west virginia department of environmental protection

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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

General Permit No.: G10-D (Prevention and Control of Air Pollution in regard to the Construction, Modification, Relocation, Administrative Update and Operation of Coal Preparation and Processing Plants and Coal Handling Operations)
Eligible SIC Codes: 1221, 1222 or 4449 (including area sources)
Engineer Assigned: Jerry Williams II, P.E.
G10-D Registration Fee Amount: $500.00
Applicable NSPS Fee Amount: $1,000.00
Description: General Permit G10-D is for facilities designed and operated for the purpose of handling and/or preparation of bituminous coal or coal-based synfuel. Activities include coal grinding, breaking, crushing, screening, conveying, stockpiling and wet wash (heavy media wash). General Permit G10-D language will be the same for all facilities that want to use General Permit G10-D. The Registration forms will be different for each facility. The Registration form shall list all emission sources and sections of the general permit, which are applicable to the particular facility.

All General Permit Registrations issued under G10-A, G10-B, and G10-C are subject to this permit upon issuance. This Class II General Permit is being updated to reflect rule changes to 40CFR60 Subpart Y (Standards of Performance for Coal Preparation and Processing Plants), and for the inclusion of reciprocating internal combustion engines that are used in conjunction with coal preparation and processing plants. New Source Performance Standards (40CFR60 Subpart IIII and 40CFR60 Subpart JJJJ) for applicable engines will also be added to this General Permit.

WVDEP DAQ did not determine whether a registrant is subject to an area source air toxics standard requiring Generally Achievable Control Technology (GACT) promulgated after January 1, 2007 pursuant to 40 CFR 63, including the area source air toxics provisions of 40 CFR 63, Subpart ZZZZ.

EMISSION SOURCES AND ELIGIBILTY

For the purposes of General Permit G10-D, *coal handling operation* means and includes, but shall not be limited to all coal grinding, crushing, picking, screening, conveying, storing and stockpiling operations not associated with a coal preparation plant. For the purposes of General Permit G10-D, *coal preparation and processing plant* means and includes and facility (excluding surface and underground mining operations) that prepares coal by one or more of the following processes: screening, breaking, crushing, wet cleaning and further such definition of a coal preparation and processing plant shall include all coal handling operations associated with the processes described above, but shall not include:

a. Any facility that would be defined as a coal preparation and processing plant solely because it incorporates a stationary grizzly or scalping screen; or
b. Any facility designed to process less than 200 tons of coal per day.

Sources of emissions at eligible coal preparation and processing plants or coal handling operations include crushers, screens, transfer points (loading, unloading, etc.), open storage piles, bins, haulroads, reciprocating internal combustion engine driven compressors, emergency standby generators, and tanks.

All coal preparation and processing plants or coal handling operations having a Standard Industrial Classification (SIC) code of 1221, 1222 or 4449 (including area sources) are eligible for this Class II General Permit registration except for:

1. Any coal preparation and processing plant or coal handling operation with a raw coal process design capacity (input) of more than 2,500 tons per hour or more than 21,900,000 tons per year (General Permit throughput eligibility limit).
2. Any coal preparation and processing plant or coal handling operation which is a major source as defined in 45CSR14 or 45CSR30 (General Permit emission eligibility limit).
3. Any coal preparation and processing plant, facility or equipment that is subject to the requirements of 45CSR3, 45CSR7, 45CSR14 or 45CSR19.
4. Any coal preparation and processing plant or coal handling operation which will require an individual air quality permit review process and/or individual permit provisions to address the emission of a regulated pollutant or to incorporate regulatory requirements other than those established by General Permit G10-D.
5. Any coal preparation and processing plant or coal handling operation which incorporates a thermal dryer or an air table.
6. Any underground or surface mining operation (except coal preparation and processing plant or coal handling operation situated at or near a surface or underground mine operation).
7. Any coal preparation and processing plant or coal handling operation which incorporates a high-wall truck or conveyor dump where raw coal is discharged unenclosed (without a dump bin and stacking tube or full enclosure) from a conveyor, endloader, truck or other transport device over a high-wall having a maximum vertical elevation differential between the drop point and the top of the collected material below (process drop height) in excess of 20 feet.

8. Any coal preparation and processing plant or coal handling operation located in or which may significantly impact the area of Brooke County west of State Route 2, north of an extension of the southern boundary of Steubenville Township in Jefferson County, Ohio and south of the Market Street Bridge.
9. Any coal preparation and processing plant or coal handling operation located within the boundaries of or which may significantly impact the Weirton nonattainment area.
10. Any coal preparation and processing plant or coal handling operation located in or which may significantly impact an area which has been determined to be a PM-10 maintenance or nonattainment area.

