



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

GENERAL PLAN APPROVAL AND/OR GENERAL OPERATING PERMIT
BAQ-GPA/GP-12

Fugitive Dust Sources and Diesel Fired Internal Combustion (IC) Engines
at Coal and Coal Refuse Preparation Plants

1. Statutory Authority and General Description:

In accordance with Section 6.1(f) of the Air Pollution Control Act, 35 P.S. §4006.1(f), 25 Pa. Code §§127.514 and 127.611 the Department of Environmental Protection ("Department") hereby issues this General Plan Approval and General Operating Permit for Fugitive Dust Sources and Diesel Fired Internal Combustion Engines at Coal and Coal Refuse Preparation Plants (hereinafter referred to as "General Permit").

2. Applicability/Source Coverage Limitations:

Approval herein granted under this General Permit (GP-12) is limited to the construction, operation, and modification of air contamination sources including diesel-fired internal combustion engines at coal and coal refuse (hereinafter referred to as "coal") preparation plants for which the applicant is in possession of a valid Bureau of District Mining Operations (BDMO) operating permit. The conditions of this General Permit apply to any owner or operator of a coal preparation plant (hereinafter "coal prep plant") authorized by the Department to operate under this General Permit. A "coal preparation plant," as defined in 40 CFR §60.251 (relating to definitions) is set forth in the definition section below. Any words or terms used in this General Permit and not specifically defined herein shall have the meanings specified in 25 Pa. Code 25, §121.1 (relating to definitions).

This General Permit is designed to serve as both a general plan approval and the general operating permit for fugitive dust sources and diesel fired internal combustion engines (except thermal dryers) at coal and coal refuse preparation plants. The specific use of the general permit will depend upon permit status, emission levels, and location of the facility as outlined below.

This General Permit has been established in accordance with the provisions described in 25 Pa. Code Chapter 127, Subchapter H (relating to general plan approvals and operating permits). If the sources at the coal and coal refuse preparation plants cannot be regulated by the requirements of this General Permit, an operating permit issued in accordance with 25 Pa. Code Chapter 27, Subchapter F (relating to operating permit requirements) will be required, or if the facility is a Title V facility, a Title V operating permit issued in accordance with Subchapter F and G (relating to Title V operating permits) will be required.

Plan Approval:

This General Plan Approval authorizes the construction of new sources that meet the best available technology (BAT) required under 25 Pa. Code §§127.1 and 127.12(a)(5) provided the construction of the sources does not subject the facility to the requirements of 25 Pa. Code Chapter 127, Subchapter D (relating to prevention of significant deterioration), 25 Pa. Code Chapter 127, Subchapter E (relating to new source review), 25 Pa. Code Chapter 127, Subchapter G (relating to Title V operating permits), or 25 Pa. Code §129.91 (relating to control of major sources of NO_x and VOCs).

- (b) Coal storage systems including coal transfer and loading systems;
- (c) Pneumatic coal cleaning equipment (air tables/air jig); and
- (d) Any diesel-fired internal combustion engines located on site (except those physically located in active underground mine workings).

As indicated in the table below, if one or more of the listed sources covered by this General Permit are present at the preparation plant, then the applicable conditions of this General Permit will apply to any other air contamination sources on site.

Permitting Requirements

| Activity | BAQ-GPA/GP12 Needed |
|--|---------------------|
| All coal handling activities with <200 tons/day throughput and IC engines below the criteria set below (1a. or 1b.) (assuming no thermal dryers or air table jigs) | No |
| Coal handling activities with only conveyors, nonvibratory screens (grizzlies) regardless of throughput and IC engines below the criteria set below (1a. or 1b.) | No |
| Use of IC engines below the criteria set below (1a. or 1b.) | No |
| Use of IC engines above the criteria set below (1a. or 1b.) | Yes |
| Use of above ground vibratory screens, grinders or crushers | Yes |
| Use of pneumatic coal cleaning devices (air tables/air jig) | Yes |

- 1.a. I.C. engines rated at less than 100 brake horsepower.
- 1.b. I.C. engines regardless of size, with combined NO_x emissions less than 100 lbs/hr, 1000 lbs/day, 2.75 tons per ozone season* and 6.6 tons per year on a 12-month rolling basis for all exempt engines at the site and used as the primary power source for equipment.

* Period beginning May 1 of each year and ending September 30 of the same year, inclusive.

for coverage date and the renewal application will still be due five (5) years from the original authorization date.

