

GENERAL PERMIT WMGR144

PROCESSING AND BENEFICIAL USE OF BLAST FURNACE
SLAG AND STEEL SLAG GENERATED BY STEELMAKING
OPERATIONS OR FROM HISTORIC SLAG PALCEMENT AREAS
FOR USE AS CONSTRUCTION MATERIAL SUB-BASE, HOT OR
WARM MIX PAVEMENT AGGREGATE, READY MIX CONCRETE
INGREDIENT, ANTISKID, AND FOR USE IN MARCELLUS
SHALE PAD CONSTRUCTION AND WELL ANNULAR
MATERIAL.

DEPARTMENT OF ENVIRONMENTAL
PROTECTION
BUREAU OF WASTE MANAGEMENT
DIVISION OF MUNICIPAL and RESIDUAL
WASTE

March 2014

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Expires: March 11, 2024

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MARCELLUS WELL PAD CONSTRUCTION, CONCRETE INGREDIENT, AND PAVEMENT
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A. Description:

This general permit authorizes the processing and beneficial use of blast furnace slag and steel slag generated by steelmaking operations or from historic slag placement areas for use as a construction material sub-base, hot or warm mix pavement aggregate, ready mix concrete ingredient, antiskid, and for use in Marcellus shale pad construction and well annular material. Processing is limited to sizing and removal of metals.

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), (v) Form HW-C (Compliance History), and (vi) 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 the permit states otherwise, the permittee shall utilize the processed material as described in the permit application.
2. The permittee shall comply with the fugitive emissions regulations under Title 25 Pa. Code, Chapter 123 (Standards for Contaminants) issued under the Air Pollution Control Act, the Act of January 8, 1960, P.L. 2119, 35 P.S. §4005 and shall comply with all the applicable provisions of the Fugitive Emissions Sections 123.1 and 123.2.
3. 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, providing that said local law, ordinance, or regulation is not preempted by the Pennsylvania Solid Waste Management Act, 35 P.S. §6018.101 et seq; and the Municipal Waste Planning, Recycling and Waste Reduction Act of 1988, 53 P.S. §4000.101 et seq.

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4. As a condition of this general permit and of the permittee's authority to conduct the activities authorized by this general permit, the permittee hereby authorizes and 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 to and to inspect all areas on which solid waste management activities are being, will be, or have been conducted. This authorization and consent shall include consent to collect samples of waste, soils, water, or gases; take photographs; to perform measurements, surveys, and other tests; inspect any monitoring equipment; to inspect the methods of operation and to inspect and/or copy documents, books, and papers required by the Department to be maintained. This permit condition is referenced in accordance with §608 and §610(7) of the Solid Waste Management Act, 35 P.S. §6018.608 and §6018.610(7). This condition in no way limits any other powers granted under the Solid Waste Management Act.
5. Any independent contractors or agents retained by the permittee in the completion of activities authorized under this general permit shall be subject to compliance history review by the Department prior to performance of any activities, as specified by the Pennsylvania Solid Waste Management Act of 1980.
6. Failure of the permittee to comply with the applicable laws, rules, and regulations and terms of this permit, for any reason, shall be grounds for the revocation or suspension of the permittee's approval to conditions of this permit, or of the measures herein approved to perform as intended or operate under this permit.
7. The activities authorized by this general 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, and reissue the authorization granted in this general permit if it deems necessary to prevent harm or the threat of harm to the public health, and the environment or if they cannot be adequately regulated under the conditions of this general permit.
8. All slag and all other waste generated by the operation shall be stored and transported in accordance with 25 Pa. Code Chapter 299 (relating to storage and transportation) and the Waste Transportation Safety Act, 27 Pa. C.S. §§6201-6209.
9. The permittee shall comply with the terms and conditions of this general permit and with the environmental protection acts to the same extent as if the activities were covered by an individual permit. The Department may require an individual permit be obtained if the permittee cannot comply with the conditions of this general permit or is conducting an activity that harms or presents a threat of harm to the health, safety, or welfare of the public or the environment of this Commonwealth.

