

GENERAL PERMIT WMGR134

BENEFICIAL USE OF SYNTHETIC GYPSUM

A. Description:

The approval herein granted is limited to the beneficial use of synthetic gypsum from forced oxidation flue gas desulfurization (FGD) systems generated at coal-fired electric power plants when mixed with coal ash, hereinafter referred to as stabilized FGD-gypsum material, to enhance compaction of fine coal refuse at coal refuse disposal sites.

B. Determination of Applicability Requirements:

A person or municipality that proposes to operate under the terms and conditions of this general permit after the date of permit issuance must obtain a "Determination of Applicability" ("DOA") from the appropriate Department Regional Office (see attached list) prior to commencing authorized activities under this general permit. A completed (i) General Information Form (Authorization Application for a Residual or Municipal Waste General Permit Application), (ii) Form B (Professional Certification), (iii) Form 20 (Application for a Municipal or Residual Waste General Permit), (iv) Form 27R (Acceptance of General Permit Conditions), and (v) A DOA application fee in the amount identified in Section A (General Information) of the Form 20 must be submitted to the appropriate Department Regional Office. A check shall be made payable to the "Commonwealth of Pennsylvania". No activities shall commence unless approved, in writing, by the Department.

C. Operating Conditions:

1. All activities conducted under the authorization granted in this permit shall be conducted in accordance with the permittee's application. Except to the extent that the permit states otherwise, the permittee shall operate its facilities covered by the general permit as described in the approved application.
2. This permit does not authorize and shall not be construed as an approval to discharge any waste, wastewater, contaminated precipitation, or runoff from the site of processing to the land or waters of the Commonwealth. Collected precipitation shall be promptly removed from the secondary containment area.
3. Best Management Practices (BMPs) shall be implemented to divert stormwater runoff away from the facility. Stormwater runoff shall be managed in accordance with The Clean Streams Law and regulations promulgated thereunder. Prior to commencing operations at the facility, the permittee must comply with regulations and obtain all the necessary erosion and sediment control and stormwater management permits.
4. The permittee shall comply with the applicable provisions of 25 Pa. Code, Chapter 123 (Standards for Contaminants) issued under the Air Pollution Control

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Act, 35 P.S. §§ 4001-4005 and shall comply with all applicable provisions of the Fugitive Emissions Sections 123.1, 123.2, and 123.31.

5. Nothing in this permit shall be construed to supersede, amend, or authorize a violation of any of the provisions of any valid and applicable local law, ordinance, or regulation, provided that said local law, ordinance, or regulation is not preempted by state or federal law. Nothing in this general permit shall be construed to supersede, amend, or authorize a violation of any of the provisions of any valid state or federal law or regulation.
6. As a condition of this permit and of the permittee's authority to conduct the activities authorized by this permit, the permittee hereby consents to allow authorized employees or agents of the Department, without advance notice or search warrant, upon presentation of appropriate credentials and without delay, to have access and to inspect all areas and permittee controlled adjacent areas where solid waste management activities are being or will be conducted. This authorization and consent shall include consent to collect samples of waste, water, or gases; to take photographs; to perform measurements, surveys, and other tests; to inspect any monitoring equipment' to inspect the methods of operation; and to inspect documents, books, and papers required by the Department to be maintained or produced. (See Sec. 608 and 610(7) of the Solid Waste Management Act, 35 P.S. Sections 6018.608 and 6018.610(7).) This condition in no way limits any other powers granted to the Department under the Solid Waste Management Act.
7. Failure of the measures herein approved to perform as intended, or as designed, or in compliance with the applicable laws, rules and regulations and terms and conditions of this permit, for any reason, shall be grounds for the revocation or suspension of the permittee's approval to operate under this permit.
8. Any independent contractors or agents retained by the permittee to conduct the activities authorized under this permit shall be subject to prior compliance history review by the Department as specified by the Pennsylvania Solid Waste Management Act of 1980. Notwithstanding the permittee obligations, the Department reserves the right to take appropriate compliance action against any contractor or agent of the permittee for site operations.
9. The activities authorized by this permit shall not harm or present a threat of harm to the health, safety, or welfare of the people or environment of this Commonwealth. The Department may modify, suspend, revoke, or reissue the authorization granted in this permit if it deems necessary to prevent harm or threat of harm to public health or the environment.

