

*** DRAFT – NOT FOR FILING ***

3745-525-801 Beneficial use - definitions.

The following definitions apply to rules 3745-525-801 to 3745-525-811 of the Administrative Code:

(A)

(1) "Agronomic application rate" means the appropriate quantity of fertilizer for the expected yield of the next crop.

(B)

(1) "Base course lift" means no more than twelve inches of loose industrial byproduct used as confined geotechnical fill in place of other aggregate to support a pavement or other structure.

(2) "Beneficial use" means the disposal of an industrial byproduct in a pre-approved use in accordance with rule 3745-525-807 of the Administrative Code or in accordance with a beneficial use permit approved in accordance with rule 3745-525-808 and 3745-525-809 of the Administrative Code.

(C) [Reserved.]

(D)

(1) "Day care facility" means a building or structure and associated property including, but not limited to, playgrounds and parking lots, in which child care is provided that is not a residential premises as residential premises is defined in this rule.

(2) "Detection limit" means the minimum concentration of a substance that can be measured and reported with ninety-nine per cent confidence that the value is above zero.

(3) "Director" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(4) "Drinking water source protection area for a public water system using ground water" means the surface and subsurface area surrounding a public water supply well or wells that will provide water to the well or wells within five years as delineated or endorsed by the agency under the wellhead protection program and the source water assessment and protection program.

(E)

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(1) "Emergency management zone" means the surface and subsurface area in the immediate vicinity of a public water system intake as delineated or endorsed by the agency under the source water assessment and protection program within which the public water supply owner or operator has little or no time to respond to potential contamination from a spill, release, or weather related event. The standard emergency management zone boundary consists of a semi-circle that extends five hundred feet upstream of the intake and one hundred feet downstream of the intake, except as modified due to local conditions.

(F) [Reserved.]

(G)

(1) "Generator" means a person who generates an industrial byproduct.

(2) "Generating facility" means the facility at which the industrial byproduct is generated.

(H) [Reserved.]

(I)

(1) "Industrial byproduct" means "industrial waste" as defined in section 6111.01 of the Revised Code and "other waste" as defined in section 6111.01 of the Revised Code, except where excluded by rule 3745-525-803 of the Administrative Code, including the following:

(a) Source-separated bottom ash from the burning of primarily coal.

(b) Source-separated fly ash from the burning of primarily coal.

(c) Source-separated FGD material from the burning of primarily coal.

(d) Source-separated foundry sand from iron, steel and aluminum foundries.

(e) Source-separated lime.

(f) Source-separated lime sludge.

(g) Source-separated cement kiln dust and lime kiln dust.

(h) Other non-hazardous waste as approved by the director for beneficial use in accordance with rules 3745-525-808 and 3745-525-809 of the Administrative Code.

(J) [Reserved.]

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(K) [Reserved.]

(L) "Lime sludge" means carbonaceous material generated during the process of treating water supplies.

(M)

(1) "Medical care facility" means "home" as defined in division (A)(1)(a) of section 3721.01 of the Revised Code, "nursing home," "residential care facility," and "home for the aging" as defined in section 3721.01 of the Revised Code, a "residential facility" for persons with mental illness or severe mental disabilities as defined in section 5119.22 of the Revised Code, a "residential facility" for mentally retarded or developmentally disabled persons as defined in section 5123.19 of the Revised Code, "hospital" as defined in section 3727.01 of the Revised Code, "adult care facility" as defined in section 3722.01 of the Revised Code, and similar facilities.

(N)

(1) "Non-hazardous waste" means any waste that has been determined to not be a hazardous waste in accordance with the methods described in rule 3745-52-11 of the Administrative Code.

(O) [Reserved.]

(P)

(1) "Person" has the same meaning as in section 6111.01 of the Revised Code.

(2) "Professional engineer" has the same meaning as in rule 3745-500-01 of the Administrative Code.

(Q) [Reserved.]

(R)

(1) "Residential premises" means a building or structure used or intended to be used in whole or in part as a personal residence by the owner, part-time owner, or lessee, or any person authorized by the owner, part-time owner, or lessee to use the building or structure as a personal residence, including a single family or two family house, apartment building, dormitory, and mobile home, and the associated grounds, areas, and facilities for the use of the occupants.

(S)

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(1) "School" means a building or structure used for an educational program that meets the minimum standards of the state board of education, and associated property including, but not limited to, athletic fields, recreational facilities, and parking lots.

(2) "Source-separated" means industrial waste or other waste that has been separated at the point of generation from other industrial wastes or other wastes.

(T) [Reserved.]

(U) [Reserved.]

(V) [Reserved.]

(W)

(1) "Waters of the state" has the same meaning as in section 6111.01 of the Revised Code.

