

**GENERAL PERMIT WMGR074  
PROCESSING AND BENEFICIAL USE OF  
BIOSOLIDS, WATER TREATMENT PLANT SLUDGE,  
PAPER PULP SLUDGE AND LIME NEUTRALIZED  
INDUSTRIAL WATER SLUDGE TO PRODUCE  
A SOIL-LIKE MATERIAL**

**DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT  
DIVISION OF MUNICIPAL AND RESIDUAL WASTE**

**Issued July 29, 2012**

**Expires July 29, 2022**

**General Permit Number WMGR074**

**Processing and Beneficial Use of Biosolids, Water  
Treatment Plant Sludge, Paper Pulp Sludge and  
Lime Neutralized Industrial Water Sludge**

**A. Description.**

1. This general permit authorizes processing and beneficial use of biosolids, water treatment plant sludge, paper pulp sludge and lime neutralized industrial water sludge hereinafter referred to as "soil substitute," to produce a soil-like material, hereinafter referred to as "soil amendments."
2. The approved processing is limited to blending only of soil amendments with the thermally treated soil to produce the soil substitute.

**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 apply for a Determination of Applicability from the appropriate Department Regional Office (see attached list) prior to commencing authorized activities under this general permit. An application shall include the following:

- (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) Bonding Worksheets,
- (vi) A application fee in the amount identified in Section A (General Information) of Form 20 payable to the "Commonwealth of Pennsylvania."

No activities shall commence unless and until approved, in writing, by the Department.

**C. Operating Conditions.**

1. The soil amendments may be beneficially used if the following quality criteria requirements are met:
  - a. The concentration in each soil amendment type, for any constituent, does not exceed the concentration limit listed in Table 1 below; and
  - b. If biosolids are intended for beneficial use as the soil amendment, the biosolids must be authorized under either a general permit (i.e., PAG-07 or PAG-08) or an individual permit issued by the Department's Bureau of Water Standards and Facility Regulation. A copy of the PAG-07, PAG-08 or individual permit must be provided in the annual report as required in Section F of this general permit.

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**Table 1  
Allowable Limits for Incoming Wastes**

<b>Parameters</b>	<b>Total (mg/kg)</b>	<b>Leachable<sup>5</sup> (mg/l)</b>
pH	6.0 – 12.0 standard units	-
Aluminum	-	5.0
Arsenic	75	-
Barium	10,000	-
Boron	7,000	-
Cadmium	39	-
Chromium (Total)	6,100	-
Chloride	-	250
Copper	1,500	-
Cyanide (Reactive)	250	-
Iron	-	7.5
Lead	840	-
Manganese	800	-
Mercury	57	-
Molybdenum	75	-
Nickel	420	-
Selenium	100	-
Silver	400	-
Sulfate	-	250
Sulfides (Reactive)	500	-
Zinc	2,800	-
PCBs <sup>1</sup>	4.0	-
Ignitability	Negative	-
Percent Solids <sup>2</sup>	≥ 15%	-
TCLP – Metals	-	TCLP Limits
TCLP – Semi Volatiles	-	TCLP Limits
TCLP – Volatiles	-	TCLP Limits

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**Table 1 (Continued)  
Allowable Limits for Incoming Wastes**

Parameters	Total (mg/kg)	Leachable <sup>5</sup> (mg/l)
TCLP – Herbs/Pesticides	-	TCLP Limits
2,3,7,8-TCDD <sup>3</sup>	0.03 µg/kg	-
Fecal Coliform	2,000,000 <sup>4</sup>	-

- <sup>1</sup> Biosolids authorized under a PAG-07 must not exceed the PCBs limit of 4.0 mg/kg. Biosolids authorized under a PAG-08 must not exceed the PCBs limit of 8.6 mg/kg.
- <sup>2</sup> Visually inspect incoming wastes for free liquids.
- <sup>3</sup> Dioxin analysis is required for the paper pulp sludge waste streams only.
- <sup>4</sup> Fecal Coliform testing is required for biosolids authorized under a PAG-08 only and in Most Probable Number (MPN) per gram of total solids in the biosolids.
- <sup>5</sup> Leachability evaluations shall be conducted using the Toxicity Characteristic Leaching Procedure (EPA method 1311).

2. Beneficial uses of the soil substitute are limited to the following:

- a. The soil substitute may be beneficially used in compost plant feed, landscaping application, landfill, final/construction cover if the concentration in soil substitute, for any constituent, does not exceed the concentration limit(s) listed in Tables 2 through 6 below.