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10. Upon cessation of operations or by the expiration date of this general permit or unless extended by the Department in writing, the permittee shall remove any remaining waste(s) material authorized under the general permit and any residual wastes or other materials which contain or have been in contact with the waste material authorized under this general permit, and shall provide for the processing and disposal of the waste or material in accordance with the Solid Waste Management Act, the environmental protection acts and the regulations promulgated thereunder.
11. The permittee shall maintain in force and effect a general liability insurance policy, in accordance with 25 Pa. Code, Chapter 287, Subchapter E to provide continuous coverage during operation of the facility and until the Department issues a final closure certification as provided by 25 Pa. Code § 287.342.
12. Except as otherwise provided by this general permit or applicable regulations, synthetic gypsum and coal ash managed under this general permit shall not be mixed with other types of solid wastes, including hazardous waste, municipal waste, other residual waste, or special handling waste.
13. Prior to beneficial use, the synthetic gypsum shall be uniformly mixed with coal ash and coal refuse using a pug mill, double auger, or equivalent mixing method approved by the Department. The blending of these three components must be in a ratio to ensure proper compaction at the end-use site.
14. Equipment used in the transportation and storage of synthetic gypsum and coal ash shall be maintained in good operating condition to prevent the synthetic gypsum and coal ash from being unintentionally conveyed out of the storage areas. Weekly inspections of the storage area and its surrounding environs are to be conducted to determine compliance of the terms and conditions of this general permit, and for evidence of failures.
15. The placement of synthetic gypsum mixed with coal ash for beneficial use must be in a lined area with a leachate and stormwater collection system. Surface water controls must be constructed, implemented, and maintained to eliminate or prevent ponding and excessive wetting and shall be based on a 24-hour precipitation event to be expected once every 25 years, or as permitted under 25 Pa. Code Chapters 86 and 90.
16. The beneficial use of stabilized FGD-gypsum material shall not be:
 - a. Placed in direct contact with surface or ground water;

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- b. Placed within 100 feet of a perennial stream;
 - c. Placed within 300 feet of an exceptional wetland;
 - d. Placed within 300 feet down gradient of a private or public water source;
 - e. Placed within 100 feet of a sinkhole or area draining into a sinkhole;
 - f. Placed within 1,000 feet up-gradient of a private or public water source, unless otherwise approved by the Department's appropriate Regional Office;
 - g. Placed during periods of heavy rain or to ground that is saturated; and
 - h. Placed within a 100-year floodplain of a water of this Commonwealth.
17. The leachate generated at the beneficial use site shall be collected, analyzed, and treated to meet the requirements of this general permit.
18. Water quality monitoring shall be conducted in accordance with 25 Pa. Code § 288.251 through § 288.257.
- a. Groundwater monitoring shall be sufficient to detect impacts of the placement of stabilized FGD-gypsum material on the groundwater.
 - b. At least one (1) upgradient and three (3) downgradient groundwater monitoring points shall be established unless otherwise approved by the Department.
 - c. Groundwater monitoring points shall be sampled on a quarterly basis once the stabilized FGD-gypsum material is placed.
 - d. Groundwater monitoring shall continue for five (5) years after the completion of beneficial use of stabilized FGD-gypsum material. The monitoring required in this condition shall continue for five (5) additional years if groundwater degradation is determined to occur.
 - e. Quarterly samples shall be analyzed for: static water elevation (for monitoring wells), flow (for springs, seeps, or mine discharges), pH (field and laboratory value), conductance, alkalinity, acidity, Iron, Manganese, Sulfate, Total Dissolved Solids, Total Suspended Solids, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chloride, Calcium, Chromium (Total),

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Cobalt, Copper, Lead, Magnesium, Mercury, Molybdenum, Nickel,
Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, and Zinc.