(2) "Wellhead protection program" means Ohio EPA's program based on the Safe Drinking Water Act as defined in rule 3745-500-03 of the Administrative Code.

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3745-525-802

Beneficial use - applicability and criteria.

(A) Rules 3745-525-801 to 3745-525-811 of the Administrative Code are applicable to the beneficial use of industrial byproducts.

(B) The beneficial use of industrial byproducts shall meet the following:

(1) Protect public health and safety and the environment.

(2) Conform to accepted engineering practices and agronomic application rates.

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3745-525-803 Beneficial use - exclusions.

Rules 3745-525-801 to 3745-525-811 of the Administrative Code do not apply to the following:

- (A) Alternative daily cover material as described in and regulated in accordance with Chapter 3734. of the Revised Code and rules adopted thereunder.
- (B) Animal waste as defined and regulated in accordance with Chapter 3734. of the Revised Code and rules adopted thereunder.
- (C) Asbestos emission control materials regulated in accordance with Chapter 3745-20 of the Administrative Code.
- (D) Coal mining and reclamation operations waste regulated in accordance with Chapter 1501:13 of the Administrative Code.
- (E) Clean hard fill material as defined in and regulated under rules adopted in accordance with Chapter 3714. of the Revised Code.
- (F) Compost product as defined and regulated under Chapter 3734. of the Revised Code and rules adopted thereunder.
- (G) Construction and demolition debris as defined in section 3714.01 of the Revised Code and regulated in accordance with Chapter 3714. of the Revised Code and Chapter 3745-520 of the Administrative Code.
- (H) Hazardous substance as defined in section 101(14) of the "Comprehensive Environmental Response, Compensation, and Liability Act," as described in rule 3745-500-03 of the Administrative Code.
- (I) Hazardous waste as defined in section 3734.01 of the Revised Code and regulated in accordance with Chapter 3734. of the Revised Code and rules adopted thereunder.
- (J) Industrial mineral mining and reclamation operations waste regulated in accordance with Chapter 1501:14 of the Administrative Code.
- (K) Infectious waste as defined in section 3734.01 of the Revised Code and regulated in accordance with Chapter 3734. of the Revised Code and rules adopted thereunder.
- (L) Leachate as defined in rule 3745-500-01 of the Administrative Code and regulated in accordance with Chapters 3745-500 to 3745-599 of the Administrative Code.

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- (M) Lime mining wastes as defined in section 1514.081 of the Revised Code and regulated in accordance with section 1514.081 of the Revised Code and rules adopted thereunder.
- (N) Low-level radioactive waste as defined in 10 CFR section 61.2 and regulated in accordance with 10 CFR Part 61 as described in rule 3745-500-03 of the Administrative Code.
- (O) Manure as defined in section 903.01 of the Revised Code and regulated in accordance with Chapter 903. of the Revised Code and rules adopted thereunder.
- (P) Municipal solid waste as defined in rule 3745-500-01 of the Administrative Code and regulated in accordance with Chapter 3734. of the Revised Code and rules adopted thereunder.
- (Q) Oil and gas exploration and production waste as defined in rule 1501:9-1-01 of the Administrative Code and regulated in accordance with Chapter 1501:9-1 of the Administrative Code.
- (R) Petroleum contaminated soil as defined in rule 1301:7-9-16 of the Administrative Code and regulated in accordance with Chapter 1301:7-9 of the Administrative Code.
- (S) Polychlorinated biphenyls (PCBs) or any PCB-containing materials as defined in 40 CFR section 761.3 and regulated in accordance with the Toxic Substances Control Act, 15 U.S.C. Sections 2601 et seq., and 40 CFR Part 761 as described in rule 3745-500-03 of the Administrative Code.
- (T) Raw materials used or industrial byproducts beneficially used in the manufacture of a product the use or disposal of which is not otherwise regulated by this chapter.
- (U) Regulated substance as defined in rule 1301:7-9-02 of the Administrative Code and regulated in accordance with Chapter 1301:7-9 of the Administrative Code for underground storage tanks.
- (V) Saltwater as defined in Rule 1501:9-3-01 of the Administrative Code and regulated in accordance with Chapter 1501:9-3 of the Administrative Code for saltwater operations; and as defined in Rule 1501:9-5-01 of the Administrative Code and regulated in accordance with Chapter 1501:9-5 for enhanced oil or gas recovery projects.
- (W) Scrap tires as defined in rule 3745-500-01 of the Administrative Code and regulated in accordance with Chapter 3734. of the Revised Code and rules promulgated thereunder.