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10. This permit does not authorize and shall not be construed as an approval to discharge any waste, wastewater, or runoff from the site of processing to the land or waters of the Commonwealth.
11. Best Management Practices shall be implemented to divert storm water run-on from the facility. Storm water runoff shall be managed in accordance with The Clean Streams Law and regulations promulgated thereunder. Prior to beginning operations at the facility, the operator must obtain all necessary storm water management permits.
12. The permittee shall maintain a bond in an amount and with sufficient guarantees acceptable to the Department as provided by 25 Pa. Code, Chapter 287, Subchapter E (Bonding and Insurance Requirements). The bond shall continue in effect for the operational life of the facility, and for up to 10 years after final closure of the facility, unless released in whole or part by the Department, in writing.
13. The permittee shall maintain in force and effect a general liability insurance policy in accordance with 25 Pa. Code, Chapter 287, Subchapter E (Bonding and Insurance Requirements) to provide continuous coverage during operation of the facility and until the Department issues a final closure certification.
14. The permittee shall maintain at the permitted facility an updated copy of a Preparedness, Prevention, and Contingency (PPC) plan for the facility prepared in accordance with the most recent edition of the Department's "Guidelines for the Development and Implementation of Environmental Emergency Response Plans." The PPC plan shall be updated every 5 years or more frequently if necessary (e.g., if changes in phone numbers, equipment, or regulatory requirements occur).
15. Upon cessation of operations at the facility, the permittee shall comply with any applicable closure requirements in 25 Pa. Code § 297.272.
16. Analytical testing shall be performed on every 1000 cubic yards proposed for beneficial use. The analyses shall be performed by a laboratory that is in compliance with the Pennsylvania Environmental Laboratory Accreditation Act, Act of 2002, No. 90, 27 Pa. C.S. §4101 et seq.
17. Slag shall not be placed directly into the environment if any of the following levels are exceeded:

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Constituent	Option 1 ⁽¹⁾	Option 2 ⁽²⁾	Option 2 ⁽²⁾	Option 3 ⁽³⁾	Option 3 ⁽³⁾
	Acceptable Limit Total (mg/kg)	Acceptable Limit Total (mg/kg)	Acceptable Limit Leachable (mg/L)	Acceptable Limit Total (mg/kg)	Acceptable Limit Leachable (mg/L)
Antimony	6.75	88	0.15	88	0.006
Arsenic	29	29	0.25	29	0.05
Cadmium	2.5	47	0.125	47	0.005
Chromium (total)	N/A	N/A	2.5	N/A	0.1
Chromium (VI)	50	94		94	
Copper	1500	1500	25	1500	1
Iron	66000	150000	7.5	150000	0.3
Lead	112.5	500	0.375	500	0.015
Manganese	31000	31000	2.5	31000	0.1
Nickel	50	420	2.5	420	0.1
PCBs (for landfilled slag only)					
Non-residential uses	2	2	2	2	2
Residential uses	1	1	1	1	1
Thallium	2.2	15	0.05	15	0.002
Zinc	1000	2800	50	2800	2

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Should the slag contain other constituents which do not meet the requirements of §288.623(a) (relating to minimum requirements for acceptable waste) or which pose a threat of harm to human health or the environment, the slag shall not be placed directly into the environment.

¹Option 1: There must be at least 4 feet between the lowest area where waste is placed and the seasonal high water table, perched water table or bedrock unless otherwise authorized in writing by the Department.

²Option 2: The total and leachate levels must be met. There must be at least 4 feet between the lowest areas where waste is placed and the seasonal high water table, perched water table or bedrock unless otherwise authorized in writing by the Department.

³Option 3: The total and leachate levels must be met. Attenuating soil not required.