**Table 2  
Inorganic Compounds**

Parameters	Total Level		Leachate Level	
	Limit (mg/kg)	Frequency	Limit (mg/L)	Frequency
pH	6.0 – 8.0 standard units	1 per 4000 tons	-	-
Antimony	88	1 per 4000 tons	0.15	Monthly
Aluminum	190,000	-	5.0	Monthly
Arsenic	29	1 per 4000 tons	0.25	Monthly
Barium	15,000	1 per 4000 tons	50.0	Monthly
Beryllium	440	1 per 4000 tons	0.1	Monthly

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**Table 2 (Continued)  
Inorganic Compounds**

Parameters	Total Level		Leachate Level <sup>2</sup>	
	Limit (mg/kg)	Frequency	Limit (mg/L)	Frequency
Boron	20,000	1 per 4000 tons	3.15	Monthly
Cadmium	47	1 per 4000 tons	0.125	Monthly
Chromium (Total)	-	1 per 4000 tons	2.5	Monthly
Chloride	-	-	250	Monthly
Copper	1,500	1 per 4000 tons	25	Monthly
Cyanide, Free (Total)	4,400	1 per 4000 tons	0.2	Monthly
Iron	66,000	-	7.5	Monthly
Lead	500	1 per 4000 tons	0.125	Monthly
Manganese	31,000	1 per 4000 tons	2.5	Monthly
Mercury	66	1 per 4000 tons	0.05	Monthly
Molybdenum	18	1 per 4000 tons	4.375	Monthly
Nickel	420	1 per 4000 tons	2.5	Monthly
Selenium	1,100	1 per 4000 tons	1.0	Monthly
Silver	1,100	1 per 4000 tons	2.5	Monthly
Sulfate	-	-	500	Monthly
Thallium	15	1 per 4000 tons	0.0125	Monthly
Zinc	2,800	1 per 4000 tons	50	Monthly
Fecal Coliform	1,000 <sup>1</sup>	1 per 4000 tons	-	-

<sup>1</sup> In Most Probable Number (MPN) per gram of total solids.

<sup>2</sup> Leachability evaluations shall be conducted using the Toxicity Characteristic Leaching Procedure (EPA method 1311).

Processing and Beneficial Use of Biosolids, Water Treatment Plant Sludge, Paper Pulp Sludge and Lime Neutralized Industrial Water Sludge

**Table 3**  
**Volatile Organic Compounds**

Parameters	Total Level		Leachate Level <sup>2</sup>	
	Limit (mg/kg)	Frequency	Limit (mg/L)	Frequency
Benzene	0.8	1 per 4000 tons	0.005	Monthly
Carbon Tetrachloride	2.1	1 per 4000 tons	0.005	Monthly
Chlorobenzene	-	-	0.1	Monthly
Chloroform	0.5	1 per 4000 tons	0.1	Monthly
1,2-Dichloroethane	0.3	1 per 4000 tons	0.005	Monthly
1,1-Dichloroethene	1.0	1 per 4000 tons	0.007	Monthly
Tetrachloroethene	2.0	1 per 4000 tons	0.005	Monthly
Trichloroethene	2.0	1 per 4000 tons	0.005	Monthly
Vinyl Chloride	2.0	1 per 4000 tons	0.02	Monthly
TPH <sup>1</sup>	500	1 per 4000 tons	-	Monthly

<sup>1</sup> Total Petroleum Hydrocarbon.

<sup>2</sup> Leachability evaluations shall be conducted using the Toxicity Characteristic Leaching Procedure (EPA method 1311).

**Table 4**  
**Polychlorinated Biphenyls (PCBs)**

Parameters	Total Level		Leachate Level <sup>1</sup>	
	Limit (mg/kg)	Frequency	Limit (mg/L)	Frequency
Total PCBs	2.0	1 per 4000 tons	0.005	Monthly

<sup>1</sup> Leachability evaluations shall be conducted using the Toxicity Characteristic Leaching Procedure (EPA method 1311).

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**Table 5  
Pesticides and Herbicides**

Parameters	Total Level		Leachate Level <sup>1</sup>	
	Limit (mg/kg)	Frequency	Limit (mg/L)	Frequency
Aldrin	0.3	1 per 4000 tons	2.06 x 10 <sup>-6</sup>	Monthly
Alpha-BHC	0.71	1 per 4000 tons	5.56 x 10 <sup>-6</sup>	Monthly
Beta-BHC	40	1 per 4000 tons	-	-
Delta-BHC	30	1 per 4000 tons	-	-
Gamma-BHC (Lindane)	3.0	1 per 4000 tons	0.0002	Monthly
4,4-DDD	20	1 per 4000 tons	1.46 x 10 <sup>-4</sup>	Monthly
4,4-DDE	10	1 per 4000 tons	1.03 x 10 <sup>-4</sup>	Monthly
4,4-DDT	10	1 per 4000 tons	1.03 x 10 <sup>-4</sup>	Monthly
Dieldrin	0.3	1 per 4000 tons	2.10 x 10 <sup>-6</sup>	Monthly
Endosulfan I	60	1 per 4000 tons	0.21	Monthly
Endosulfan II	60	1 per 4000 tons	0.21	Monthly
Endrin	20	1 per 4000 tons	0.002	Monthly
Heptachlor	1.0	1 per 4000 tons	0.0004	Monthly
Heptachlor Epoxide	0.5	1 per 4000 tons	0.0002	Monthly
Methoxychlor	200	1 per 4000 tons	0.0004	Monthly
Toxaphene	4.0	1 per 4000 tons	0.002	Monthly
2,4-D	2.0	1 per 4000 tons	0.07	Monthly
2,4,5-TP (Silvex)	3.0	1 per 4000 tons	0.05	Monthly

