



BUREAU OF WASTE MANAGEMENT

DIVISION OF MUNICIPAL and RESIDUAL WASTE

GENERAL PERMIT WMGR144

PROCESSING AND BENEFICIAL USE OF BLAST FURNACE SLAG
AND STEEL SLAG GENERATED BY STEELMAKING OPERATIONS
OR FROM HISTORIC SLAG PLACEMENT 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.

Issued: March 12, 2024

Expires: March 12, 2034

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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 application on forms provided by the Department must be submitted electronically to the appropriate Department Regional Office. Additionally, the application fee should be submitted to the appropriate Department Regional Office. Checks shall be made payable to the "Commonwealth of Pennsylvania". No activities shall commence unless approved, in writing, by the Department.

C. Operating Conditions:

1. 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).
2. 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.
3. 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⁾ Acceptable Limit Total (mg/kg)	Option 2 ⁽²⁾ Acceptable Limit Total (mg/kg)	Option 2 ⁽²⁾ Acceptable Limit Leachable (mg/L)	Option 3 ⁽³⁾ Acceptable Limit Total (mg/kg)	Option 3 ⁽³⁾ 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

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.

4. Slag shall not be used as an ingredient in concrete and asphalt if the leachable levels in Condition C.3 are exceeded in the slag, unless the following levels are not exceeded in the produced concrete/asphalt:

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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:

- 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.3 is exceeded.

5. Upon cessation of permitted operations at the facility, the permittee shall assure removal of all wastes and provide for the processing, recycling, beneficial use, or disposal of wastes in accordance with the SWMA, the environmental protection acts and the regulations promulgated thereunder and comply with any applicable closure requirements in 25 Pa. Code § 297.272.
6. The activities authorized by this permit shall not cause or allow conditions that are harmful to the environment, public health or safety, including but not limited to, odors, noise, or other public nuisances. The permittee shall not cause or allow the attraction, harborage, or breeding of vectors.
7. The permittee shall develop and implement a Preparedness, Prevention and Contingency Plan (PPC) that is consistent with the Department's most recent guidelines.
8. 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 materials as described in the permit application.

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9. The permittee shall comply with the fugitive emissions regulations under 25 Pa. Code, Chapter 123 (relating to 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 25 Pa. Code §§123.1 and 123.2 (relating to prohibition of certain fugitive emissions and fugitive particulate matter).
10. 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 Solid Waste Management Act (SWMA), 35 P.S. §§ 6018.101—6018.1001; and the Municipal Waste Planning, Recycling and Waste Reduction Act of 1988, 53 P.S. §§4000.101, et seq.
11. 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 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; perform measurements, surveys, and other tests; inspect any monitoring equipment; inspect the methods of operation and inspect and/or copy documents, books, and papers required by the Department to be maintained. This permit condition is referenced in accordance with Sections 6018.608 and 6018.610(7) of the SWMA, 35 P.S. §§ 6018.608 and 6018.610(7). This condition in no way limits any other powers granted under the SWMA.
12. 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 SWMA.
13. Failure of 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.
14. 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.
15. 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

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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.

16. 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.
17. Best Management Practices shall be implemented to divert storm water run-on from the storage area. 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.
18. The permittee shall maintain in force and affect a general liability insurance policy in accordance with 25 Pa. Code, Chapter 287, Subchapter E (relating to bonding and insurance requirements) to provide continuous coverage during operation of the facility and until the Department issues a final closure certification.
19. 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 (relating to 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.
20. Equipment used for the processing and storage of steel slag shall be maintained in good operating condition. Daily inspections of each storage area and surrounding environs shall be conducted, when permitted waste management activities are occurring, to determine compliance of the terms and conditions of this general permit and for evidence of failure.
21. Storage of steel by the permittee shall be in a manner that complies with the requirements set forth in 25 Pa. Code, Chapter 299 (relating to storage and transportation of residual waste).
22. The steel slag shall not be mixed with other types of solid wastes, including hazardous waste, municipal waste, special handling waste, or other residual waste, as the terms are defined in 25 Pa. Code § 287.1.
23. Analytical testing required by this general permit shall be performed by a laboratory accredited under the Pennsylvania Environmental Laboratory Accreditation Act, Act of 2002, 27 Pa. C.S.A. §§ 4101-4113.

D. Recordkeeping:

1. The permittee shall maintain records of all analytical evaluations conducted in accordance with this permit, and records shall be made available to the Department upon request. Required records shall be retained for a minimum of 5 years. Records of analytical evaluations must include, at a minimum, the

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following for each sample: the dates of sampling and testing, sampling procedures utilized, name of the individual who collected the sample, the volume or weight of the sample, each parameter tested, the analytical results, the name of the analytical laboratory used, and the analytical methodologies employed.

2. The permittee shall maintain records of all waste accepted by the facility, and records shall be made available to the Department upon request. Required records shall be retained for a minimum of 5 years. Records of each source of incoming waste must include, at a minimum, the following: the name, address, and phone number of each source of incoming waste; the date of receipt; the quantity of waste received; and the results of visual observations. Records of each load of steel slag sent for beneficial use or disposal shall include the weight or volume of waste and the name, address, and phone number of the destination of each outgoing shipment of waste. The permittee shall also maintain records of spills or releases that include, at a minimum, the following: the location, date, time, identification, and quantity of spilled or released material, and a description of how the material was cleaned up. The permittee shall also maintain records of all reports submitted to the Department or to the U.S. Environmental Protection Agency.

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, and the status of any permit issued by the Department or federal government under the environmental protection acts.
2. Persons operating under the provision of this general permit shall submit to the appropriate Department Regional Office (see attached list), an annual report on the beneficial use activities conducted under this permit by March 1 for the preceding calendar year. This report shall include the information required by Conditions D.1. and D.2.
3. The permittee shall immediately notify the Department's Emergency Hotline by telephone at 800-541-2050 and the waste management program in the appropriate DEP regional office (see attached list) of any accidental spills and shall take appropriate immediate action to protect the health and safety of the public and the environment.

F. Renewal:

A permittee 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 applications shall be submitted to the appropriate DEP Regional Office (see attached list) and include, at a minimum, the following:

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1. General Information Form (Authorization Application for a Residual or Municipal Waste General Permit Application),
2. Form B (Professional Certification),
3. Form 20 (Application for a Municipal or Residual Waste General Permit),
4. Form 27R (Acceptance of General Permit Conditions), and
5. Updated bonding worksheets, if applicable.

Additionally, a renewal application fee in the amount identified in Section A (General Information) of the Form 20 must be sent to the appropriate DEP Regional Office. A check shall be made payable to the "Commonwealth of Pennsylvania."

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.

**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 – 2516

- 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, Beaver, Cambria, Fayette, Greene, Somerset, Washington, Westmoreland.

Southwest Regional Office
400 Waterfront Drive
Pittsburgh, PA 15222-4745
Phone: (412) 442 – 4000

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

Northwest Regional Office
230 Chestnut Street
Meadville, PA 16335-3481
Phone: 814-332-6848