding 30 seconds in any six-minute period as determined by U.S. Environmental Protection Agency (EPA) Test Method (TM) 22.
- (I) The drum dryer exhaust shall be vented to, and controlled by, a properly sized fabric filter baghouse.
- (J) Lime and mineral fillers shall be transported and stored in a closed system and all exhaust air to the atmosphere shall be vented through a properly sized fabric filter. An operational overflow warning device shall be installed on each bulk storage silo to alert operators in sufficient time prior to the silo reaching capacity. Any overfilling of the silo resulting in failure of the abatement system, or visible emissions in excess of the requirements of subsection(1)(D) of this standard permit, must be documented and reported following the requirements of 30 TAC §§ 101.201 or 101.211, as appropriate.

- (K) Fabric filters and collection systems shall meet all of the following requirements:
- (i) all fabric filter systems shall be maintained and operated properly with no tears or leaks;
 - (ii) before July 10, 2007 all drum dryer filter systems shall meet at least a front half outlet grain loading of 0.02 grains per dry standard cubic foot (gr/dscf) and a combined (front half and back half) total outlet grain loading of 0.04 gr/dscf;
 - (iii) on and after July 10, 2007 all drum dryer filter systems shall meet at least a front half outlet grain loading of 0.01 grains per dry standard cubic foot (gr/dscf) and a combined (front half and back half) total outlet grain loading of 0.04 gr/dscf; and
 - (iv) lime/mineral bulk storage silo(s) not vented to the drum dryer system shall vent to a fabric filter system designed to meet at least 0.01 outlet grain loading (combined front half and back half).
- (L) Except for those periods described in 30 TAC §§ 101.201 and 101.211, opacity of emissions from the lime silo fabric filter baghouse stack and/or the drum dryer stack shall not exceed 5 percent averaged over a six-minute period, and according to EPA TM 9.
- (M) All stockpiles shall be sprinkled with water, dust-suppressant chemicals, or covered, as necessary, to minimize dust emissions.
- (N) Fuel for dryers and hot oil heaters shall be either:
- (i) pipeline sweet natural gas as defined in the 30 TAC Chapter 101, General Air Quality Rules, containing no more than 5 grains total sulfur and 0.2 grain hydrogen sulfide per 100 dscf;
 - (ii) liquid petroleum gas;
 - (iii) diesel fuel with a maximum sulfur content of 0.6 percent by weight;
 - (iv) first-run No. 2 fuel oil with a maximum sulfur content of 0.6 percent by weight;
 - (v) first-run No. 4 fuel oil with a maximum sulfur content of 0.6 percent by weight; or
 - (vi) reclaimed industrial oil with a maximum sulfur content of 0.6 percent by weight. Reclaimed industrial oil shall meet all requirements specified in 40 CFR Part 279, Standards for the Management of Used Oil, and not contain more than the indicated amounts of the substances listed below in parts per million by weight (ppm):

<u>Substance</u>	<u>Concentration (ppm)</u>	<u>Substance</u>	<u>Concentration (ppm)</u>
Antimony	180	Selenium	75
Arsenic	3	Thallium	37
Beryllium	1	Vanadium	18
Cadmium	2	Lead	100
Chromium	9	Nickel	5
Mercury	37	Total Halogens	1000

- (O) The maximum mix temperature, at the discharge point of the drum, shall not exceed 325° F except:
- (i) when a PG binder requires a higher mix temperature, in which case the maximum mix temperature shall not exceed 350° F; or
 - (ii) when crumb rubber mix, produced in compliance with section (5) of this standard permit, requires a higher temperature, in which case the maximum mix temperature shall not exceed 375° F; or
 - (iii) during periods of start-up or shutdown, not surpassing 20 minutes.
- (P) The following materials, added at the plant at no more than the maximum concentration, are authorized by this standard permit

<u>Description</u>	<u>Maximum Concentration</u>
Hydrated Lime, Portland Cement, or Fly Ash	Not Applicable
Liquid Amine Antistrip Agents	<u>2%</u> by weight of liquid asphalt in the mix
Styrene-Butadiene-Styrene	<u>10%</u> by weight of liquid asphalt in the mix
Styrene-Butadiene Rubberized Latex	<u>6%</u> by weight of liquid asphalt in the mix
RAP	<u>50%</u> displacement of aggregate

Other materials added at the hot mix asphalt plant may be used provided that such use complies with the requirements of 30 TAC §116.116(e), Changes to facilities, §116.117, Documentation and Notification of Changes to Qualified Facilities, and §116.118, Pre-change Qualification.