<sup>1</sup> Leachability evaluations shall be conducted using the Toxicity Characteristic Leaching Procedure (EPA method 1311).

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Table 6  
Semi-Volatile Organic Compounds

Parameters	Total Level		Leachate Level <sup>1</sup>	
	Limit (mg/kg)	Frequency	Limit (mg/L)	Frequency
Acenaphthene	94	1 per 4000 tons	2.1	Monthly
Acenaphthylene	360	1 per 4000 tons	2.2	Monthly
Aniline	19	1 per 4000 tons	0.0028	Monthly
Anthracene	7.3	1 per 4000 tons	0.066	Monthly
Benzidine	0.078	1 per 4000 tons	$1.52 \times 10^{-7}$	Monthly
Benzo (a) anthracene	20	1 per 4000 tons	0.0009	Monthly
Benzo (a) pyrene	2.5	1 per 4000 tons	0.0002	Monthly
Benzo (b) fluoranthene	3.7	1 per 4000 tons	0.0009	Monthly
Benzo (g,h,i) perylene	3.9	1 per 4000 tons	0.00026	Monthly
Benzo (k) fluoranthene	13	1 per 4000 tons	0.00055	Monthly
Benzoic acid	430	1 per 4000 tons	140.0	Monthly
Bis (2-ethylhexyl) phthalate	130	1 per 4000 tons	0.006	Monthly
Butylbenzylphthalate	460	1 per 4000 tons	2.7	Monthly
4-Chloroaniline	880	1 per 4000 tons	0.14	Monthly
Bis (2-chloroethyl) ether	0.96	1 per 4000 tons	$3.18 \times 10^{-5}$	Monthly
Bis (2-chloroisopropyl) ether	32	1 per 4000 tons	0.3	Monthly
2-Chloronaphthalene	500	1 per 4000 tons	2.8	Monthly
2-Chlorophenol	330	1 per 4000 tons	0.04	Monthly
Chrysene	5.1	1 per 4000 tons	0.0019	Monthly

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**Table 6 (Continued)  
Semi-Volatile Organic Compounds**

<b>Parameters</b>	<b>Total Level</b>	<b>Leachate Level<sup>1</sup></b>	<b>Parameters</b>	<b>Total Level</b>
Di-n-butylphthalate	3,200	1 per 4000 tons	3.5	Monthly
Di-n-octylphthalate	500	1 per 4000 tons	-	-
Dibenzo (a,h) anthracene	2.5	1 per 4000 tons	0.00009	Monthly
Dibenzofuran	30	1 per 4000 tons	-	-
1,2-Dichlorobenzene	260	1 per 4000 tons	0.6	Monthly
1,4-Dichlorobenzene	210	1 per 4000 tons	0.075	Monthly
3,3-Dichlorobenzidine	40	1 per 4000 tons	$7.78 \times 10^{-5}$	Monthly
2,4-Dichlorophenol	660	1 per 4000 tons	0.2	Monthly
Diethylphthalate	440	1 per 4000 tons	5.0	Monthly
2,4-Dimethylphenol	4,400	1 per 4000 tons	0.73	Monthly
2,4-Dinitrophenol	22	1 per 4000 tons	0.019	Monthly
2,4-Dinitrotoluene	58	1 per 4000 tons	0.0021	Monthly
1,2-Diphenylhydrazine	0.92	1 per 4000 tons	$4.38 \times 10^{-5}$	Monthly
Fluoranthene	65	1 per 4000 tons	0.26	Monthly
Fluorene	76	1 per 4000 tons	1.4	Monthly
Hexachlorobenzene	0.15	1 per 4000 tons	0.001	Monthly
Hexachlorocyclopentadiene	66	1 per 4000 tons	0.05	Monthly
Hexachloroethane	22	1 per 4000 tons	0.001	Monthly
Indeno (1,2,3-cd) pyrene	25	1 per 4000 tons	0.009	Monthly

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**Table 6 (Continued)  
Semi-Volatile Organic Compounds**

