

SPECIAL CONDITIONS
GENERAL PERMIT NO. WMGM009

1. The approval herein granted is limited to the processing of municipal sewage sludge, including raw primary and secondary sludge mixtures, and digested primary sludge (hereinafter also referred to as “sludge” or “waste”) to produce a commercial grade fertilizer through a heat drying and pelletizing process. Beneficial use of the processed sludge (i.e., land applied, given away, sold or distributed in a bag or other container) is not authorized under this general permit.
2. a. Municipal sewage sludge may not be received for processing under the authority granted within this general permit if any pollutant in the sludge exceeds the concentration limits listed in Table 1 below:

TABLE 1

<u>Constituent</u>	<u>Limit (mg/kg)¹</u>
Arsenic	75
Cadmium	85
Copper	4,300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7,500
PCBs	8.6

¹ Dry weight basis.

- b. Municipal sewage sludge received at the facility that exceeds the concentration limit for any parameter listed in Table 1 above is not authorized for processing under the authority of this general permit and must be disposed properly (i.e., landfilled or incinerated).
 - c. Municipal sludge received at the facility with a solids content of less than 6% shall undergo on-site treatment and/or dewatering prior to transfer to storage on-site sludge cake storage pits, and shall have a solids content of at least 12%.
3. Municipal sewage sludge shall be processed to continuously meet the quality criteria requirements specified in Conditions 3 (a) through (c) below:
 - a. The sludge shall meet the pollutant concentration limits as specified in Table 2 below:

SPECIAL CONDITIONS
GENERAL PERMIT NO. WMGM009

TABLE 2

<u>Pollutant</u>	<u>Concentration Limit (mg/kg)</u>
pH	6.0 – 12.0 standard unit
Arsenic	41 dry weight basis
Cadmium	39 dry weight basis
Copper	1,500 dry weight basis
Lead	300 dry weight basis
Mercury	17 dry weight basis
Nickel	420 dry weight basis
Selenium	100 dry weight basis
Zinc	2,800 dry weight basis
Molybdenum	75 dry weight basis
PCBs	4 dry weight basis

- b. The sludge shall meet the pathogen reduction requirements for Class A – Alternative 1 as specified in Conditions 3 (b) (i) through (iii) below:
- i. Either the density of Fecal Coliform in the processed sludge shall be less than 1,000 most probable number (MPN) per gram of total solids (dry weight basis), or the density of Salmonella Sp. bacteria in the processed sludge shall be less than three MPN per 4 grams of total solids (dry weight basis) at the time the processed sludge is used; at the time the processed sludge is prepared for sale; given away or other distribution, in a bag or other container for application to the land.
 - ii. The temperature during the processing of the sludge shall be maintained at a specific value for a period of time as follows:
 - (A) When the percent solids of the sludge is 7% or higher, the temperature of the sludge shall be maintained at 122°F (50°C) or higher; the processing time period shall be 20 minutes or longer; and the temperature and time period shall be determined using equation (1) below, except when small particles of the sludge are heated either by warm gases or an immiscible liquid.

$$D = \frac{131,700,000}{10^{0.1400T}} \quad \text{Equation (1)}$$

Where,

D = Time in days
T = Temperature in degree Celsius

- (B) When the percent solids of the sludge is 7% or higher and small particles of the sludge are heated by either warmed gases or an immiscible liquid, the temperature of the sludge shall be maintained at 122°F (50°C) or higher; the processing time period shall be 15 seconds or

SPECIAL CONDITIONS
GENERAL PERMIT NO. WMGM009

longer; and the temperature and processing time period shall be determined using equation (1) above.