- (Q) Asphalt release agents that do not emit VOCs at ambient temperature, such as vegetable oil or surfactants, may be used.
- (R) The owner or operator shall not operate more than one truck load out point at any time.

- (S) The hot mix asphalt plant, and all its associated facilities (silos, conveyors, screens, RAP crushers and equipment), shall be located a minimum distance to the property line. This minimum property line distance is determined by utilizing the following table. If no site-specific data is available, a 0.5 volatility factor (-0.5) shall be used. In all cases, the holder of this standard permit shall determine the appropriate distance by rounding up to the highest distance that is provided in the table by production and volatility factor. There shall be no interpolation in determining the appropriate property line distance. Only one of the nine distances provided in this table shall be used. For example, a plant producing 250 tph of asphalt mix and using a volatility factor of .35 shall use the distance of 300 ft. For a 300 tph plant using a volatility factor of, 0.42 this distance would be 425 feet.

Actual Production	Volatility factor of no more than 0.30	Volatility factor of no more than 0.42	Volatility factor of no more than 0.50
no more than 400 tph	450 ft	550 ft	650 ft
no more than 300 tph	300 ft	425 ft	500 ft
no more than 200 tph	200 ft	275 ft	375 ft

- (T) As an alternative to the distance requirements in (1)(S) of this a standard permit, a hot mix asphalt plant that restricts hours of operation of the truck load out to the period of time between one hour after sunrise and one hour before sunset and mix production and silo filling at the plant to a period of time between sunrise and one hour before sunset, the minimum distance to the property line shall be determined by using the following table. If no site-specific data is available, a 0.5 volatility factor (-0.5) should be used. In all cases, the holder of this standard permit shall determine the appropriate distance by rounding up to the highest distance that is provided in the table by production and volatility factor. There shall be no interpolation in determining the appropriate property line distance. Only one of the nine distances provided in this table shall be used.

Actual Production	Volatility factor of no more than 0.30	Volatility factor of no more than 0.42	Volatility factor of no more than 0.50
no more than 400 tph	225 ft	300 ft	375 ft
no more than 300 tph	150 ft	200 ft	275 ft
no more than 200 tph	100 ft	150 ft	175 ft

- (U) For a production rate of less than or equal to 300 tph, stockpiles and vehicle traffic areas (except for entrance and exit to the site) shall be located at least 25 feet from any property line. For a production rate of greater than 300 tph, stockpiles and vehicle traffic areas (except for entrance and exit to the site) shall be located at least 50 feet from any property line. In lieu of meeting the distance requirements for roads and stockpiles, the following shall occur:

- (i) roads and other traffic areas located less than the applicable distance requirement from the property line must be bordered by dust-suppressing fencing or barriers. The fencing or barriers shall be constructed to a height of at least 12 feet; and
 - (ii) if any portion of a stockpile is located less than the applicable distance requirement from the property line, then the entire stockpile must be contained within a three-walled bunker which extends at least two feet above the top of the stockpile.
- (V) The hot mix asphalt plant and all associated facilities, as defined in subsections (3)(A) and (4)(A) of this standard permit, authorized by this standard permit shall be located at least 550 ft. from any concrete batch plant, or rock crusher located on the same site. Additionally, any hot mix asphalt plant and all associated facilities, as defined in subsections (3)(A) and (4)(A) of this standard permit, authorized by this standard permit shall be located at least 1300 ft. from any other hot mix asphalt plant located on the same site. If either of these distances cannot be met, then the hot mix asphalt plant authorized under this standard permit shall not operate at the same time as the concrete batch plant, rock crusher, or other hot mix asphalt plant. Stockpiles and other associated sources must comply with subsection (1)(U) of this standard permit.
- (W) Records shall be maintained on-site for a rolling 24 month period and shall consist of the following:
 - (i) if applicable, record keeping requirements listed in 40 CFR Part 60, Subparts A and I;
 - (ii) annual and hourly production rates of all mix types produced by the facility;
 - (iii) continuous temperature as monitored at the outlet of the drum. During any periods when the mix temperature is greater than 325EF, the PG binder type shall also be recorded;
 - (iv) dryer fuel type and its maximum sulfur content being used for each mix type;
 - (v) when a reclaimed industrial fuel is used, documentation from independent third-party testing laboratory that lists the concentrations of the substances, listed in paragraph (N)(vi) of this section, shall be kept on-site at all times. Upon request by the executive director, or any local air pollution control program with jurisdiction, this documentation shall be provided to the commission staff to demonstrate compliance with the concentrations listed above,

- (vi) the asphalt volatility for each type of asphaltic cement used in the production of hot mix asphalt produced, as determined by the most recent version of ASTM method D2872;
 - (vii) documentation of any new additives authorized by §§116.116(e); and
 - (viii) for facilities complying with subsection (1)(T) documentation of the start and stop times of the truck load out, mix production, and silo filling.
- (X) A generator set, that is used to provide electrical power to a hot mix asphalt plant authorized under this standard permit, with an internal combustion engine rated at no more than 1000 horsepower (hp), and fueled by natural gas, propane, or liquid petroleum gas, as defined by paragraph (1)(N)(i) and (1)(N)(ii) of this section, is authorized by this standard permit. The engine horsepower rating shall be based on the engine manufacturer's maximum continuous load rating at the lesser of the engine or driven equipment's maximum published speed and load. A generator set with an engine rated at greater than 1000 hp or fueled by any fuel other than natural gas, propane, or liquid petroleum gas and is located at a plant site for period greater than 12 months shall be authorized separately under 30 TAC Chapter 116, 30 TAC Chapter 106, or other appropriate authorization.

(2) Sampling Requirements

- (A) Stack sampling for particulate matter (PM) emissions shall occur after initial start-up of the plant to comply with 40 CFR Part 60, Subparts A and I and the requirements listed in subsection (1)(L), paragraph (1)(K)(iv), and paragraph (1)(K)(ii) or paragraph (1)(K)(iii) of this standard permit. This initial stack sampling analysis for PM shall not be required of the holder of this permit provided that acceptable data in lieu of testing (DILOT) documentation demonstrates to the satisfaction of the executive director that the model of the hot mix asphalt plant being constructed has been previously tested and shown to meet the requirements of 40 CFR Part 60, Subparts A and I and the requirements listed in subsection (1)(L), paragraph (1)(K)(iv), and paragraph (1)(K)(ii) or paragraph (1)(K)(iii) . If DILOT demonstrations are used, then a copy of such documentation shall be maintained on site with the hot mix asphalt plant and made available to the appropriate regional office or any local air pollution control program having jurisdiction over this facility.
- (B) Sampling or submission of a DILOT shall occur within 60 days of achieving the maximum allowable production rate based on the table in subsection (1)(S) or (1)(T) of this standard permit but no later than 180 days from initial startup of equipment. Requests for additional time to perform sampling shall be submitted to the appropriate regional office. Additional time to comply with the applicable requirements of 40 CFR Part 60 requires EPA approval, and requests shall be submitted to the TCEQ Compliance Support Division.