Parameters	Total Level		Leachate Level <sup>1</sup>	
	Limit (mg/kg)	Frequency	Limit (mg/L)	Frequency
Isphorone	1,900	-1 per 4000 tons	0.1	Monthly
2-Methylnaphthalene	2,000	1 per 4000 tons	0.73	Monthly
N-Nitrosos-di-n-propylamine	2.6	-1 per 4000 tons	5.0 x 10 <sup>-6</sup>	Monthly
N-Nitrosodiphenylamine	100	-1 per 4000 tons	0.00714	Monthly
N-Nitrosodimethylamine	0.023	-1 per 4000 tons	3.1 x 10 <sup>-6</sup>	Monthly
Naphathalene	140	1 per 4000 tons	0.1	Monthly
Nitrobenzene	110	1 per 4000 tons	0.018	Monthly
4-Nitrophenol	1,800	1 per 4000 tons	0.06	Monthly
Pentachlorophenol	150	1 per 4000 tons	0.001	Monthly
Phenanthrene	210	1 per 4000 tons	1.1	Monthly
Phenol	9,300	1 per 4000 tons	4.0	Monthly
Pyrene	46	1 per 4000 tons	0.13	Monthly
Pyridine	33	1 per 4000 tons	0.0097	Monthly
1,2,4-Trichlorobenzene	340	1 per 4000 tons	0.07	Monthly
2,4,6-Trichlorophenol	66	1 per 4000 tons	0.00318	Monthly
2,4,5-Trichlorophenol	12,000	1 per 4000 tons	3.5	Monthly

<sup>1</sup> Leachability evaluations shall be conducted using the Toxicity Characteristic Leaching Procedure (EPA method 1311).

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- b. The soil substitute may be beneficially used as a construction material or blended with other aggregate as a roadway sub-base for roadway construction use, if the requirements in Section A and one or more requirements in sub-Conditions C1 through C2 below are met:
- i. The concentration in the soil substitute, for any constituent, shall not exceed the concentration limit(s) listed in Tables 7 through 9 below.
  - ii. The soil substitute must comply with the requirements of the Pennsylvania Department of Transportation (PennDOT) specifications as outlined in their Publication No. 408 (Specifications).
  - iii. The soil substitute conforms to the applicable engineering properties as the raw material it is being substituted for.
  - iv. Where the soil substitute will be beneficially used under a project contract, the contract must specially address the engineering qualities and characteristics that must be met for completion of the job or project. The contract must specially indicate that the soil substitute satisfies the engineering requirements and the specifications for the job or project.

**Table 7  
Inorganic Compounds**

Parameters	Total Level		Leachate Level <sup>2</sup>	
	Limit (mg/kg)	Frequency	Limit (mg/L)	Frequency
pH	6.0 – 10.0 standard units	Bi-monthly	-	-
Aluminum	190,000	-	5.0	Bi-monthly
Arsenic	12	Bi-monthly	0.25	Bi-monthly
Barium	15,000	Bi-monthly	50	Bi-monthly
Boron	440	Bi-monthly	0.1	Bi-monthly
Cadmium	47	Bi-monthly	0.125	Bi-monthly
Chloride	-	-	250	Bi-monthly
Chromium (Total)	94	Bi-monthly	2.5	Bi-monthly
Copper	8200	Bi-monthly	25	Bi-monthly
Iron	66,000	Bi-monthly	7.5	Bi-monthly
Lead	500	Bi-monthly	0.125	Bi-monthly
Manganese	31,000	Bi-monthly	2.5	Bi-monthly
Mercury	66	Bi-monthly	0.05	Bi-monthly
Molybdenum	18	Bi-monthly	4.375	Bi-monthly
Nickel	4,400	Bi-monthly	2.5	Bi-monthly
Selenium	1,100	Bi-monthly	1.0	Bi-monthly
Silver	1,100	Bi-monthly	2.5	Bi-monthly

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**Table 7 (Continued)  
Inorganic Compounds**

Sulfate	-	-	250	Bi-monthly
Zinc	66,000	Bi-monthly	50	Bi-monthly
PCBs (Residential)	1.0	Bi-monthly	-	-
PCBs (Non-residential)	2.0	Bi-monthly	-	-
TPH <sup>1</sup>	500	Bi-monthly	-	-
Temperature	-	1 per shift	-	-
Total Solids	-	Monthly	-	-

<sup>1</sup> Total Petroleum Hydrocarbon.

<sup>2</sup> Leachability evaluations shall be conducted using the Toxicity Characteristic Leaching Procedure (EPA method 1311).

**Table 8  
Volatile Organic Compounds**

Parameters	Total Level		Leachate Level <sup>1</sup>	
	Limit (mg/kg)	Frequency	Limit (mg/L)	Frequency
Benzene	0.8	Monthly	0.005	Monthly
Carbon Tetrachloride	2.1	Monthly	0.005	Monthly
Chlorobenzene	-	-	0.1	Monthly
Chloroform	0.5	Monthly	0.1	Monthly
1,2-Dichloroethane	0.3	Monthly	0.005	Monthly
1,1-Dichloroethene	1.0	Monthly	0.007	Monthly
Tetrachloroethene	2.0	Monthly	0.005	Monthly
Trichloroethene	2.0	Monthly	0.005	Monthly
Vinyl Chloride	2.0	Monthly	0.02	Monthly

<sup>1</sup> Leachability evaluations shall be conducted using the Toxicity Characteristic Leaching Procedure (EPA method 1311).