- (C) When the percent solids of the sludge is less than 7% and the processing time period is at least 15 seconds, but less than 30 minutes, the temperature and processing time period shall be determined using equation (1) above.
- (D) When the percent solids of the sludge is less than 7%; the temperature of the sludge is maintained at 122°F (50°C) or higher; and the processing time period is 30 minutes or longer; the temperature and processing time period shall be determined using equation (2) below.

$$D = \frac{50,070,000}{10^{0.1400T}} \quad \text{Equation (2)}$$

Where,

D = Time in days
T = Temperature in degree Celsius

- iii. The pathogen reduction requirements in Conditions 3 (b) (i) and (ii) above shall be met either prior to or at the same time the vector attraction reduction requirements in Condition 3 (c), except the vector attraction reduction requirements in Conditions 3 (c) (iv) through (vi) below, are met.
- c. The sludge shall meet one of the vector attraction reduction requirements specified below:
- i. The mass of volatile solids in the sludge shall be reduced by a minimum of 38% (see calculation procedures in “Environmental Regulations and Technology – Control of Pathogens and Vector Attraction in Sewage Sludge”, EPA-625/R-92/013, 1992, United States Environmental Protection Agency, Cincinnati, Ohio 45268).
 - a. When the 38% volatile solids reduction requirement in Condition 3 (c) (i) cannot be met for an anaerobically digested sludge, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature of between 86°F and 98°F (30°C and 37°C). When at the end of the 40 days, the volatile solids in the sludge at the beginning of that period is reduced by less than 17%, vector attraction reduction is achieved.
 - b. When the 38% volatile solids reduction requirement in Condition 3 (c) (i) cannot be met for an aerobically digested sludge, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sludge that has a percent solids of 2% or less in the laboratory in a bench-scale unit for 30 additional days at a temperature of 68°F (20°C). When at the end of the 30 days, the volatile solids in the sludge at the beginning of that period is reduced by less than 15%, vector attraction reduction is achieved.

SPECIAL CONDITIONS
GENERAL PERMIT NO. WMGM009

- ii. The specific oxygen uptake rate (SOUR) for the sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 68°F (20°C).
 - iii. The sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of sludge shall be higher than 104°F (40°C) and the average temperature of the sludge shall be higher than 113°F (45°C).
 - iv. The pH of sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for 2 hours and then at 11.5 or higher for an additional 22 hours.
 - v. The percent solids of sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75% based on the moisture content and total solids prior to mixing with other materials.
 - vi. The percent solids of sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90% based on the moisture content and total solids prior to mixing with other materials.
4. The analytical methodologies used to meet the requirements in Conditions 2 and 3 of this general permit shall be those in the most recent edition of the EPA's "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (EPA SW-846), "Methods for Chemical Analysis of Water and Wastes" (EPA 600/4-79-020), "Standard Methods for Examination of Water and Wastewater" (prepared and published jointly by the American Public Health Association, American Waterworks Association, and Water Pollution Control Federation), the Department's "Sampling Manual for Pollutant Limits, Pathogens and Vector Attraction Reductions in Sewage Sludge" or a comparable methods subsequently approved by the EPA or the Department.
 5. For each new source of sludge received at the facility, the permittee shall require the generator to provide laboratory reports of analyses performed on the representative samples of sludge collected for the parameters listed in Table 1 of Condition 2 of this general permit. At a minimum, laboratory reports of analyses for three (3) consecutive months must be provided by the generator, the most recent of which is no more than 3 months old.
 6. a. The permittee shall collect representative samples of the sludge processed at the facility and analyze to determine compliance with the requirements in Condition 3 of this general permit.

To obtain a representative sample of the sludge, the sample must be taken from the correct locations and represent the entire amount of sludge processed. More than one sample is usually necessary to accurately represent the sludge produced and stored. Core samples at different locations and at various depths shall be collected and then composited to obtain a representative sample of the processed or stored sludge. 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 sludge that is produced.