6. Application and Notice Requirements:

The permittee shall comply with applicable requirements established in 25 Pa. Code Chapter 127, Subchapter H (relating to general plan approvals and operating permits). The applications and notifications required by 25 Pa. Code §127.621 shall be sent to the appropriate District Mining Office responsible for authorizing use of this General Permit. This General Permit may be used for the construction, operation, and modification of coal preparation plants for the associated air emission sources and/or air pollution control devices located at these preparation plants.

At least five (5) working days prior to the completion of construction of the sources authorized under this General Plan Approval, the Owner/Operator of the "coal prep plant" shall provide written notice to the Department of the completion of the construction and its intent to commence operation. The notice shall specify when the construction will be completed and when the facility owner or operator expects to commence operation.

7. Definitions:

Annual coal throughput – The total raw coal mined at a facility in a calendar year along with any coal or coal refuse brought to the preparation plant for processing not limited to only that portion of mined material passing through the preparation plant.

Coal preparation plant – Any facility (excluding those processes conducted underground at underground mining operations) which prepares coal by one or more of the following processes: breaking, crushing, screening, wet or dry cleaning, and thermal drying.

Coal processing and conveying equipment – Any machinery used to reduce the size of coal or to separate coal from refuse, and the equipment used to convey coal to or remove coal and refuse from the machinery. This includes, but is not limited to, breakers, crushers, screens, and conveyor belts.

Coal storage system – Any facility used to store coal except for open storage piles.

Pneumatic coal-cleaning equipment – Any facility which classifies coal by size or separates coal from refuse by application of air stream(s).

Thermal dryer – Any facility in which the moisture content of coal is reduced by contact with a heated gas stream which is exhausted to the atmosphere.

Transfer and loading system – Any facility used to transfer and load coal.

8. Term of Permit:

Authorization for coverage under this General Permit is granted for a fixed period of five (5) years.

14. Regulatory Conflicts:

Wherever a conflict occurs between this General Permit and any of the regulatory provisions listed below, the permittee shall, in all cases, meet the more stringent requirement:

- a. 25 Pa. Code §§123.1, 123.2, 123.13(c), and 123.41.
- b. 40 CFR Part 60, Subpart Y.

15. Limitations:

The operation of a coal preparation plant and any associated air emission sources and/or air pollution control devices shall not at any time result in the emission of:

- a. Fugitive air contaminants contrary to the provisions of 25 Pa. Code §§123.1 and 123.2. All reasonable actions shall be taken to prevent particulate matter from becoming airborne. These actions include, but are not limited to the following:
 - i. Proper installation of a water spray dust suppression system and operation in accordance with Condition 16 or proper design, installation, and operation of a fabric collector in accordance with Condition 16;
 - ii. Application of asphalt, water or suitable chemicals on dirt roads, material stockpiles and other surfaces which may give rise to airborne dusts;
 - iii. Maintenance of all paved plant roadways;
 - iv. Prompt removal of earth or other material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosions by water, or other means.
- b. Particulate matter emissions from a process in excess of 0.04 gr/dscf as specified in 25 Pa. Code §123.13(c) or equal to or in excess of 20% opacity.
- c. Particulate matter from pneumatic coal cleaning equipment in excess of 0.018 gr/dscf or equal to or greater than 10 percent opacity as required in 40 CFR §60.252. Installation of a properly designed and operated baghouse on the source shall be adequate demonstration of compliance with this condition. If there is any evidence that the emission level or opacity standards may not be in compliance, as determined by the Department, the permittee may be required to conduct performance tests using Methods 5 and 9 as required in 40 CFR §60.254.
- d. A diesel engine for which construction at the site commenced prior to July 1, 1972 and operated more than 500 hours per year under this General Permit may not, at any time, result in the emission of:
 - i. Visible emissions in excess of the limitations specified in 25 Pa. Code §123.41 (relating to limitations) as follows:
 - (a) Equal to or greater than 20% opacity for a period or periods aggregating more than three (3) minutes in any one (1) hour;

- v. The sulfur content in diesel fuel shall not, at any time exceed 0.3% by weight.
- vi. The particulate matter emissions from each engine shall not exceed 0.4 grams per brake horsepower-hour.
- vii. Visible emissions from diesel engine(s) stacks shall not exceed 10% for a period or periods aggregating more than three (3) minutes in any one (1) hour or be equal to or greater than 30% at any time.
- viii. Odor emissions in such a manner that the malodors are detectable outside the property of the permittee as specified in 25 Pa. Code §123.31.