19. The synthetic gypsum/coal ash mixture may be beneficially used if all of the following are met:

- a. Leachate analysis, using the Synthetic Precipitation Leaching Procedure (EPA 1312), on a representative sample indicates none of the levels in Table 1 are exceeded.

Table 1	
Constituent	Leachable (mg/L)
Aluminum	10
Antimony	0.3
Arsenic	0.5
Barium	100
Beryllium	0.2
Boron	350
Cadmium	0.25
Chromium	5
Cobalt	36.5
Copper	65
Iron	15
Lead	0.25
Manganese	2.5
Mercury	0.1
Molybdenum	8.75
Nickel	5
Selenium	2.5
Silver	5
Thallium	0.025
Vanadium	13
Zinc	250
Chloride	12,500
Fluoride	200
Nitrate	500
Nitrite	50
Sulfate	12,500

- b. The stabilized synthetic gypsum material shall achieve a minimum 90% of the standard Proctor maximum dry density.

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20. In cases when coal ash is not being generated at the facility, the permittee shall request, in writing, a temporary daily approval to place synthetic gypsum with coal refuse alone. The Department may approve the use on a case-by-case basis until coal ash is again generated at the facility.
21. The beneficial use of stabilized FGD-gypsum material at a coal refuse disposal site must be approved by the DEP Mining Program.

D. Sampling, Analysis, and Frequency of Monitoring

1. Representative samples of the entire stabilized FGD-gypsum material produced must be collected and analyzed as required in Condition D.3 and D.4 to determine compliance with the physical and/or chemical requirements as specified in Conditions C.19.a and C.19.b of this general permit. More than one sample is usually necessary to accurately represent the stabilized FGD-gypsum material produced. Core samples at different locations and at various depths shall be collected and then composited to obtain a representative sample of the stabilized FGD-gypsum material produced. The key is to obtain a representative sample. In general, the more samples taken, the greater the chance that the sampling results will be representative of the quality of the stabilized FGD-gypsum material that is produced.
2. The required analysis shall be performed by a laboratory accredited or registered for accreditation under the Pennsylvania Environmental Laboratory Accreditation Act, Act of 2002, No. 25.
3. Prior to the beneficial use of any stabilized FGD-gypsum material under the provisions of this permit, the permittee shall verify that the material is uniformly mixed and collect representative samples of the entire stabilized FGD-gypsum material and analyzed for "leachable" levels for each constituent level as listed in Table 1 of Condition C.19.a of this general permit. Thereafter, the permittee shall perform chemical analysis on additional representative sampled of stabilized FGD-gypsum material as follows:
 - a. If the amount of stabilized FGD-gypsum material is greater than zero but less than 75,000 tons, on a monthly basis, the frequency of testing shall be once per 60 days.
 - b. If the amount of stabilized FGD-gypsum material is equal to or greater than 75,000 tons, on a monthly basis, the frequency of testing shall be once per 30 days.
4. The frequency of monitoring requirements for the physical and chemical analysis of representative samples of the stabilized FGD-gypsum material shall be as follows:

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- a. The frequency of monitoring for the compaction of 90% Standard Proctor as specified in Condition C.19.b shall be once per 90 days.
- b. After the physical and chemical analysis of representative samples of the stabilized FGD-gypsum material has been conducted as required by this general permit for a two-year period and has met the concentration limits and requirements as specified, the Department may reduce the required frequency of monitoring if a written request for the reduction of sampling frequency is submitted by the permittee. However, the frequency of monitoring may not be less than twice per year. A written approval from the Department must be obtained before commencing a reduced sampling frequency.