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Table 9  
Semi-Volatile Organic Compounds

Parameters	Total Level		Leachate Level <sup>1</sup>	
	Limit (mg/kg)	Frequency	Limit (mg/L)	Frequency
Acenaphthene	94	1 per 4000 tons	2.1	Monthly
Acenaphthylene	360	1 per 4000 tons	2.2	Monthly
Aniline	19	1 per 4000 tons	0.0028	Monthly
Anthracene	7.3	1 per 4000 tons	0.066	Monthly
Benzidine	0.078	1 per 4000 tons	$1.52 \times 10^{-7}$	Monthly
Benzo (a) anthracene	20	1 per 4000 tons	0.0009	Monthly
Benzo (a) pyrene	0.6	1 per 4000 tons	0.0002	Monthly
Benzo (b) fluoranthene	3.7	1 per 4000 tons	0.0009	Monthly
Benzo (g,h,i) perylene	3.9	1 per 4000 tons	0.00026	Monthly
Benzo (k) fluoranthene	13	1 per 4000 tons	0.00055	Monthly
Benzoic acid	430	1 per 4000 tons	140.0	Monthly
Bis (2-ethylhexyl) phthalate	130	1 per 4000 tons	0.006	Monthly
Butylbenzylphthalate	460	1 per 4000 tons	2.7	Monthly
4-Chloroaniline	880	1 per 4000 tons	0.14	Monthly
Bis (2-chloroethyl) ether	0.96	1 per 4000 tons	$3.18 \times 10^{-5}$	Monthly
Bis (2-chloroisopropyl) ether	32	1 per 4000 tons	0.3	Monthly
2-Chloronaphthalene	500	1 per 4000 tons	2.8	Monthly
2-Chlorophenol	330	1 per 4000 tons	0.04	Monthly
Chrysene	5.1	1 per 4000 tons	0.0019	Monthly

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Table 9 (Continued)  
Semi-Volatile Organic Compounds

Parameters	Total Level		Leachate Level <sup>1</sup>	
	Limit (mg/kg)	Frequency	Limit (mg/L)	Frequency
Di-n-butylphthalate	3,200	-	3.5	Monthly
Di-n-octylphthalate	500	1 per 4000 tons	-	-
Dibenzo (a,h) anthracene	2.5	1 per 4000 tons	0.00009	Monthly
Dibenzofuran	30	1 per 4000 tons	-	-
1,2-Dichlorobenzene	260	1 per 4000 tons	0.6	Monthly
1,4-Dichlorobenzene	210	1 per 4000 tons	0.075	Monthly
3,3-Dichlorobenzidine	40	1 per 4000 tons	$7.78 \times 10^{-5}$	Monthly
2,4-Dichlorophenol	660	1 per 4000 tons	0.02	Monthly
Diethylphthalate	440	1 per 4000 tons	5.0	Monthly
2,4-Dimethylphenol	4,400	1 per 4000 tons	0.73	Monthly
2,4-Dinitrophenol	22	1 per 4000 tons	0.019	Monthly
2,4-Dinitrotoluene	58	1 per 4000 tons	0.0021	Monthly
1,2-Diphenylhydrazine	0.92	1 per 4000 tons	$4.38 \times 10^{-5}$	Monthly
Fluoranthene	65	1 per 4000 tons	0.26	Monthly
Fluorene	76	1 per 4000 tons	1.4	Monthly
Hexachlorobenzene	0.15	1 per 4000 tons	0.001	Monthly
Hexachlorocyclopentadiene	66	1 per 4000 tons	0.05	Monthly
Hexachloroethane	220	1 per 4000 tons	0.001	Monthly
Indeno (1,2,3-cd) pyrene	25	1 per 4000 tons	0.0009	Monthly
Isphorone	1,900	1 per 4000 tons	0.1	Monthly