SPECIAL CONDITIONS
GENERAL PERMIT NO. WMGM009

- b. The frequency of monitoring for the pollutants, pathogen density and the vector attraction reduction requirements in Condition 3 of this general permit shall be as follows:

TABLE 3

Amount of Sludge Processed (Tons or Metric Tons per 365 Day Period)	Frequency
Greater than 0 but less than 319 (290)	Once per year
Equal to or greater than 319 (290) but less than 1,650 (1,500)	Once per quarter
Equal to or greater than 1,650 (1,500) but less than 16,500 (15,000)	Once per 60 days
Equal to or greater than 16,500 (15,000)	Once per month

7. Exhaust air from the sludge drying and pelletizing process shall be routed through a 2 stage air scrubber. Such a device may be subject to a permit from the Bureau of Air Quality.
8. This permit does not authorize and shall not be construed as an approval to discharge any industrial wastes, wastewater, leachate or runoff to the waters of the Commonwealth.
9. The permittee shall comply with the fugitive emissions standards adopted under Chapter 123 regulations (Standards for Contaminants) issued under Air Pollution Control Act, the Act of January 8, 1960, P.L. 2119, 35 P.S. §4005 and shall be required to comply with all the applicable sections of 25 Pa. Code, §§123.1 and 123.2 (relating to fugitive emissions).
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 regulations, 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.
11. As a condition of this permit and of the permittee's authority to conduct the activities authorized by this 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 and to inspect all areas or 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

SPECIAL CONDITIONS
GENERAL PERMIT NO. WMGM009

inspect and/or copy 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. Section 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.

12. 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.
13. Any independent contractors or agents retained by the permittee in the completion of 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.
14. 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 the threat of harm to the public health, or the environment.
15. Persons or municipalities that propose to operate under the terms and conditions of this general permit after the date of permit issuance must obtain a "Determination of Applicability" from the Department's Bureau of Land Recycling and Waste Management, Division of Municipal and Residual Waste, P.O. Box 8472, Harrisburg, PA 17105-8472. No activities shall commence unless specifically authorized by the Department in writing.

At a minimum, the following information must be provided on forms available from the Department's Bureau of Land Recycling and Waste Management (See address above):

- a. Name and street address of applicant;
- b. For each source of municipal sewage sludge, a chemical and physical analysis, and description of the municipal sewage sludge that fully characterizes its composition and properties; and a plan for screening, managing, and rejecting incoming municipal sewage sludge;
- c. Name and location of the generator of the municipal sewage sludge;
- d. Total volume or weight of municipal sewage sludge to be processed at the facility;
- e. Description of method of beneficial use;
- f. Number and title of general permit;
- g. Proof the municipal sewage sludge and waste management activities are consistent with the general permit;
- h. Signed and notarized statement by the person who seeks authorization to operate under the terms and conditions of this permit that states that the person accepts all conditions of this general permit;
- i. An application fee in the amount as specified in the municipal waste regulations, payable to the "Commonwealth of Pennsylvania";
- j. Proof that copies of the application have been submitted to each municipality, county, county planning agency and county health department, if one exists, in which the processing facility is or will be located;
- k. Proof that the applicant has legal right to enter the land and perform the activities approved under this permit;