E. Record Keeping:

1. The permittee shall maintain records of the beneficial use of synthetic gypsum:
 - a. The dates and volumes of gypsum placement, including the ratio of coal ash/gypsum mixed for placement.
 - b. The locations of placement for each coal ash/gypsum mixture.
2. Records of all analytical testing conducted on the leachate shall be retained by the permittee at the site and shall be made available to the Department on request. Analytical information on the waste shall be retained for a minimum of 5 years from the date it was obtained and is to include: The dates of sampling and testing, sampling procedures, person collecting the sample, the volume or weight of the sample, each parameter tested, the analytical results, the laboratory used, and analytical methodologies.
3. Records of all analytical evaluations conducted on the waste shall be retained by the permittee at the site and shall be made available to the Department on request. Analytical information on the waste shall be retained for a minimum of 5 years from the date it was obtained and is to include: The dates of sampling and testing, sampling procedures, person collecting the sample, the volume or weight of the sample, each parameter tested, the analytical results, the laboratory used, and analytical methodologies.

F. Reporting Requirements:

1. Any person that operates under the provisions of this permit shall immediately notify the Department via certified mail of any changes in: the company name, address, owners, facility managers or operators and responsible officials, land ownership and the right to enter and operate on any land occupied by a facility, the raw source or

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physical and chemical characteristics of the waste, the manufacturing process which generates the waste, and the change in status of any permit issued to the permittee by the Department or federal government under the environmental protection acts.

2. Persons operating under the provisions of this general permit shall submit, by March 1st of the following year, to the appropriate Department Regional Office, an annual report which contains the information outlined in Conditions C.19.a, C.19.b, and E. The annual report must include the laboratory reports for leachate analyses performed on a representative sample of the stabilized gypsum material for all of the constituents listed in Table 1. The analysis data submitted must be in compliance with this requirement and from samples of the stabilized gypsum material collected within the past six (6) months.

G. Renewal:

A person or municipality that plans to continue the operations authorized under this general permit, after the expiration date indicated on the approval for coverage page, shall file a complete application for permit renewal at least 180 days before the expiration date of this general permit unless permission has been granted by the Department for submission at a later date. The renewal application shall be made using the "Form 20 (Application For a Municipal or Residual Waste General Permit)". The renewal shall be sent to the attention of the Department's Bureau of Waste Management, Rachel Carson State Office Building, 400 Market Street, P.O. Box 69170, Harrisburg, PA 17106-9170.

In the event that a timely and complete application for renewal has been submitted and the Department is unable, through no fault of the permittee, to reissue the general permit or approval for coverage before its current coverage expiration date, the terms and conditions of the approved coverage will automatically continue and will remain fully effective and enforceable pending the issuance or denial of the renewal for permit coverage, provided the permittee is, and has been, operating in compliance with the terms and conditions of the general permit.

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Department of Environmental Protection Regional Offices (and Counties Served)

- I. Bucks, Chester, Delaware, Montgomery, Philadelphia.

Southeast Regional Office

2 East Main Street
Norristown, PA 19401
Phone: (484) 250-5960

- II. Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton, Pike, Schuylkill, Susquehanna, Wayne, Wyoming.

Northeast Regional Office

2 Public Square
Wilkes-Barre, PA 18711-0790
Phone: (570) 826-2511

- III. Adams, Bedford, Berks, Blair, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lancaster, Lebanon, Mifflin, Perry, York.

Southcentral Regional Office

909 Elmerton Avenue
Harrisburg, PA 17110-8200
Phone: (717) 705-4706

- IV. Bradford, Cameron, Centre, Clearfield, Clinton, Columbia, Lycoming, Montour, Northumberland, Potter, Snyder, Sullivan, Tioga, Union.

Northcentral Regional Office

208 West 3rd Street – Suite 101
Williamsport, PA 17701
Phone: (570) 327-3653

- V. Allegheny, Armstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Washington, Westmoreland.

Southwest Regional Office

400 Waterfront Drive
Pittsburgh, Pa 15222-4745
Phone: (412) 442-4000

- VI. Butler, Clarion, Crawford, Elk, Erie, Forest, Jefferson, Lawrence, McKean, Mercer, Venango, Warren.

Northwest Regional Office

230 Chestnut Street
Meadville, PA 16335-3481
Phone: (814) 332-6848