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- (X) Sewage, sewage sludge, sludge, and sludge materials as defined in section 6111.01 of the Revised Code and regulated in accordance with Chapter 6111. of the Revised Code and rules adopted thereunder.
- (Y) Sewage sludge materials as defined in rule 3745-40-01 of the Administrative Code and regulated in accordance with Chapter 3745-40 of the Administrative Code.
- (Z) Tire derived fuel or tire derived chips as defined in rule 3745-500-01 of the Administrative Code and regulated in accordance with Chapter 3734. of the Revised Code and rules promulgated thereunder.
- (AA) Universal waste as defined in rule 3745-273-09 of the Administrative Code and regulated in accordance with Chapter 3745-273 of the Administrative Code.
- (BB) Used oil as defined in rule 3745-279-01 of the Administrative Code and regulated in accordance with Chapter 3745-279 of the Administrative Code; and materials derived from used oil as defined in rule 3745-279-10 of the Administrative Code.
- (CC) Voluntary action program materials including engineered fill, hazardous substances, industrial fill, native fill, and petroleum, as defined in and regulated in accordance with Chapter 3745-300 of the Administrative Code.
- (DD) Yard waste and commingled yard waste as defined in rule 3745-500-01 of the Administrative Code and regulated in accordance with Chapter 3734. of the Revised Code and rules promulgated thereunder.

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3745-525-804 Beneficial use - prohibitions.

No person shall do the following:

(A) Cause pollution or place or cause to be placed any beneficially used industrial byproducts in a location where they cause pollution of any waters of the state except in accordance with an effective national pollutant discharge elimination system permit.

(B) Beneficially use an industrial byproduct in any of the pre-approved uses of rule 3745-525-807 of the Administrative Code if the concentration of any of the pollutants exceeds any of the limits in the applicable table of rule 3745-525-806 of the Administrative Code. No person shall beneficially use an industrial byproduct not pre-approved in accordance with rule 3745-525-807 of the Administrative Code if the concentration of any of the pollutants exceeds any of the limits established in an approved beneficial use permit.

(C) Beneficially use an industrial byproduct except in accordance with the pre-approved uses of rule 3745-525-807 of the Administrative Code, or with an approved individual beneficial use permit in accordance with rules 3745-525-808 and 3745-525-809 of the Administrative Code. All industrial byproducts not approved or pre-approved for beneficial use shall be disposed in accordance with Chapters 3734. and 6111. of the Revised Code and rules adopted thereunder as applicable.

(D) Beneficially use an industrial byproduct as utility trench backfill in the construction of a potable water system for human or livestock consumption.

(E) Beneficially use an industrial byproduct as a pre-approved confined geotechnical fill or unconfined geotechnical fill at a residential premises, medical care facility, school, day care facility, playground, or correctional facility.

[Comment: Pre-approved confined geotechnical fill and unconfined geotechnical fill projects are described in rule 3745-525-807 of the Administrative Code.]

(F) Beneficially use an industrial byproduct as a pre-approved confined geotechnical fill within five hundred feet of a well that provides potable drinking water for human or livestock consumption.

[Comment: Pre-approved confined geotechnical fill projects are described in paragraph (B) of rule 3745-525-807 of the Administrative Code.]

(G) Beneficially use an industrial byproduct as a pre-approved confined geotechnical fill in a drinking water source protection area for a public water system using ground water or in an emergency management zone for a public water system using surface water.

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[\[Comment: Pre-approved confined geotechnical fill projects are described in paragraph \(B\) of rule 3745-525-807 of the Administrative Code.\]](#)

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3745-525-805 Initial characterization.

Any generator who intends to beneficially use, or give, sell, or otherwise provide for beneficial use, an industrial byproduct in accordance with rules 3745-525-801 to 3745-525-811 of the Administrative Code shall comply with the following:

(A) Develop and implement a sampling plan following the methodology of EPA SW-846, Chapter Nine as described in rule 3745-500-03 of the Administrative Code for the initial characterization of the industrial byproduct. The sampling plan shall include information describing the following:

(1) The collection of a minimum of seven representative grab samples of industrial byproduct from each process train from which the industrial byproduct is intended to be beneficially used. The grab samples shall not be composited.

(2) The pollutants to be analyzed, including the following:

(a) For industrial byproducts intended for pre-approved uses in accordance with rule 3745-525-807 of the Administrative Code, the pollutants listed in the tables contained in rule 3745-525-806 of the Administrative Code and any other pollutants which may be expected to be found in the industrial byproduct.

(b) For industrial byproducts intended for beneficial uses other than those described in paragraph (A)(2)(a) of this rule, the pollutants required by rules 3745-525-808 and 3745-525-809 of the Administrative Code.

(3) The detection limit which shall be below the most limiting concentration for the pollutant being analyzed.

(B) The generator shall use the following analytical methods:

(1) For land application and soil blends, employ methods that generate total pollutant results.

