

ASPHALT PLANT AIR PERMIT General Permit-13 or Individual



2024

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ASPHALT PLANT AIR PERMIT GP-13

- Air Permits
 - Needed for All Asphalt Plants
 - Permitting by GP-13 OR Individual Permit



ASPHALT PLANT AIR PERMIT GP-13

- Air Permits
 - Most Areas Throughout the State by PA DEP Regional Offices
 - Philadelphia County and Allegheny County have Authority for Permit Issuance.
 - County Programs Similar to PA DEP but CAN be more Restrictive



ASPHALT PLANT AIR PERMIT GP-13

- Why Did PA DEP Issue General Permit-13 for Asphalt Plants?
 - Consistency between air permits was requested by the Industry
 - Standardize the permitting process
 - Expedite permitting review
 - Permit Conditions Standardized to Minimize Potential Emissions
 - Establish Best Available Technology Requirements for the Permittee
 - Simplify Permit Compliance



ASPHALT PLANT AIR PERMIT GP-13

- Limitations and Requirements

- i. The drop heights from front-end loaders being used to stockpile, transfer, and load aggregate shall be kept as short as possible to minimize dust emissions.
- ii. Stockpiles shall be kept as compact as possible to limit exposure to the wind. Material shall be stockpiled in such a manner that it may be adequately wetted as necessary to control fugitive emissions.
- iii. All in-plant roads shall be maintained to prevent particulate matter from becoming airborne in accordance with 25 Pa. Code §§ 123.1 and 123.2.
- iv. All unpaved in-plant roads shall be watered once per day during warm weather, at the start of each shift, if no precipitation has fallen within the previous twenty-four (24) hours, and as needed thereafter on a preventative basis such that visible fugitive emissions are controlled in accordance with 25 Pa. Code §§ 123.1 and 123.2. Other methods of dust control may be used when weather conditions make the watering of unpaved roads hazardous.
- v. In accordance with 25 Pa. Code § 123.1(c), the owner or operator shall promptly remove earth or other material from paved roads onto which earth or other material has been transported by trucking or earth moving equipment, or other means.



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- Limitations and Requirements



- Be Aware of:
- Dust Control Wetting Stockpiles, Covering Stockpiles



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- Limitations and Requirements



- Be Aware of:
- Dust Control Wetting Roads



Best Available Technology (BAT) Examples to Control Emissions

- vi. A set vehicle pattern shall be established and maintained for vehicles entering and exiting the plant.
- vii. The owner or operator shall post a sign limiting speeds to less than 15 mph on all in-plant roads.
- viii. The owner or operator shall post and enforce a requirement stating "All vehicles entering or exiting the plant property shall be properly tarpaulin covered." Vehicles with a gross vehicle weight rating of less than 10,000 pounds shall be exempt from this condition.



Best Available Technology (BAT) Examples to Control Emissions

- Dust Controls
 - Water Sprays
 - Paving
 - Conveyor covers



Best Available Technology (BAT) Examples to Control Emissions



- x. Only HMA plants controlled by an appropriately designed fabric collector (i.e., baghouses capable of complying with all applicable requirements) may apply for this General Permit. A fabric collector ("baghouse") shall be accepted by the Department as "appropriately designed" only if the Department determines it to be based upon the information provided by the owner or operator and on any other information available to the Department.
- xii. No fugitive air contaminant emissions shall be generated as a result of removing collected dust from the baghouse or as a result of subsequently handling the collected dust on-site following its removal from the collector.
- xiii. The owner or operator shall keep sufficient quantity of spare baghouse bags, at a minimum of 10% of the total number of bags, on hand for immediate replacement.



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- Limitations and Requirements - FUEL

xiv. The owner or operator is approved to burn the following fuels under this General Permit:

- 1.) Propane
- 2.) Natural gas
- 3.) No.2 fuel oil
- 4.) No.4 fuel oil
- 5.) On-specification waste-derived liquid fuel ("WDLF")
- 6.) Biodiesel that is a fuel comprised of mono-alkyl esters of long chain fatty acids derived from vegetable oils or animal fats and conform to ASTM D6751 specifications.
- 7.) Any alternative fuels that, unless specified, meet the same specification as other fuels permitted under this General Permit, such as:
 - A.) Liquid biofuels derived from recycled vegetable oils or animal fats from restaurants or food processing industries after processed through filtration, deodorization, water washing or other polishing and refining steps.
 - B.) Biofuels from bio-processing of cellulosic bio-mass.
 - C.) Bio-oils produced by pyrolysis of bio-mass materials.




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- Limitations and Requirements - FUEL

xv. The owner or operator may not use a fuel to fire a burner at the plant that exceeds the sulfur limits stated below:

- 1.) For No.2 fuel oil, biodiesel and alternative fuels, $\leq 0.3\%$, by weight.
- 2.) For No.4 fuel oil and WDLF, $\leq 0.5\%$, by weight.

xvi. Fuel analysis records shall be used to demonstrate compliance with the above sulfur limitations. For each shipment of any liquid fuel, fuel sulfur content shall also be demonstrated by providing the supplier's fuel certification for the type of fuel received.