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2-Methylnaphthalene	2,000	1 per 4000 tons	0.73	Monthly
N-Nitrosos-di-n-propylamine	2.6	1 per 4000 tons	5.0 x 10 <sup>-6</sup>	Monthly
N-Nitrosodiphenylamine	100	1 per 4000 tons	0.00714	Monthly
N-Nitrosodimethylamine	0.023	1 per 4000 tons	3.1 x 10 <sup>-6</sup>	Monthly
Naphathalene	140	1 per 4000 tons	0.1	Monthly
Nitrobenzene	110	1 per 4000 tons	0.018	Monthly
4-Nitrophenol	1,800	1 per 4000 tons	0.06	Monthly
Pentachlorophenol	150	1 per 4000 tons	0.001	Monthly
Phenanthrene	210	1 per 4000 tons	1.1	Monthly
Phenol	9,300	1 per 4000 tons	4.0	Monthly
Pyrene	46	1 per 4000 tons	0.13	Monthly
Pyridine	33	1 per 4000 tons	0.0097	Monthly
1,2,4-Trichlorobenzene	340	1 per 4000 tons	0.07	Monthly
2,4,6-Trichlorophenol	66	1 per 4000 tons	0.00318	Monthly
2,4,5-Trichlorophenol	12,000	1 per 4000 tons	3.5	Monthly

<sup>1</sup> Leachability evaluations shall be conducted using the Toxicity Characteristic Leaching Procedure (EPA method 1311).

- c. The soil substitute may be beneficially used, as landfill daily/intermediate cover and as asphalt plant feed as an ingredient or a component in the production of hot mix asphalt-paving material, if the following requirements are met:
  - i. The concentration in the soil substitute, for any constituent, does not exceed the concentration limit(s) listed in Table 10 below; and
  - ii. The asphalt-paving material meets the applicable requirements of the American Society for Testing and Materials (ASTM) Standard, or other National, state, or industry standard for which it is being used.

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**Table 10  
Inorganic Compounds**

Parameters	Total Level	
	Limit (mg/kg)	Frequency
pH	6.0 – 12.0 standard units	Bi-monthly
Arsenic	29	Bi-monthly
Barium	15,000	Bi-monthly
Cadmium	47	Bi-monthly
Chromium (Total)	-	Bi-monthly
Copper	1,500	Bi-monthly
Lead	500	Bi-monthly
Mercury	66	Bi-monthly
Molybdenum	18	Bi-monthly
Nickel	420	Bi-monthly
Selenium	1,100	Bi-monthly
Silver	1,100	Bi-monthly
PCBs (Residential)	1.0	Bi-monthly
PCBs (Non-residential)	2.0	Bi-monthly
TPH <sup>1</sup>	500	Bi-monthly
Zinc	2,800	Bi-monthly
Temperature	-	1 per shift
Total Solids	-	Monthly

<sup>1</sup> Total Petroleum Hydrocarbon

3. Soil substitute that does not meet the requirements as specified in Condition C2 of this general permit shall be managed properly at a permitted disposal facility or may be beneficially use at locations outside the Commonwealth provided the soil substitute is authorized for beneficial use by the State authority.
4. The soil substitute authorized under this general permit shall not be used in primary food production and shall not be applied to agricultural land (including grazing land), a lawn, a home garden, a forest or a public contact (i.e., public park, playground, etc.) site.
5. In compliance with the requirements specified in Conditions C1 and C2 of this general permit, the soil amendments and soil substitute shall be monitored as follows:
  - a. For each source of soil amendments intended for beneficial use, the permittee shall collect representative samples of each soil amendment type and analyze for the total (mg/kg) and leachable (mg/L) levels for each constituent listed in Table 1 of Condition C1 of this general permit.

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- b. Prior to the first beneficial use of the soil substitute and at the frequencies specified in Condition C2 of this general permit thereafter, representative samples of the soil substitute shall be analyzed, based on the intended beneficial use, for the total (mg/kg) and/or leachable (mg/L) levels for each parameter listed in Tables 2 through 10 of Condition C2 of this general permit.

Representative sampling is one of the most difficult aspects of monitoring. To obtain a representative sample of the soil amendment or soil substitute, the samples must be taken from the correct locations and represent the entire amount of soil amendment or soil substitute. In the batch process, more than one sample is usually necessary to accurately represent a particular batch of the soil amendment(s) or a storage pile of soil substitute.

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 soil amendment or soil substitute and because the pollutant limits pertain to the quality of the soil substitute that will be beneficially used, samples must be collected after the final stage of the soil substitute generation process and prior to storage. Should knowledge of the soil amendment(s) received or soil substitute generation, visual observations, or analytical results indicate variability in the quality of the soil amendment or soil substitute, more frequent testing shall be conducted.