(2) For all leachate analyses, use SW-846 Method 1312 as described in rule 3745-500-03 of the Administrative Code, to generate the elutriate used in the leachate analysis of pollutants required by rules 3745-525-801 to 3745-525-811 of the Administrative Code.

(C) The generator shall submit a copy of the laboratory results from the initial characterization of the industrial byproduct intended for beneficial use to the director prior to the industrial byproduct leaving the generating facility, or as part of a beneficial use permit application in accordance with rule 3745-525-808 of the Administrative Code, and provide a copy of the laboratory results to the recipients of

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the industrial byproduct prior to the industrial byproduct leaving the generating facility. The laboratory results shall include the following:

- (1) The detection limit and the practical quantification limit (PQL).
- (2) If a pollutant is detected below the PQL, the detected value with the appropriate qualifier.
- (D) Any generator who intends to beneficially use, or give, sell, or otherwise provide for beneficial use, an industrial byproduct in accordance with rules 3745-525-801 to 3745-525-811 of the Administrative Code shall characterize the industrial byproduct in accordance with the sampling plan developed pursuant to paragraph (A) of this rule, at least once per calendar year.
- (E) Whenever there is a change in the raw materials or processes that generate an industrial byproduct which is intended for beneficial use, the generator shall characterize a representative grab sample of the industrial byproduct in accordance with the sampling plan developed pursuant to paragraph (A) of this rule. All subsequent characterizations of the industrial byproduct shall include all additional pollutants.

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3745-525-806 Beneficial use - pollutant limits for the pre-approved uses of industrial byproducts.

(A) This rule contains the common names of pollutants that are widely used in government regulation, scientific publications, and commerce. However, synonyms may exist for many pollutants. The chemical abstract service registry number (CAS RN) for each pollutant has been provided. The metals include all species in industrial byproduct that contain the element unless specified.

(B) The concentration of the following pollutants shall be determined and reported for each industrial byproduct intended to be beneficially used in a pre-approved use in accordance with rule 3745-525-807 of the Administrative Code.

(1) Pollutant limits for bottom ash from the burning of primarily coal:

<u>Pollutant</u>	<u>CAS RN</u>	<u>Confined geotechnical fill, bonded surface course material, and cold weather road abrasive (mg/L)</u>	<u>Soil blends (mg/kg)</u>	<u>Unconfined geotechnical fill (mg/L)</u>
<u>1) Antimony</u>	<u>7440-36-0</u>	<u>0.0130</u>	<u>31.0</u>	<u>0.0060</u>
<u>2) Arsenic</u>	<u>7440-38-2</u>	<u>0.130</u>	<u>3.90</u>	<u>0.010</u>
<u>3) Barium</u>	<u>7440-39-3</u>	<u>3.50</u>	<u>5,400.0</u>	<u>2.0</u>
<u>4) Beryllium</u>	<u>7440-41-7</u>	<u>5.0</u>	<u>150.0</u>	<u>0.0040</u>
<u>5) Cadmium</u>	<u>7440-43-9</u>	<u>0.0150</u>	<u>35.0</u>	<u>0.0050</u>
<u>6) Chromium VI</u>	<u>18540-29-9</u>	<u>5.0</u>	<u>30.0</u>	<u>0.10</u>
<u>7) Cobalt</u>	<u>7440-48-4</u>	<u>5.0</u>	<u>900.0</u>	<u>0.730</u>
<u>8) Copper</u>	<u>7440-50-8</u>	<u>61.0</u>	<u>1,500.0</u>	<u>1.30</u>
<u>9) Lead</u>	<u>7439-92-1</u>	<u>0.250</u>	<u>300.0</u>	<u>0.0150</u>
<u>10) Mercury</u>	<u>7439-97-6</u>	<u>0.0030</u>	<u>6.10</u>	<u>0.0020</u>
<u>11) Molybdenum</u>	<u>7439-98-7</u>	<u>0.220</u>	<u>75.0</u>	<u>0.040</u>
<u>12) Nickel</u>	<u>7440-02-0</u>	<u>1.20</u>	<u>420.0</u>	<u>0.10</u>
<u>13) Selenium</u>	<u>7782-49-2</u>	<u>0.0780</u>	<u>100.0</u>	<u>0.050</u>
<u>14) Thallium</u>	<u>7440-28-0</u>	<u>0.0040</u>	<u>5.20</u>	<u>0.0020</u>
<u>15) Zinc</u>	<u>7440-66-6</u>	<u>45.0</u>	<u>2,800.0</u>	<u>2.0</u>
<u>16) Cyanide (free)</u>	<u>57-12-5</u>	<u>730.0</u>	<u>1,200.0</u>	<u>0.20</u>
<u>17) Fluoride</u>	<u>16984-48-8</u>	<u>6.20</u>	<u>3,700.0</u>	<u>4.0</u>
<u>18) Acenaphthene</u>	<u>82-32-9</u>	<u>13.0</u>	<u>3,700.0</u>	<u>1.3</u>
<u>19) Anthracene</u>	<u>120-12-7</u>	<u>160.0</u>	<u>22,000.0</u>	<u>16.0</u>
<u>20) Benzo[a]anthracene</u>	<u>56-55-3</u>	<u>0.030</u>	<u>0.620</u>	<u>0.0030</u>