SITE INSPECTION

All persons submitting a Class II General Permit Registration Application to construct, modify or relocate a coal preparation and processing plant or coal handling operation shall be subject to the following siting criteria:

a. No person shall construct, locate or relocate any facility, affected facility or emission unit within three hundred (300) feet of any occupied dwelling, business, public building, school, church, community, institutional building or public park. An owner of an occupied dwelling or business may elect to waive the three hundred (300) foot siting criteria.

b. Any person proposing to construct, modify or relocate a coal preparation and processing plant or coal handling operations within three (300) feet of any occupied dwelling, business, public building, school, church, community, institutional building or public park may elect to obtain an individual permit pursuant to 45CSR13.

The registrant shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

a. At all reasonable times enter upon the registrant's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit
b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Class II General Permit.
c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution Control equipment), practices, or operations regulated or required under this Class II General Permit.
d. Sample or monitor at reasonable times, substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Sources of emissions at eligible coal preparation and processing plants or coal handling operations include crushers, screens, transfer points (loading, unloading, etc.), open storage piles, bins, haulroads, reciprocating internal combustion engine driven compressors, emergency standby generators, and tanks. An estimate of criteria and hazardous/toxic pollutant emissions shall be submitted with each Class II General Permit Registration Application on an Emission Summary Sheet.

G10-D applicants are required to submit emission estimates and supporting calculations for each affected source located at the facility. The DAQ has provided an emissions calculations spreadsheet available on our website to assist registrants with this requirement. These emissions will be reviewed by the DAQ to determine that the registrant meets the requirements of General Permit G10-D.

REGULATORY APPLICABILITY

The following rules apply to General Permit G10-D:

45CSR2 To Prevent and Control Particulate Air Pollution From Combustion of Fuel in Indirect Heat Exchangers

45CSR2 establishes emission limitations for smoke and particulate matter which are discharged from fuel burning units. All fuel burning units will be subject to the weight emission standard for particulate matter set forth in 45CSR2. Each registrant is also subject to all applicable opacity requirements set forth in 45CSR2 Section 3.2.

45CSR5 To Prevent and Control Particulate Air Pollution from the Operation of Coal Preparation Plants and Coal Handling Operations

45CSR5 applies to the registrant because the facility meets the definition of "Coal Preparation Plant" found in subsection 45CSR5.2.4. General Permit G10-D requires that the registrant is in compliance with Section 3 (less than 20% opacity) and Section 6 (fugitive dust control system and dust control of the premises and access roads) when the particulate matter control methods and devices proposed within General Permit G10-D are in operation.

45CSR10 To Prevent and Control Air Pollution from the Emission of Sulfur Oxides

The purpose of this rule is to prevent and control air pollution from the emission of sulfur oxides. All fuel burning units will be subject to the weight emission standard for sulfur dioxide set forth in 45CSR10.

45CSR13 Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation

As provided in 45CSR13, the Secretary may issue Class II General Permits involving the same or similar processes or pollutants. For eligible applicants and/or registrants, Class II General Permit registration satisfies the construction, modification, relocation and operating permit requirements of 45CSR13.

45CSR16 Standards of Performance for New Stationary Sources Pursuant to 40 CFR Part 60

45CSR16 applies to all registrants that are subject to a NSPS by reference of 40CFR60. The registrant is subject to the applicable requirements of the NSPS that applies.

45CSR22 Air Quality Management Fee Program

45CSR22 applies to all registrants which are minor sources and no NSPS applies. The affected registrants will be subject to the fee schedule set forth in 45CSR22. They are also required to keep their Certificate to Operate status current.

45CSR30 Requirements for Operating Permits

45CSR30 applies to those sources for which an NSPS applies. The affected registrants will be subject to the fee schedule set forth in 45CSR30. They are also required to file a Certified Emissions Statement annually.

40CFR60 Subpart Y (Standards of Performance for Coal Preparation and Processing Plants)

Subpart Y regulates affected facilities located at coal preparation and processing plants or coal handling operations which process more than 200 tons of coal per day. Subpart Y sets forth opacity limits, particulate matter control methods, and monitoring requirements for all subject coal preparation and processing plants.

On October 8, 2009, EPA promulgated amendments to the New Source Performance Standard (NSPS) for Coal Preparation and Processing Plants, 40 CFR Part 60 Subpart Y. This final rule was effective on October 8, 2009, and the final applicable amendments to General Permit G10-D include:

1. Revision to the definition of pneumatic coal cleaning equipment for units constructed after May 27, 2009, to include pneumatic coal-cleaning equipment cleaning all coal ranks.

2. Revision to the definition of coal to include coal refuse.

3. Revisions to the emission limits for particulate matter and opacity standards for pneumatic coal cleaning equipment, and coal handling equipment constructed, reconstructed, or modified after April 28, 2008.

4. Submittal of fugitive coal dust emissions control plan and establishment of work practice standards to control fugitive coal dust emissions from open storage piles constructed, reconstructed, or modified after May 27, 2009, located at coal preparation and processing plants.

5. Minor revisions to the emissions testing, monitoring, recordkeeping and reporting requirements.

40CFR60 Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines)

Subpart IIII sets forth emission limits, fuel requirements, installation requirements, and monitoring requirements based on the year of installation of the subject reciprocating internal combustion engine.