18. Slag shall not be used as an ingredient in concrete and asphalt if the leachable levels in Condition C.17 are exceeded in the slag, unless the following levels are not exceeded in the produced concrete/asphalt:

Constituent	Leachable (mg/L)*
Antimony	0.15
Arsenic	1.25
Cadmium	0.25
Chromium (Total)	1.25
Copper	32.5
Lead	0.375
Nickel	2.5
Thallium	0.05
Zinc	125

*The toxicity characteristic leaching procedure (EPA Method 1311) or the synthetic precipitation leaching procedure (EPA Method 1312) or other leaching procedure approved by the Department shall be used for all leaching analyses.

Once chemical analysis of the concrete and asphalt demonstrates that these levels are not exceeded, reanalysis of the concrete and asphalt is not required as long as:

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- a. Constituent levels in the slag do not exceed those in the waste used to prepare the concrete and asphalt analyzed for this demonstration.
- b. The quantity of slag per ton of concrete and asphalt is not greater than the quantity used for this demonstration.

Slag shall not be used as an ingredient in concrete and asphalt if the total PCB level in Condition C.17 is exceeded.

19. The slag shall not be mixed with other types of solid wastes, including hazardous waste, municipal waste, special handling waste, or other residual waste.
20. Slag shall not be used as antiskid unless it meets the technical standards developed by the Pennsylvania Department of Transportation (PennDOT) as outlined in their Publication 408, Specifications for antiskid material (703.4).

D. Recordkeeping:

1. The permittee shall maintain current records of wastes processed including: date received, generator, volume/weight in and out, and destination. These records shall be maintained on site at all times and made available to the Department upon request.
2. Records of any analytical evaluations conducted on slag pursuant to the residual waste regulations and this permit shall be kept by the permittee at the permittee's place of business and shall be available to the Department for inspection. At a minimum, these records shall include information on the dates of testing, each parameter tested, the results, the laboratory, sampling procedures, analytical methodologies, person collecting the sample, and disposition/disposal of unqualified slag. This waste analysis information shall be retained by the permittee at the permittee's place of business for a minimum of 5 years after the analyses were performed.

E. 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, operators, and/or responsible officials of the company, compliance status, land ownership and the right to enter and operate sites operated by the permittee,, and the status of any permit issued by the Department or federal government under the environmental protection acts.

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2. At least sixty (60) days prior to a permittee operating a facility at a new location, two (2) copies of the following must be supplied to the appropriate Department Regional Office, in writing:
 - a. Name, address, phone number, and contact person for the new facility;
 - b. A description of the facility, including detailed maps, storage areas, containment areas, and other significant features, and a map showing the facility placement;
 - c. Proof that copies of the notification have been submitted to the municipality, county, county planning agency, and county health department where activities will take place;
 - d. A Preparedness, Prevention, and Contingency Plan (PPC) for the facility prepared in accordance with the most recent editions of the Department's "Guidelines for the Development and Implementation of Environmental Emergency Response Plans";
 - e. Proof that the applicant has legal right to enter the land and operate the facilities approved under this permit;
 - f. An irrevocable written consent from the landowner giving the Department permission to enter upon the land where the applicant will be conducting waste management activities;
 - g. Proof that any independent contractors retained by the permittee to perform any activities authorized under this permit are in compliance with Department regulations as required in Condition C.5;
 - h. Bonding and insurance in an amount acceptable to the Department with supporting documentation.
3. The permittee shall immediately notify the Department's Emergency Hotline by at 800-541-2050 and the appropriate DEP regional office waste management program in the event of any accidental spills of the specialty oil or fluid and shall take appropriate immediate action to protect the health and safety of the public and the environment in accordance with the approved PPC plan.

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4. The permittee shall submit an annual report to the appropriate Department Regional Office. The report shall contain a summary of all of the information required in Section D above. The report shall be submitted by the anniversary date on which the permittee was covered by this permit.

F. 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 include 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 27 (Acceptance of General Permit Conditions), and (v) bonding worksheets, and (vi) 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." A copy of the renewal application shall also be sent to the attention of the Department's Bureau of Waste Management, Division of Municipal and Residual Waste, 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.