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21) Benzo[a]pyrene	50-32-8	1.80	0.0620	0.180
22) Benzo[b]fluoranthene	205-99-2	0.770	0.620	0.0770
23) Benzo[k]fluoranthene	207-08-9	0.920	6.20	0.000090
24) Chrysene	218-01-9	0.30	62.0	0.030
25) Cresol m-	108-39-4	2.40	3,900.0	0.240
26) Cresol o-	95-48-7	2.40	390.0	0.240
27) Cresol p-	106-44-5	0.240	390.0	0.0240
28) Dibenzo[a,h]anthracene	53-70-3	1,000.0	0.0620	100.0
29) Fluoranthene	206-44-0	54.0	2,300.0	5.40
30) Fluorene	86-73-7	240.0	2,700.0	0.0240
31) Indeno[1,2,3-c,d]pyrene	193-39-5	1,000.0	0.620	100.0
32) Pyrene	129-00-0	79.0	2,300.0	7.90
33) Total dissolved solids	Not applicable	15,000.0	Not applicable	3,000.0

(2) Pollutant limits for fly ash from the burning of primarily coal:

Pollutant	CAS RN	Confined geotechnical fill and bonded surface course material (mg/L)	Soil blends (mg/kg)	Unconfined geotechnical fill (mg/L)
1) Antimony	7440-36-0	0.0130	31.0	0.0060
2) Arsenic	7440-38-2	0.130	3.90	0.010
3) Barium	7440-39-3	3.50	5,400.0	2.0
4) Beryllium	7440-41-7	5.0	150.0	0.0040
5) Cadmium	7440-43-9	0.0150	35.0	0.0050
6) Chromium VI	18540-29-9	5.0	30.0	0.10
7) Cobalt	7440-48-4	5.0	900.0	0.730
8) Copper	7440-50-8	61.0	1,500.0	1.30
9) Lead	7439-92-1	0.250	300.0	0.0150
10) Mercury	7439-97-6	0.0030	6.10	0.0020
11) Molybdenum	7439-98-7	0.220	75.0	0.040
12) Nickel	7440-02-0	1.20	420.0	0.10
13) Selenium	7782-49-2	0.0780	100.0	0.050
14) Thallium	7440-28-0	0.0040	5.20	0.0020
15) Zinc	7440-66-6	45.0	2,800.0	2.0
16) Cyanide (free)	57-12-5	730.0	1,200.0	0.20
17) Fluoride	16984-48-8	6.20	3,700.0	4.0
18) Acenaphthene	83-32-9	13.0	3,700.0	1.30
19) Anthracene	120-12-7	160.0	22,000.0	16.0
20) Benzo[a]anthracene	56-55-3	0.030	0.620	0.0030
21) Benzo[a]pyrene	50-32-8	1.80	0.0620	0.180

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22) Benzo[b]fluoranthene	205-99-2	0.770	0.620	0.0770
23) Benzo[k]fluoranthene	207-08-9	0.920	6.20	0.000090
24) Chrysene	218-01-9	0.30	62.0	0.030
25) Cresol m-	108-39-4	2.40	3,900.0	0.240
26) Cresol o-	95-48-7	2.40	390.0	0.240
27) Cresol p-	106-44-5	0.240	390.0	0.0240
28) Dibenzo[a,h]anthracene	53-70-3	1,000.0	0.0620	100.0
29) Fluoranthene	206-44-0	54.0	2,300.0	5.40
30) Fluorene	86-73-7	240.0	2,700.0	0.0240
31) Indeno[1,2,3-c,d]pyrene	193-39-5	1,000.0	0.620	100.0
32) Pyrene	129-00-0	79.0	2,300.0	7.90
33) Total dissolved solids	Not applicable	15,000.0	Not applicable	3,000.0

(3) [Pollutant limits for FGD material from the burning of primarily coal:](#)