SPECIAL CONDITIONS
GENERAL PERMIT NO. WMGM009

- l. An irrevocable written consent from the landowner giving the Department permission to enter upon land where the applicant will be conducting waste management activities;
 - m. Information that identifies the applicant (i.e., individual, corporation, partnership, government agency, association, etc.), including the names and addresses of every officer that has a beneficial interest in or otherwise controls the operation of the company;
 - n. A list of all previous permits or licenses issued by the Department or federal government under the environmental protection acts; the dates issued, status and compliance history concerning environmental protection acts;
 - o. 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 13;
 - p. A map clearly showing the permittee's processing site and all setback distances as required under Condition 27.
 - q. Laboratory reports to demonstrate that the requirements in Conditions 2 and 3 of this general permit are met.
16. Any person that operates under the provisions of this permit shall immediately notify the Department's Bureau of Land Recycling and Waste Management (see address in Condition 15, in writing, of any changes in: the company name, address, owners, operators and responsible officials; the physical or chemical characteristics of the municipal sewage sludge; the generator(s) of the municipal sewage sludge; changes in the processing of the municipal sewage sludge; changes in the pathogen reduction and vector attraction reduction treatment provided to the sludge; the status of any permit issued by the Department or federal government under the environmental protections acts; or changes in land ownership and the right to enter and operate on the land where the facility operates.
17. Any person or municipality who is permitted to operate under the provisions of this general permit may operate at a new location or expand operations at an existing location by submitting a written request to the Department. This request shall be submitted at least thirty (30) days prior to starting the new or expanded operation, and, as applicable, shall at a minimum consist of the following information:
- a. Name and street address of applicant, facility location, and contact person;
 - b. A topographic map of the new facility area, and a site map, which includes the facility layout and a showing of compliance with all isolation distances as specified in Condition 27;
 - c. Proof the municipal sewage sludge and waste management activities to be carried out at a new or expanded site are consistent with the general permit;
 - d. Proof that copies of this request have been submitted to each municipality, county, county planning agency and county health department, if one exists, in which beneficial use activities are or will located;
 - e. Proof that the applicant has legal right to enter the land and operate the facilities for which approval is being sought;
 - f. An irrevocable written consent from the landowner giving the Department permission to enter upon land where the applicant will be conducting waste management activities;

SPECIAL CONDITIONS
GENERAL PERMIT NO. WMGM009

- 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 13;
 - h. A Preparedness, Prevention, and Contingency (PPC) Plan for the processing facility prepared in accordance with the most recent edition of the Department's "Guidelines for the Development and Implementation of Environmental Emergency Response Plans".
18. Municipal sewage sludge shall not be mixed with hazardous wastes or any special handling wastes; or mixed or stored in any manner that creates a risk of fire, explosion, or the accumulation of poisonous gases or harmful vapors.
 19. The processing, storage, and transportation of the municipal sewage sludge authorized in this general permit shall be in a manner that will not create a nuisance or be harmful to the public health, safety, or environment, and shall be in a manner that prevents the dispersal of sludge by wind or water erosion.
 20. The municipal sewage sludge shall be stored, transported, and managed in a manner that complies with 25 Pa. Code, Chapter 285, the municipal waste regulations (relating to the storage, collection, and transportation of municipal waste).
 21. The permittee shall immediately notify the Department by telephone at (717) 787-4343 and the appropriate DEP regional office in the event of a discharge or spill of municipal sewage sludge, and shall take appropriate immediate action to protect the health and safety of the public and the environment.
 22. Equipment used for the storage and processing of municipal sewage sludge shall be maintained in good operating condition, and daily inspections of the facility, its equipment, and surrounding area are to be conducted to determine stability, operating status and for evidence of failure. A plan for the alternative storage and processing of municipal sewage sludge during periods of equipment breakdown or emergencies shall be developed and retained at the processing facility.
 23. Runoff from municipal sewage sludge storage areas shall not cause surface water pollution or groundwater degradation and shall be managed in accordance the Clean Streams Law and regulations promulgated thereunder.
 24. All municipal sewage sludge generated by the processing facility or sludge piles shall be collected, stored and managed in a manner that complies with the Solid Waste Management Act and the municipal waste management regulations.
 25. Municipal sewage sludge shall not be stored where continuous or intermittent contact can occur between the sludge and groundwater or surface water. Where storage pads or liners are used to protect the groundwater or surface water, they shall collect all leachate or runoff, be no less permeable than 1×10^{-7} cm/sec, and shall not be adversely affected by the physical or chemical characteristics of the municipal sewage sludges or its leachate.