40CFR60 Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines)

Subpart JJJJ sets forth emission limits, fuel requirements, installation requirements, and monitoring requirements based on the year of installation of the subject reciprocating internal combustion engine.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

Small amounts of non-criteria regulated hazardous or toxic air pollutants such as benzene, ethylbenzene, toluene, xylenes and formaldehyde may be emitted when fuels are combusted in reciprocating internal combustion engines. Total non-criteria regulated hazardous/toxic air pollutant emissions are tabulated for each registered fuel burning unit in the Class II General Permit Registration Application. The Director has previously determined that due to the typically small amounts emitted, these non-criteria regulated hazardous/toxic pollutants should not adversely impact an applicable ambient air quality standard or cause or contribute to degradation of public health and welfare. The changes to this permit do not change that determination. A toxicity analysis will be performed when the Director finds existing circumstances and/or submitted data provide cause for an assessment to be made concerning whether a specific fuel burning unit may interfere with attainment or maintenance of an applicable ambient air quality standard or cause or contribute to degradation of public health and welfare. Any fuel burning unit granted a Class II General Permit registration by the Director shall not have a potential to emit of 10 tons per year of any hazardous/toxic pollutant or 25 tons per year of any combination of hazardous/toxic pollutants.

AIR QUALITY IMPACT ANALYSIS

Air dispersion modeling will be performed when the Director finds existing circumstances and/or submitted data provide cause for an assessment to be made concerning whether a specific coal preparation and processing plant or coal handling operation may interfere with attainment or maintenance of an applicable ambient air quality standard or cause or contribute to a violation of an applicable air quality increment from any proposed Class II General Permit registration action. Factors to be considered when determining whether an ambient air assessment would be made include:

a. Existing air quality of the area
b. Topographic or meteorological factors
c. Maximum emissions
d. Siting criteria

MONITORING OF OPERATIONS

G10-D registrants will be required to perform the following monitoring and recordkeeping:

1. Monitor and record daily and monthly records of the amount of coal processed.
2. Monitor and record calendar monthly and calendar annual quantity of fuel consumed and hours of operation for all engines and combustion sources.
3. Monitor and record calendar annual quantity of organic liquid throughput in all registered storage tanks.
4. Conduct visual observations of all points listed in the registration that are subject to opacity limits.
5. Conduct annual preventative maintenance/inspection, and all routine maintenance service and repairs as required, to facilitate proper control device performance, for the control devices listed in the registration.
6. These records shall be maintained on-site for a minimum of five (5) years from the date of record creation and shall be made available to the Director of the Division of Air Quality or his or her duly authorized representative upon request.

CHANGES TO GENERAL PERMIT G10-C

General Permit G10-D addresses the amendments to the New Source Performance Standards (NSPS) for 40CFR60 Subpart Y (Standards of Performance for Coal Preparation and Processing Plants). This language was incorporated into Sections 6 through 8 of General Permit G10-D. In addition, General Permit G10-D will allow the opportunity for registrants to operate reciprocating internal combustion engines (spark or compression ignition), including emergency generators and this language was incorporated into Sections 9 through 12.

All registered facilities under Class II General Permit G10-D are subject to Sections 1.0, 1.1, 2.0, 3.0 and 4.0.

Each applicant will then choose which of the following sections that they are seeking registration for, under General Permit G10-D:

Section 5[1]	Coal Preparation and Processing Plants and Coal Handling Operations
Section 6	Standards of Performance for Coal Preparation and Processing Plants that Commenced Construction, Reconstruction or Modification after October 27, 1974, and on or before April 27, 2008 (40CFR60 Subpart Y)
Section 7	Standards of Performance for Coal Preparation and Processing Plants that Commenced Construction, Reconstruction or Modification after April 28, 2008, and on or before May 27, 2009 (40CFR60 Subpart Y)
Section 8	Standards of Performance for Coal Preparation and Processing Plants that Commenced Construction, Reconstruction or Modification after May 27, 2009 (40CFR60 Subpart Y)
Section 9[2]	Reciprocating Internal Combustion Engines (R.I.C.E.)
Section 10	Tanks
Section 11	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40CFR60 Subpart IIII)
Section 12	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (40CFR60 Subpart JJJJ)

1 Affected facilities that are subject to Section 5 may also be subject to Sections 6, 7, and 8. Therefore, if the applicant is seeking registration under multiple sections, they will need to select all applicable sections.

2 Affected facilities that are subject to Section 9 may also be subject to Sections 11 or 12. Therefore, if the applicant is seeking registration under multiple sections, they will need to select all applicable sections.

RECOMMENDATION TO DIRECTOR

General Permit G10-D meets all the requirements of applicable regulations when all of the applicable control devices are functioning properly. Therefore, it is recommended that General Permit G10-D should be issued to supersede and replace General Permit G10-C.

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Jerry Williams II, P.E.
Engineer

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Date