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Pollutant	CAS RN	Confined geotechnical fill (mg/L)	Soil blends and land application at an agronomic rate (mg/kg)	Unconfined geotechnical fill (mg/L)
1) Antimony	7440-36-0	0.0130	31.0	0.0060
2) Arsenic	7440-38-2	0.130	3.90	0.010
3) Barium	7440-39-3	3.50	5,400.0	2.0
4) Beryllium	7440-41-7	5.0	150.0	0.0040
5) Cadmium	7440-43-9	0.0150	35.0	0.0050
6) Chromium VI	18540-29-9	5.0	30.0	0.10
7) Cobalt	7440-48-4	5.0	900.0	0.730
8) Copper	7440-50-8	61.0	1,500.0	1.30
9) Lead	7439-92-1	0.250	300.0	0.0150
10) Mercury	7439-97-6	0.0030	6.10	0.0020
11) Molybdenum	7439-98-7	0.220	75.0	0.040
12) Nickel	7440-02-0	1.20	420.0	0.10
13) Selenium	7782-49-2	0.0780	100.0	0.050
14) Thallium	7440-28-0	0.0040	5.20	0.0020
15) Zinc	7440-66-6	45.0	2,800.0	2.0
16) Cyanide (free)	57-12-5	730.0	1,200.0	0.20
17) Fluoride	16984-48-8	6.20	3,700.0	4.0
18) Total dissolved solids	Not applicable	15,000.0	Not applicable	3,000.0

(4) [Pollutant limits for foundry sand from iron, steel and aluminum foundries:](#)

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Pollutant	CAS RN	Confined	Soil	Unconfined
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		<u>geotechnical fill, bonded surface course material, and cold weather road abrasive (mg/L)</u>	<u>blends (mg/kg)</u>	<u>geotechnical fill (mg/L)</u>
<u>1) Antimony</u>	<u>7440-36-0</u>	<u>0.0130</u>	<u>31.0</u>	<u>0.0060</u>
<u>2) Arsenic</u>	<u>7440-38-2</u>	<u>0.130</u>	<u>3.90</u>	<u>0.010</u>
<u>3) Barium</u>	<u>7440-39-3</u>	<u>3.50</u>	<u>5,400.0</u>	<u>2.0</u>
<u>4) Beryllium</u>	<u>7440-41-7</u>	<u>5.0</u>	<u>150.0</u>	<u>0.0040</u>
<u>5) Cadmium</u>	<u>7440-43-9</u>	<u>0.0150</u>	<u>35.0</u>	<u>0.0050</u>
<u>6) Chromium VI</u>	<u>18540-29-9</u>	<u>5.0</u>	<u>30.0</u>	<u>0.10</u>
<u>7) Cobalt</u>	<u>7440-48-4</u>	<u>5.0</u>	<u>900.0</u>	<u>0.730</u>
<u>8) Copper</u>	<u>7440-50-8</u>	<u>61.0</u>	<u>1,500.0</u>	<u>1.30</u>
<u>9) Lead</u>	<u>7439-92-1</u>	<u>0.250</u>	<u>300.0</u>	<u>0.0150</u>
<u>10) Mercury</u>	<u>7439-97-6</u>	<u>0.0030</u>	<u>6.10</u>	<u>0.0020</u>
<u>11) Molybdenum</u>	<u>7439-98-7</u>	<u>0.220</u>	<u>75.0</u>	<u>0.040</u>
<u>12) Nickel</u>	<u>7440-02-0</u>	<u>1.200</u>	<u>420.0</u>	<u>0.10</u>
<u>13) Selenium</u>	<u>7782-49-2</u>	<u>0.0780</u>	<u>100.0</u>	<u>0.050</u>
<u>14) Thallium</u>	<u>7440-28-0</u>	<u>0.0040</u>	<u>5.20</u>	<u>0.0020</u>
<u>15) Zinc</u>	<u>7440-66-6</u>	<u>45.0</u>	<u>2,800.0</u>	<u>2.0</u>
<u>16) Cyanide (free)</u>	<u>57-12-5</u>	<u>730.0</u>	<u>1,200.0</u>	<u>0.20</u>
<u>17) Fluoride</u>	<u>16984-48-8</u>	<u>6.20</u>	<u>3,700.0</u>	<u>4.0</u>
<u>18) Cresol m-</u>	<u>108-39-4</u>	<u>2.40</u>	<u>3,900.0</u>	<u>0.240</u>
<u>19) Cresol o-</u>	<u>95-48-7</u>	<u>2.40</u>	<u>390.0</u>	<u>0.240</u>
<u>20) Cresol p-</u>	<u>106-44-5</u>	<u>0.240</u>	<u>390.0</u>	<u>0.0240</u>
<u>21) Formaldehyde</u>	<u>50-00-0</u>	<u>9.40</u>	<u>9,200.0</u>	<u>1.0</u>
<u>22) Naphthalene</u>	<u>91-20-3</u>	<u>1.70</u>	<u>56.0</u>	<u>0.00620</u>
<u>23) Phenol</u>	<u>108-95-2</u>	<u>28.0</u>	<u>18,000.0</u>	<u>2.80</u>
<u>24) 2,4,6-trichlorophenol</u>	<u>88-06-2</u>	<u>0.0210</u>	<u>6.10</u>	<u>0.00360</u>
<u>25) Total dissolved solids</u>	<u>Not applicable</u>	<u>15,000.0</u>	<u>Not applicable</u>	<u>3,000.0</u>