6. The permittee and subsequent sellers of the soil substitute shall inform all persons or municipalities and other entities who purchase soil substitute from the permittee, which propose to beneficially use the soil substitute covered under this permit of all conditions and limitations imposed on the beneficial use of soil substitute by the Department of Environmental Protection (Department). This notification shall be as follows:
  - a. Provide a copy of Appendix "A" (Use Restrictions) of this permit to all persons or municipalities which propose to beneficially use the soil substitute. The conditions in Appendix "A" also apply to: (1) any permittee who obtains a Determination of Applicability to conduct activities authorized by this permit, and (2) all subsequent end-users of the soil substitute, and

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- b. Obtain a signed written "Terms and Conditions" agreement with all persons or municipalities which propose to beneficially use the soil substitute.
7. The storage and transportation of soil amendments and soil substitute shall be in a manner which does not create a nuisance or be harmful to the public health, safety or the environment and shall comply with the requirements of Title 25 Pa Code, Chapter 299 (relating to Storage and Transportation of Residual Waste).
8. Unless otherwise authorized by the Department in writing, the soil amendments and soil substitute shall not be stored for more than one (1) year, and at any one time the maximum amount stored may not exceed 1,700 cubic yards (CY) of soil amendments and 2,300 CY of the soil substitute as described in the approved application.
9. Equipment used for the storage and transportation of the soil amendments and soil substitute shall be maintained in good operating condition to prevent soil amendments and soil substitute from being conveyed out of the storage areas. Weekly inspections of each storage area and their surrounding environs are to be conducted to determine compliance of the terms and conditions of this general permit, and for evidence of failure.
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 soil amendments and soil substitute and any other residual wastes or other materials which contain or have been contaminated by the soil amendments and soil substitute 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 immediately notify the Department, in writing, of any changes in: the name, address, owners, operators and/or responsible officials of the company; changes in facility location; changes in land ownership or the right to operate on the land occupied; the physical or chemical characteristics of the soil amendments or soil substitute; the manufacturing process which generates the soil substitute; the change in status of bonding and insurance of the facility and the change in status of any permit issued by the Department or any state authority or federal government under the environmental protection acts.
12. The permittee shall comply with the fugitive emissions regulations under 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 §§123.1 and 123.2.

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13. 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.
14. 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 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 soil amendments, soil substitute, 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.
15. 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 and reissue the authorization granted in this 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 permit.
16. 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.
17. Any independent contractors or agents retained by the permittee in the completion of activities authorized under this permit shall be subject to compliance history review by the Department prior to performance of any activities, as specified by the Solid Waste Management Act of 1980.
18. The soil amendments and soil substitute under the authorization granted in this permit shall be managed in accordance with the permittee's application. Except to the extent the permit states otherwise, the permittee shall utilize the soil amendments and soil substitute for beneficial use purposes as described in the permit application.

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19. 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.
20. Except for the thermally treated soil authorized in Section A of this general permit, hazardous waste, municipal waste, special handling waste, and other residual wastes may not be mixed and/or stored or beneficially use with the soil amendments.
21. Runoff from the soil amendments and soil substitute storage areas shall not cause surface water pollution or groundwater degradation and shall be managed in accordance with The Clean Streams Law and regulations promulgated thereunder.

This permit does not authorize and shall not be construed as an approval to discharge any industrial wastes, wastewater, leachate or runoff from areas where solid waste management activities are conducted to the waters of the Commonwealth.

The soil substitute may not be beneficially used at a mine reclamation site unless the reclamation activity is permitted or otherwise authorized by the Department's Bureau of Mine and Reclamation.

22. During the first thirty (30) days after the operation is commenced and prior to the first use of the soil substitute for each beneficial use type (i.e., compost plant feed, landscaping application, landfill daily/immediate cover, construction material, etc.) authorized in Condition C2 of this general permit, the permittee shall collect representative samples of soil amendments and soil substitute and analyze for constituents as specified in Condition C5 of this general permit. Laboratory results of analyses during this 30-day period shall be submitted to the appropriate Department Regional Office (see attached list) no later than 90 days after the commencing of operation.
23. The soil substitute shall not be used as a valley fill material, to fill open pits from coal or other fills, or to level an area or bring an area to grade where the construction activity is not completed promptly after the placement of the soil substitute.
24. The permittee shall maintain a bond in an amount and with sufficient guarantees as provided by 25 Pa. Code, Chapter 287, Subchapter E (Bonding and Insurance Requirements).
25. The bond filed with the Department under Condition C26 shall continue for the operational life of the facility, until 10 years after final closure of the facility, unless released in whole or in part by the Department, in writing, prior thereto as provided by 25 Pa. Code §287.341 (relating to Release of Bonds).

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26. 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 as provided by 25 Pa. Code §287.342 (relating to Final Closure Certification).
27. The beneficial use of the soil substitute is contingent upon compliance with conditions of this general permit and, if sold, the Pennsylvania Fertilizer, Soil Conditioner and Plant Growth Substance Law of the Pennsylvania Department of Agriculture, if applicable. Information related to this law may be obtained from the Department of Agriculture by writing the Bureau of Plant Industry, Division of Agronomic Services, 230 North Cameron Street, Harrisburg, PA 17110-9408.