SPECIAL CONDITIONS
GENERAL PERMIT NO. WMGM009

26. The following records shall be retained by the permittee and shall be available to the Department upon request: analytical evaluations conducted on municipal sewage sludges accepted at the permittee's facility pursuant to the municipal waste regulations and the conditions of this permit, which shall include at a minimum, the generator of municipal sewage sludge, the dates of testing, each parameter tested, the results, the laboratory, sampling procedures, analytical methodologies and person collecting the sample; records identifying each transporter that delivers sludge to the permittee's processing facility; records of each load of incoming sludge rejected by the permittee; records of inspections of the facility by facility personnel; amounts of processed municipal sewage sludge shipped off-site, and names and addresses to whom the material was shipped; and bills of lading or manifests for all incoming shipments of municipal sewage sludge. These records shall be retained by the permittee at the permittee's processing facility for a minimum of five (5) years from the date of execution of each record.
27. A facility operating under the authority granted in this permit shall not be operated within the following isolation distance as follows:
- a. *Floodplain.* In the 100-year floodplain of waters of this Commonwealth, unless the Department approves in the permit a method of protecting the facility from a 100-year flood consistent with the Flood Plain Management Act (32 P.S. §§ 679.101-679.601) and the Dame Safety and Encroachment Act (32 P.S. §§ 693.1-693.27).
 - b. *Wetlands.*
 - (1) In or within 300 feet of an exceptional value wetland as defined §105.17 (relating to wetlands.)
 - (2) In or within 100 feet of a wetland other than an exceptional value wetland unless storage and processing will not occur within that distance, or storage and processing take place in an enclosed facility and one of the following is true:
 - (i) If the operation is or along the wetland, the operator has received a permit from the Department under Chapter 105 (relating to dam safety and waterway management).
 - (ii) If the operation is not in or along the wetland, no adverse hydrologic or water quality impacts will result.
 - c. *Occupied dwelling.* Within 300 feet measured horizontally from an occupied dwelling, unless the owner of the dwelling has provided a written waiver consenting to the facility being closer than 300 feet. The waiver shall be knowingly made and separate from a lease or deed unless the lease or deed contains an explicit waiver from the owner.
 - d. *Perennial Stream.* Within 100 feet of a perennial stream unless the storage and processing will not occur within that distance and no adverse hydrologic or water quality impacts will result.
 - e. *Property line.* Within 50 feet of a property line unless the operator demonstrates one of the following:
 - (1) That actual processing of municipal sewage sludge is not occurring within 50 feet of a property line.

SPECIAL CONDITIONS
GENERAL PERMIT NO. WMGM009

- (2) That storage and processing take place in an enclosed facility.
 - (3) That the owner of the adjacent property has provided a written waiver consenting to the facility being closer than 50 feet. The waiver shall be knowingly made and separate from a lease or deed unless the lease or deed contains an explicit waiver from the owner.
28. The permittee shall immediately implement the applicable provisions of the Preparedness, Prevention and Contingency Plan (PPC) plan for any emergency that threatens the public health, safety, welfare or the environment. The plan shall be consistent with the Department's most recent guidelines shall be maintained at the processing facility and updated at least every 5 years.
 29. 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 if the permittee is not in compliance 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 people or the environment.
 30. The permittee shall submit to the Department's Bureau of Land Recycling and Waste Management, (see address in Condition 15) and to each DEP Regional Office for each site where the permittee operates under this permit, an annual report that contains the information outlined in Conditions 5, 6, 16 and 26 and identifies for the preceding 12 months, the generator of the sludge accepted for processing, each rejected load of sludge, the weight or volume of sludge processed, and the disposition of all processed sludge sent from the facility, including the dates of shipment, quantities, and name and address of the party to which the processed sludge was shipped. The reporting period for the annual report ends each year 30 days before the anniversary date that the permit became applicable to the permittee. The report must be received by each Department Office by the aforementioned anniversary date.
 31. 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 as described in the approved application.
 32. Upon cessation of operations at the permittee's facility, the operator shall remove all municipal sewage sludge and structures or other materials that contain or have been contaminated with municipal sewage sludge and shall provide for the processing and disposal of the municipal sewage sludge or material in accordance with the Solid Waste Management Act, the environmental protection acts and the regulations promulgated thereunder.