 123 Main Street
 City, Province Postal Code
 Phone: 123.456.7890
 Fax: 123.456.7890

FUEL LOG 0001

Employee Name: _____

Fuel Card Company: _____

Date	Time	Litres	Unit

Employee Signature: _____

FORM 430/03/01



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- Limitations and Requirements – WDLF

- xvii. On-Specification WDLF

The owner or operator shall not accept at the facility any WDLF which is represented by the oil supplier as failing to meet following standards, or for which the facility does not have documentation from the waste oil supplier verifying the following acceptable standards:

Sulfur $\leq 0.5\%$ (by weight)
Btu ≥ 8000 btu/lb
Flashpoint $\geq 100^{\circ}\text{F}$;
Total Halogens (TX) ≤ 1000 ppmw
Lead ≤ 100 ppmw
Arsenic ≤ 5 ppmw
Cadmium ≤ 2 ppmw
Chromium ≤ 10 ppmw
PCBs Not Detectable
Ash $\leq 1.0\%$ (by weight)



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- Limitations and Requirements - WDLF

xviii. Analytical Techniques

The following analytical techniques and methods, or alternative methods approved in writing by the Department, will be accepted for the analyses required by this General Permit.

Constituent	Analytical Technique
Arsenic	EPA Method 6010, 6020, 7010, 7061, or 7062
Cadmium	EPA Method 6010, 6020, 7000 or 7010
Chromium	EPA Method 6010, 7000 or 7010
Lead	EPA Method 6010, 7000 or 7010
PCBs	EPA Method 8082
TX	EPA Method 9075, 9076, or 9077
Flash Point	EPA Method 1010 or ASTM D93
Ash	ASTM D482
Sulfur	ASTM D3227, D1552, D4294, or D129



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- Limitations and Requirements - WDLF
 - Records related to WDLF (kept on site for 3 years)
 - Testing for Halogenated Compounds
 - Sampling Procedures for WDLF
 - Auditing of WDFL based on Usage (1 of 15 trucks analyzed)
 - Cannot Blend to Meet Criteria
 - Proper Storage Required



ASPHALT PLANT AIR PERMIT GP-13

- Limitations and Requirements

- Plant Emissions Based on Age of Plant

b. The owner or operator of any existing HMA plant constructed after July 1, 1972, but prior to the effective date of this General Permit and for which an approval was obtained pursuant to 25 Pa. Code § 127.11 shall comply with the following limitations and requirements:

- i. The filterable particulate matter emissions in the exhaust of the baghouse shall not exceed 0.016 grains per dry standard cubic foot of effluent gas volume.
- ii. The following emission limits pertain to Nitrogen Oxide (NO_x), Carbon Monoxide (CO) and Volatile Organic Compounds (VOC, as propane):

Pollutant	NO _x	CO	VOC (as propane)
Emission limits	85 ppmvd @15% O ₂	350 ppmvd @15% O ₂	60 ppmvd @15% O ₂

- iii. The owner or operator may not permit the emission into the outdoor atmosphere of visible air contaminants in such a manner that the opacity of the emission is equal to or greater than 10% at any time.



ASPHALT PLANT AIR PERMIT GP-13

- Limitations and Requirements

- Plant Emissions Based on Age of Plant

- c. The owner or operator of any HMA plant constructed after the effective date of this General Permit , and a plant constructed after July 1, 1972, but prior to the effective date of this General Permit and for which no plan approval was obtained pursuant to 25 Pa. Code § 127.11 shall comply with the following best available technology requirements, which are hereby established pursuant to 25 Pa. Code §§ 127.1 and 127.12(a)(5):
 - i. The filterable particulate matter emissions in the exhaust of the fabric collector (baghouse) shall not exceed 0.009 grains per dry standard cubic foot of effluent gas volume.
 - ii. The total PM-10 (filterable plus condensable) in the exhaust of the baghouse shall not exceed 0.021 grains per dry standard cubic foot of effluent gas volume.
 - iii. There shall be no visible air contaminant emissions from the exhaust of the baghouse.
 - iv. Pursuant to BAT requirements, the following emission limits pertain to NO_x, CO and VOC (as propane)

Pollutant	NO _x	CO	VOC (as propane)
Emission limits	60 ppmvd @15% O ₂	200 ppmvd @15% O ₂	30 ppmvd @15% O ₂



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- Performance Testing and Tuning

- a. Emissions testing using EPA reference methods shall be conducted one time while the source is burning the worst case fuel to verify compliance with filterable particulate, NO_x, CO and VOCs. An existing HMA plant as described in Condition 14.b. may use an earlier stack test result approved by the Department for demonstration of compliance with this requirement, if it has been tested for the worst case fuel. The new and other plants as described in Condition 14.c. shall be tested for total PM₁₀ and PM_{2.5}.