**D. Recordkeeping.**

1. The permittee shall maintain records:
  - a. to demonstrate that each soil amendment type accepted for beneficial use meets the concentration limits listed in Table 1 of Condition C13 in this general permit.
  - b. to demonstrate that, for each beneficial use type, the soil substitute meets the concentration limits listed in Tables 2 through 10 of Condition C2 in this general permit.
  - c. of rejected, unacceptable and unauthorized wastes that are disposed of from the facility. The records shall include the name and address of the disposal location, date of disposal, volume or weight of the waste that is disposed.
  - d. the name and address of each person who is given or purchases the soil substitute and shall record its intended use(s).
2. The records required in this Condition E1 shall be retained at the facility for a minimum of 5 years and made available to the Department upon request.

**E. Reporting Requirements.**

1. Persons operating under the provisions of this general permit shall submit, by the anniversary date of this permit, to the appropriate Department Regional Office (see attached list), an annual report which contains the information outlined in Conditions C1, C5, C6, C12, and D1c and d and summarizes the name and address of generator(s) of biosolids and weight or volume of each soil amendment type and soil substitute in storage, sold, traded or given away during the last 12 months ending 30 days prior to the anniversary date of the permit.

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2. Any person who operates under the provisions of this permit shall immediately notify, in writing, within 15 days the Solid Waste Manager of the appropriate regional office of the Department (address in attached list) of any changes in: the name, address, owners, permittees, and/or responsible officials of the company; the location of processing facilities; compliance status; land ownership and the right to enter and operate sites operated by the permittee; the bonding status of the facilities authorized by this permit; and the status of any permit issued by the Department or federal government under the environmental protection acts.
3. Any person currently operating under the provisions of this general permit must notify the Department's Regional Office having jurisdiction over the new processing facility, in writing, if the existing processing facility will be relocated to a new location, or if an additional processing facility, owned and/or operated by the permittee, will be added for coverage under this general permit.

In addition to the notice, the following must be submitted for the Department's approval:

- i. A completed Form 20 (Application for a Municipal or Residual Waste General Permit);
  - ii. An application fee in the amount identified in Section A (General Information) of Form 20 made payable to the "Commonwealth of Pennsylvania"; and completed bonding worksheets.
- b. The new or relocated facility shall not operate until adequate bonding has been approved by the Department. When an existing facility is relocated, the existing bond may be used to cover the new facility, provided the bond amount adequately covers the operations at the new or relocated facility.

#### F. Renewal.

1. A person or municipality that plans to continue the beneficial use of residual waste 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 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) Bonding Worksheets, and (vi) a check made payable to the "Commonwealth of Pennsylvania" for the renewal application fee in the amount identified in Section A (General Information) of the Form 20. The application for renewal must be submitted to the same Department office where the permittee's original application for this general permit or determination of applicability was submitted.

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2. 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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### Appendix A Acceptable Uses and Use Restrictions

The following "Use Restrictions" apply to the beneficial use of the soil substitute, a resultant mixture of soil amendments (i.e., biosolids, water treatment plant sludge, paper pulp sludge and lime naturalized industrial water sludge) with the thermally treated soil. Persons receiving, storing and/or using the soil substitute for beneficial use purposes must comply with the following requirements:

#### USE RESTRICTIONS:

1. The soil substitute shall not be placed in direct contact with surface water or groundwater of the Commonwealth.
2. The soil substitute shall not be placed within 300 feet of an exceptional value wetland and or within 300 feet of a private or public water source.
3. The soil substitute shall not be used as a valley fill material, to fill open pits from coal or other fills, or to level an area or bring an area to grade where the construction activity is not completed promptly after the placement of the soil substitute.
4. Except for the thermally treated soil authorized in Condition 2 of this general permit, hazardous waste, municipal waste, special handling waste, and other residual wastes may not be mixed and/or stored or beneficially used with the soil substitute.
5. Unless specifically approved by the Department in writing, the soil substitute shall not be stored for more than one (1) year, and as follows:
  - i. The soil substitute is not accumulated before being beneficially used unless the operator shows that the soil substitute is potentially reusable and has a feasible means of being beneficial use; and
  - ii. During the calendar year (commencing on January 1), the soil substitute that is beneficially used, equals at least 75% by weight or volume of the soil substitute accumulated at the beginning of the period. In calculating the percentage of turnover, the 75% requirement is to be applied to each waste of the same type (i.e., soil substitute from a specific facility) that is beneficially used in the same way (that is, from which the same material is recovered or that is used in the same way).
6. The storage, transportation or use of the soil substitute shall be in a manner which will not create a nuisance or be harmful to the public health, safety or the environment. The storage and transportation of soil substitute shall comply with the requirements of 25 Pa Code, Chapter 299 (relating to Storage and Transportation of Residual Waste).
7. Runoff from the soil substitute storage area(s) shall not cause surface water pollution or groundwater degradation and shall be managed in accordance with The Clean Streams Law and regulations promulgated thereunder.

**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 18701-1915  
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 3<sup>rd</sup> 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