(5) Pollutant limits for lime and lime sludge:

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<u>Pollutant</u>	<u>CAS RN</u>	<u>Confined geotechnical fill (mg/L)</u>	<u>Soil blends and land application at an agronomic application rate (mg/kg)</u>	<u>Unconfined geotechnical fill (mg/L)</u>
<u>1) Arsenic</u>	<u>7440-38-2</u>	<u>0.130</u>	<u>3.90</u>	<u>0.010</u>
<u>2) Barium</u>	<u>7440-39-3</u>	<u>3.50</u>	<u>5,400.0</u>	<u>2.0</u>
<u>3) Cadmium</u>	<u>7440-43-9</u>	<u>0.0150</u>	<u>35.0</u>	<u>0.0050</u>
<u>4) Copper</u>	<u>7440-50-8</u>	<u>61.0</u>	<u>1,500.0</u>	<u>1.30</u>
<u>5) Lead</u>	<u>7439-92-1</u>	<u>0.250</u>	<u>300.0</u>	<u>0.0150</u>

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<u>6) Mercury</u>	<u>7439-97-6</u>	<u>0.0030</u>	<u>6.10</u>	<u>0.0020</u>
<u>7) Nickel</u>	<u>7440-02-0</u>	<u>1.20</u>	<u>420.0</u>	<u>0.10</u>
<u>8) Selenium</u>	<u>7782-49-2</u>	<u>0.0780</u>	<u>100.0</u>	<u>0.050</u>
<u>9) Zinc</u>	<u>7440-66-6</u>	<u>45.0</u>	<u>2,800.0</u>	<u>2.0</u>
<u>10) Total dissolved solids</u>	<u>Not applicable</u>	<u>15,000.0</u>	<u>Not applicable</u>	<u>3,000.0</u>

(6) Pollutant limits for cement kiln dust and lime kiln dust:

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<u>Pollutant</u>	<u>CAS RN</u>	<u>Confined geotechnical fill (mg/L)</u>	<u>Soil blends and land application at an agronomic application rate (mg/kg)</u>	<u>Unconfined geotechnical fill (mg/L)</u>
<u>1) Antimony</u>	<u>7440-36-0</u>	<u>0.0130</u>	<u>31.0</u>	<u>0.0060</u>
<u>2) Arsenic</u>	<u>7440-38-2</u>	<u>0.130</u>	<u>3.90</u>	<u>0.010</u>
<u>3) Barium</u>	<u>7440-39-3</u>	<u>3.50</u>	<u>5,400.0</u>	<u>2.0</u>
<u>4) Beryllium</u>	<u>7440-41-7</u>	<u>5.0</u>	<u>150.0</u>	<u>0.0040</u>
<u>5) Cadmium</u>	<u>7440-43-9</u>	<u>0.0150</u>	<u>35.0</u>	<u>0.0050</u>
<u>6) Chromium VI</u>	<u>18540-29-9</u>	<u>5.0</u>	<u>30.0</u>	<u>0.10</u>
<u>7) Lead</u>	<u>7439-92-1</u>	<u>0.250</u>	<u>300.0</u>	<u>0.0150</u>
<u>8) Mercury</u>	<u>7439-97-6</u>	<u>0.0030</u>	<u>6.10</u>	<u>0.0020</u>
<u>9) Nickel</u>	<u>7440-02-0</u>	<u>1.20</u>	<u>1.20</u>	<u>0.10</u>
<u>10) Selenium</u>	<u>7782-49-2</u>	<u>0.0780</u>	<u>0.0780</u>	<u>0.050</u>
<u>11) Thallium</u>	<u>7440-28-0</u>	<u>0.0040</u>	<u>0.0040</u>	<u>0.0020</u>
<u>12) Zinc</u>	<u>7440-66-6</u>	<u>45.0</u>	<u>45.0</u>	<u>2.0</u>
<u>13) Total dissolved solids</u>	<u>Not applicable</u>	<u>15,000.0</u>	<u>Not applicable</u>	<u>3,000.0</u>

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3745-525-807

Beneficial use - pre-approved uses of industrial byproducts.

Industrial byproducts identified in this rule are pre-approved for the following beneficial uses only if the concentration of all of the applicable pollutants in the industrial byproduct do not exceed any of the limits in the table of rule 3745-525-806 of the Administrative Code applicable to the intended pre-approved use. The pre-approval of the following uses does not relieve the person using the industrial byproduct from the duty of complying with all applicable federal, state and local laws, regulations and ordinances.