The emissions limitations in Conditions 15 (d) and (e) shall apply at all times except during periods of startup and shutdown, provided, the duration of startup and shutdown does not exceed one hour per occurrence.

16. BAT Requirements for Coal Preparation Plants and Associated Fugitive Dust Sources:

The permittee shall comply with the following requirements based on annual coal throughput:

| Activity | >500,000 TPY Total Annual Coal Throughput | ≤ 500,000TPY Total Annual Coal Throughput and ≤ ¼ mile from a residence | ≤ 500,000TPY Total Annual Coal Throughput and >¼ mile from a residence | * ≤ 200,000 TPY Total Annual Coal Throughput |
|----------------------------|---|---|--|--|
| Coal storage | ABCD | ABCD | ABD | D |
| Conveyors | E | F | F | — |
| Roadways | NOP | NOP | NOP | MP |
| Crushers/vibratory screens | GHI | GHI | GH | G |
| Loading/unloading | JK | L | L | L |
| Miscellaneous | QRS | QRS | QRS | QRS |

applicable conds. based on permitted coal throughput

- A. The permittee shall use a radial or tube stacker with air cannon or other device to prevent operational problems at coal storage locations in the winter months.
- B. The permittee shall employ the use of existing and/or manmade wind barriers wherever necessary for coal storage piles.
- C. The permittee shall employ the use of a permanent elevated surfactant treated water/oil sprays or water truck with pressurized spray gun for control of stockpile fugitive emissions. The water truck must be maintained on site and ready for use when conditions warrant.
- D. Any storage silos on site used for the stockpiling of thermally dried coal shall be equipped with a bin vent fabric collector.
- E. All coal conveyors shall be fully enclosed if the coal throughput is greater than 500,000 TPY. An equivalent BAT will be a partially enclosed conveyor where the moisture content of the coal

17. Air Pollution Control Device Specifications:

A. For Fugitive Dust Control Systems:

Dust suppression systems at coal preparation plants shall be operated on any and all occasions that the respective plant is operated. Operation without simultaneous operation of the water spray dust suppression system can take place only in those instances where processed materials contain sufficient moisture, no less than 5% moisture, so as not to create air contaminant emissions in excess of the limitations and standards of this General Permit. If the water spray dust suppression system is incapable of operation due to weather conditions or any other reason, and air contaminant emissions are in excess of the limitations and standards of this General Permit, then the permittee may not operate the emission source responsible for the violation.

B. For Control of Enclosed Dust Sources such as Air Tables and Processing Equipment:

Fabric collectors shall be installed on all pneumatic coal cleaning equipment and shall be equipped with pressure drop instrumentation and operated in accordance with manufacturer's specifications. Compressed air sources for fabric collectors shall be equipped and operated with air dryers and oil traps. If a baghouse is proposed to control any other fugitive dust sources, the exhaust shall be designed and guaranteed to achieve 0.01 grains per dry standard cubic foot by the baghouse manufacturer.

C. Catalytic Oxidation Units and NO_x Control Devices:

Catalytic oxidation units and add-on NO_x control devices shall be installed and properly maintained on each internal combustion engines as required in Condition 15.e.

18. Maintenance:

- a. The permittee shall keep on hand a sufficient quantity of spare fabric collector bags for any fabric collector associated with the coal preparation plant in order to be able to immediately replace any bags requiring replacement due to deterioration resulting from routine operation of the plant.
- b. The permittee shall keep on hand such equipment and materials as are necessary to take reasonable action (including, but not limited to the application of water, oil or chemicals) to prevent fugitive particulate matter resulting from the use of any roadways and/or material stockpiling operations associated with the plant from becoming airborne and shall be used, as necessary, to prevent such fugitive particulate matter from becoming airborne.
- c. The storage and handling of any material collected in any air cleaning device associated with the plant shall not at any time result in the emission of fugitive air contaminants in excess of the limitations specified in 25 Pa. Code §123.1(a).
- d. Catalyst media shall be visibly inspected annually and cleaned in accordance with the manufacturer's recommendations.