- (C) Facilities complying with paragraph (1)(K)(ii), shall conduct stack sampling for particulate matter (PM) emissions no later than 60 days after July 10, 2007 to comply with 40 CFR Part 60, Subparts A and I and the requirements listed in subsection (1)(L) and paragraph (1)(K)(iii) of this standard permit.
- (D) The plant shall operate at maximum production rates during stack emissions testing. If the plant is unable to operate at the maximum rates during testing, then future production rates shall be limited to the rates established during testing (± 10 percent not to exceed the maximum production rate listed in subsections (1)(S) or (1)(T) and the PM emission limits listed in subsection (1)(L) and paragraph (1)(K)(ii) or (1)(K)(iii). Additional stack testing shall be required when higher production rates are achieved.
- (E) The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. Sampling ports and platforms shall be installed on the exhaust stack, according to the specifications set forth in Chapter 2 of the TCEQ Sampling Procedures Manual, prior to stack sampling. Alternate sampling facility designs may be submitted for approval by the executive director.
- (F) A pretest meeting concerning the required sampling shall be held with the appropriate regional office before the required tests are performed. The regional office shall be notified not less than 45 days prior to sampling to schedule a pretest meeting. The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test results. A written proposed description of any deviation from sampling procedures specified in this standard permit or TCEQ or EPA sampling procedures shall be made available prior to the pretest meeting. Any deviation from specified sampling procedures requires the approval of the executive director. The pretest meeting notice office shall also include:
- (i) date for pretest meeting;
 - (ii) date sampling shall occur;
 - (iii) name of firm conducting sampling;
 - (iv) type of sampling equipment to be used; and
 - (v) method or procedure to be used in sampling.
- (G) The sampling report shall include the following:
- (i) plant production rate during tests;

- (ii) type of fuel and consumption rates;
 - (iii) mix type and temperature;
 - (iv) percent sulfur in fuel; and
 - (v) concentration (by weight) of liquid asphalt, antistripping agents, or any additive present in the asphalt concrete mix.
- (H) Copies of the final sampling report shall be submitted within 45 days after sampling is completed. Sampling reports shall comply with the provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:
- (i) one copy to the appropriate TCEQ Regional office;
 - (ii) one copy to the TCEQ Compliance Support Division; and
 - (iii) one copy to each appropriate local air pollution control program.
- (I) Upon request by the executive director, or any local air pollution control program with jurisdiction, the holder of this permit shall provide a sample of the fuel(s) utilized in these plants and shall allow air pollution control program representatives to obtain a sample for analysis.

(3) Requirements Specific to Temporary Hot Mix Asphalt Plants

- (A) This standard permit authorizes not more than the following facilities (as defined in 30 TAC Chapter 116.10(4)):
- (i) cold feed bin(s);
 - (ii) transfer conveyor(s);
 - (iii) aggregate screen(s);
 - (iv) a counter/parallel flow drum;
 - (v) a RAP feed bin;
 - (vi) a RAP conveyor;
 - (vii) 90,000 gallons or less total asphalt binder storage in no more than three tanks with associated hot oil heater(s);
 - (viii) three hot mix surge bins/storage silos;

- (ix) 90,000 gallon or less total fuel oil storage in no more than three tanks;
- (x) a liquid anti-strip tank
- (xi) a RAP breaker/crusher;
- (xii) a release agent application facility
- (xiii) a lime storage silo;
- (xiv) a mineral filler silo; and
- (xv) a fines storage silo.

Equipment that is not a source of emissions does not require authorization.