Initial Testing w/in 180 Days

Testing Every 5 Years

PA DEP Emissions Testing

Standard Protocol 013 (DRAFT 2024)



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- Tuning Annually After First year
 - b. Except for the first year, the owner or operator shall conduct a burner tuning procedure in accordance with the manufacturer's specifications to minimize NO_x and CO emissions each year thereafter. The owner or operator shall conduct each annual tune-up not later than June 15 of each year or within four (4) weeks after each start-up of the HMA plant. An existing HMA plant as described in Condition 14.b of this General Permit may use an earlier stack test result approved by the Department for demonstration of compliance with this requirement, if it has been already tested for the worst case fuel. In such case, conducting a burner tuning procedure in accordance with the manufacturer's specifications will be adequate. The owner or operator shall comply with the following requirements:



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AIR PERMIT GP-13 PERFORMANCE TESTING

xi. The testing shall be performed while the source is operating at a maximum routine operating conditions rate and while producing a typical mix formulation.

- **Timing is Key Factor in Order to Get Production and Worst-Case Fuel Usage to Align with Stack Testing**



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Example Monitoring, Recordkeeping and Reporting Items

16. Monitoring, Recordkeeping and Reporting

- a. The owner or operator shall maintain records including the following:
 - i. Monthly and 12-month rolling total for asphalt production;
 - ii. Daily records shall be made available to the Department upon request;
 - iii. 12-month rolling total for gallons of No. 2 fuel oil, No. 4 fuel oil, WDLF, biodiesel, alternative fuels used;
 - iv. Hours operated while firing each liquid fuel;
 - v. 12-month rolling total for each pollutant listed;
 - vi. Daily baghouse pressure drop reading;
 - vii. Daily stack, fugitive and malodor surveys;
 - viii. Any corrective actions taken to bring facility back into compliance with stack, fugitive, and malodor requirements of this permit; and
 - ix. Records of tune-up and annual portable monitor testing done in accordance with Condition 15.b. of the General Permit.
- b. All logs and required records shall be maintained on site for a minimum of five (5) years and shall be made available to the Department upon request.



ASPHALT PLANT AIR PERMIT GP-13 REPORTING

- **Keep the Records**
 - Hours of Operation
 - Fuel Usage
 - Pressure Drop in the Baghouse
 - Emission Estimates for the Month
 - Inspections (Opacity Monitoring)
 - Maintenance Records



- **Have Records Available for DEP Inspector**



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ASPHALT PLANT INDIVIDUAL AIR PERMIT

- Permit Conditions May Vary Between Facilities
- Subject to PA DEP Requirements
 - Can write into permit additional conditions beyond the GP-13
 - Can include further reporting or material tracking



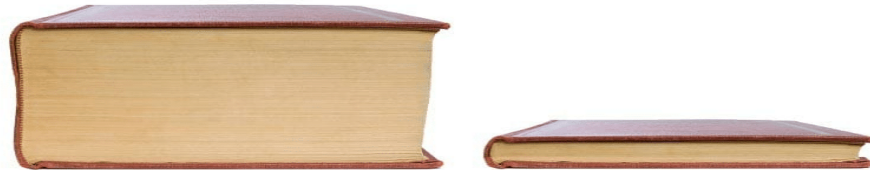
ASPHALT PLANT INDIVIDUAL AIR PERMIT

- Each Regional Office MAY have specific conditions to include
 - If you have multiple plants in multiple PA DEP Regions, your Permits MAY NOT be consistent for each facility
 - May have Variable Compliance Tracking for each Site
- **Challenge for Compliance Mangers**
 - Which facility has which permit requirements and are they close enough to each other OR are they really different requirements
 - Harder to keep it sorted out



ASPHALT PLANT INDIVIDUAL AIR PERMIT

- Complexity of Individual Permit and Training for Site Managers
 - General Permit is 14 pages
 - Individual Permit can be substantially more (i.e. over 38 pages)



- Easier to Understand Smaller Permit Document



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INDIVIDUAL Vs. GP AIR PERMIT

- Permit Review Timing Individual Air Permit
 - Need to Allow for a minimum of 180 days
 - **PRIOR TO CONSTRUCTION (Footers for Equipment Can Be Considered Construction)**
 - **PRIOR TO EQUIPMENT ARRIVING ONSITE**
 - The air emission source arrival onsite constitutes the start of emission regardless of operations
- Permit Review Timing GP-13
 - **Need to Allow for Minimum of 30 days**
 - Always allow for an adequate period of time for review and response to comments on any application. **Approvals are not guaranteed within these time frames.**



OPEN DISCUSSION AND QUESTIONS



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