- ii. 90 tons per year if the facility is located in an ozone nonattainment area classified better than severe.
- b. For a new internal combustion engine installed in accordance with Condition 15(e) of this General Permit and equal to or greater than 400 brake horsepower, the permittee shall demonstrate compliance with the emission limits set forth in Condition 15(e), within 180 days of initial startup of the engine under this General Permit by way of Department approved stack testing in accordance with 25 Pa. Code Chapter 139, or Department approved vendor guarantee or other Department approved testing method.
- c. In addition to the stack testing required by this condition, within twelve (12) months after the initial stack testing, and annually thereafter, the permittee shall perform NO_x emissions tests upon each of the respective engines subjected to the BAT as stated in Condition 15(e) of this General Permit using a portable analyzer approved by the Department. The Department may alter the frequency of annual portable analyzer tests based on the results. The Department may also waive all or parts of this requirement if the permittee demonstrates compliance, in lieu of testing, through alternate means satisfactory to the Department.
- d. The Department reserves the right to require stack tests in accordance with EPA reference methods should the data from the portable analyzer warrant. The purpose of this testing is to demonstrate compliance with the emission limitations required for new engines.
- e. The Department may accept the vendor guarantees or recent test data on identical engines approved by the Department, as a verification of NO_x emissions if the NO_x emissions from a diesel engine are less than 10 tons per year.
- f. The permittee shall conduct performance tests for any pneumatic coal cleaning device that commences construction or modification after October 24, 1974 using Methods 5 and 9 as required in 40 CFR §60.254 to demonstrate compliance with the particulate matter standard of 0.018 gr/dscf.
- g. If, at any time, the Department has cause to believe that air contaminant emissions from a coal preparation plant covered by this general permit are in excess of the limitations specified in, or established pursuant to, any applicable regulation contained in 25 Pa. Code, Subpart C, Article III, the permittee shall conduct tests deemed necessary by the Department to determine the actual emission rate(s). The permittee shall perform such testing in accordance with applicable provisions of 25 Pa. Code Chapter 139 (relating to sampling and testing) and in accordance with any restrictions or limitations established by the Department at the time the permittee is notified, in writing, of the testing requirement.
- h. If performance stack tests are required for the demonstration of compliance with applicable emissions limits, the owner or operator of the affected facility shall comply with the following requirements:
 - (i) Within sixty (60) days after achieving the maximum production rate at which the affected facility will be operated, but no later than one hundred eighty (180) days after the initial startup of the source, the owner or operator shall demonstrate compliance with the applicable emission limits;

- c. When a new diesel fired internal combustion engine is installed in accordance with Condition 15.e and is required to conduct a performance test, the permittee shall maintain records or report the following:
 - i Records including a description of testing methods, results, all engine operating data collected during the tests and a copy of the calculations performed to determine compliance with emission standards;
 - ii Copies of the report that demonstrates that the engines were operating at rated brake horsepower and rated speed conditions during performance testing; and
 - iii Submittal of reports in accordance with the requirements and schedules outlined in this General Permit.
- d. These records shall be retained for a minimum of five (5) years and shall be made available to the Department upon request. The Department reserves the right to expand the list contained in this condition as it may reasonably prescribe pursuant to the provisions of Section 4 of the Pennsylvania Air Pollution Control Act (35 P.S. §4004), and as it may deem necessary to determine compliance with any condition contained herein.

23. Small Sources of NO_x Requirements:

Each diesel engine rated at greater than 1,000 brake horsepower and located in a severe non-attainment area for ozone shall comply with small sources of NO_x requirements as established in 25 Pa. Code §§129.203 through 129.205 as applicable.

24. Interstate Pollution Transport Reduction Requirements:

Each diesel engine rated equal to or greater than 3,000 brake horsepower that emitted greater or equal to 153 tons of NO_x from May 1 through September 30 in 1995 or from May 1 through September 30 of any year thereafter shall comply with the applicable requirements as established in 25 Pa. Code §§145.11 through 145.115, as applicable.

25. Report Submittal:

Pursuant to the federal New Source Performance Standards in 40 CFR §60.4, the permittee shall submit copies of all requests, reports, applications, submittals, and other communications to both EPA and the appropriate District Mining Office and the appropriate Regional Air Quality Office of the Department. The EPA copies shall be forwarded to:

Air Enforcement Branch, Mail Code 3AP12US EPA, Region III
1650 Arch St
Philadelphia PA 19103 – 2029

Approved by: _____
Joyce E. Epps
Director
Bureau of Air Quality

Date: _____ March 17, 2005