- (B) The owner or operator of a temporary hot mix asphalt plant that has been determined by the commission to be in compliance with the technical requirements of the standard permit in effect at the time of the registration, and which supplies asphalt to a public works project and is located in or contiguous to the right of way of that public works project may, in lieu of the registration requirement in subsection(1)(D) of this standard permit, register by notifying the appropriate TCEQ Regional office and any local air pollution control agency having jurisdiction in writing at least 30 calendar days prior to locating at the site. The notification shall include the owner's and, if applicable, the operator's name, address, and phone number as well as the physical description of the site, scaled plot plan of site with location of equipment authorized by this standard permit, asphalt plant serial number, account number or regulated entity number, expected hours of operation, expected date of arrival on site, expected date to vacate the site, a completed Table 22, Hot Mix Asphalt Plants, and a Hot Mix Asphalt Standard Permit Checklist. Temporary hot mix asphalt plants that do not supply asphalt to a public works project must apply for a new registration under subsection (1)(D) of this standard permit in order to relocate at a new site.
- (C) For the purposes of this section, a temporary hot mix asphalt plant is one that occupies a designated site for not more than 180 consecutive days or supplies asphalt for only a single public works project (single contract or same contractor for related project segments),and not to other unrelated projects.
- (D) The owner or operator shall remove the hot mix asphalt plant and associated equipment from the site within 15 calendar days of ceasing operation. The 15 days allotted for the removal of equipment shall not be used as additional operational time above the 180 consecutive calendar days or completion of a project. Alternatively, the owner or operator may notify the regional office at the

end of the project and store the non-operational facilities on-site until the next relocation. Once the region has been notified that the facility will be shut down, re-registration as a permanent facility as described in this standard permit will be required to resume operation at the current site.

- (E) For a hot mix asphalt plant supplying asphalt for a single public works project, the “property line” measurements, for purposes of compliance with this standard permit and 30 TAC §111.155, Ground Level Concentrations, shall be made at the outer boundaries of the designated public property, roadway project, and associated rights-of-way.
- (F) In order to maintain compliance with subsection (1)(H), emissions from all in-plant roads and traffic areas associated with the operation of the hot mix asphalt plant shall be minimized at all times by at least one of the following methods. In-plant roads and traffic areas shall be:
 - (i) covered with a material such as, but not limited to, roofing shingles or tire chips (when used in combination with (ii) or (iii) of this subsection);
 - (ii) treated with dust-suppressant chemicals;
 - (iii) watered; or
 - (iv) paved with a cohesive hard surface that is maintained intact and cleaned.

(4) Requirements Specific to Permanent Hot Mix Asphalt Plants

- (A) This standard permit authorizes not more than the following facilities (as defined in 30 TAC Chapter 116.10(4)):
 - (i) cold feed bin(s);
 - (ii) transfer conveyor(s);
 - (iii) aggregate screen(s);
 - (iv) a counter/parallel flow drum;
 - (v) a RAP feed bin;
 - (vi) a RAP conveyor;
 - (vii) 90,000 gallons or less total asphalt binder storage in no more than three tanks with associated hot oil heaters;
 - (viii) three, hot mix surge bin/storage silos;

- (ix) 90,000 gallons or less total fuel oil storage in no more than three tanks;
- (x) a liquid anti-strip tank
- (xi) a RAP breaker/crusher;
- (xii) a release agent application facility
- (xiii) a lime storage silo;
- (xiv) a mineral filler silo; and
- (xv) a fines storage silo.

Equipment that is not a source of emissions does not require authorization.

- (B) In order to maintain compliance with paragraph (1)(H), all entry and exit roads and main traffic routes associated with the operation of the hot mix asphalt plant (including batch truck and material delivery truck roads) shall be paved with a cohesive hard surface to be maintained intact and cleaned. All batch trucks and material delivery trucks shall remain on paved surfaces when entering, conducting primary function, and leaving the property. All other traffic areas must comply with the control requirements listed in paragraph (3)(F).

(5) Requirements specific to permanent or temporary plants producing crumb rubber asphalt mix

- (A) Stack sampling for VOC shall occur within 45 days of achieving the maximum allowable production rate based on the table in subsection (1)(S) or (1)(T) of this standard permit but no later than 90 days from initial startup of equipment and shall demonstrate an emission rate of less than .032 pound of VOC per ton of asphalt mix produced.
- (B) The stack sampling required in subsection (A) of this section shall comply with all requirements listed in subsections (2)(D) - (H) of this standard permit.
- (C) The plant shall operate at the maximum expected concentration of crumb rubber during the stack sampling event. If the plant is unable to operate at the maximum concentration of crumb rubber during testing, then future concentrations shall be limited to the concentration established during testing.