(A) Confined geotechnical fill. Bottom ash from the burning of primarily coal; fly ash from the burning of primarily coal; FGD material from the burning of primarily coal; foundry sand from iron, steel and aluminum foundries; lime; lime sludge; cement kiln dust; and, lime kiln dust are pre-approved by the director for use in confined geotechnical fill projects. Detailed plans of the project, including the amounts and locations of placement of industrial byproducts beneficially used in the project, shall be prepared, signed, and sealed by a professional engineer. Pre-approved confined geotechnical fill projects are limited to the following:

- (1) Up to three base course lifts, for the construction of industrial and commercial buildings. The industrial byproduct shall be placed underneath the concrete floor slab and shall not extend more than three feet beyond the slab of the structure. Any area where industrial byproduct is not directly beneath the building slab shall be sloped to prevent ponding of water, covered with soil and seeded as soon after placement as is practical.
- (2) Up to three base course lifts, for the construction of a portland cement concrete or asphalt cement concrete parking lot. The placement of the industrial byproduct shall not extend more than three feet beyond the edge of the pavement. Any area where industrial byproduct is not directly beneath the pavement shall be sloped to prevent ponding of water, covered with soil and seeded as soon after placement as is practical.
- (3) Up to three base course lifts, for the construction of a portland cement concrete or asphalt cement concrete paved roadway. Industrial byproduct placed as part of the construction of a portland cement concrete or asphalt cement concrete paved roadway shall not extend more than three feet beyond the pavement. Any area where industrial byproduct is not directly beneath the pavement shall be sloped to prevent ponding of water, covered with soil and seeded as soon after placement as is practical.
- (4) Backfill for the installation of a utility in a trench. The industrial byproduct may be placed as part of the backfill of a trench constructed for the placement of utilities other than potable water systems for human or livestock consumption and shall be beneath a paved roadway, parking lot or other portland cement

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concrete or asphalt cement concrete paved structure. The industrial byproduct shall not extend more than six feet beyond the pavement. Any area where industrial byproduct is not directly beneath the pavement structure shall be sloped to prevent ponding of water, covered with soil and seeded as soon after placement as is practical.

(B) Unconfined geotechnical fill. Bottom ash from the burning of primarily coal; fly ash from the burning of primarily coal; FGD material from the burning of primarily coal; foundry sand from iron, steel and aluminum foundries; lime; lime sludge; cement kiln dust; and, lime kiln dust are pre-approved by the director for use in unconfined geotechnical fills. Detailed plans of the project, including the amounts and locations of placement of industrial byproducts beneficially used in the project and cap specifications where applicable, shall be prepared, signed, and sealed by a professional engineer. Pre-approved unconfined geotechnical fill projects are limited to the following:

(1) Roadway sound and sight barrier embankments.

(2) Airport sound and sight barrier embankments.

(3) Embankments leading to bridges or overpasses.

(4) Building or equipment supportive bases.

(C) Bonded surface course material. Bottom ash from the burning of primarily coal; fly ash from the burning of primarily coal; and, foundry sand from iron, steel and aluminum foundries are pre-approved by the director for use in bonded surface course material used as seal coats in roads, parking lots and recreational or exercise trails. Industrial byproduct used as a bonded surface course material shall not exceed the amount which can be thoroughly embedded within the bonded surface course. Within forty-eight hours of application of the industrial byproduct, the bonded surface course shall be rolled to thoroughly embed the industrial byproduct.

(D) Cold weather road abrasive. Bottom ash from the burning of primarily coal and foundry sand from iron, steel and aluminum foundries are pre-approved by the director for use as a cold weather road abrasive for use on ice or snow-covered roadways to enhance traction. All particles of the industrial byproduct shall be smaller than one-quarter inch, and the material shall contain no more than five per cent silt or clay size particles. The application rate of industrial byproduct used as a winter road abrasive shall not exceed one-half ton per lane mile per application. These materials may be mixed with sand or other abrasives to achieve this application rate.

(E) Soil blends. Bottom ash from the burning of primarily coal; fly ash from the burning of primarily coal; FGD material from the burning of primarily coal; foundry sand from iron, steel and aluminum foundries; lime; lime sludge; cement kiln dust; and,

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lime kiln dust are pre-approved by the director as an admixture in the manufacture of soil blends. Soil blends shall not exceed fifty per cent total industrial byproduct by volume.

(F) Land application at an agronomic application rate. FGD material from the burning of primarily coal; lime; lime sludge; cement kiln dust; and, lime kiln dust are pre-approved by the director for land application at an agronomic application rate.

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3745-525-808

Beneficial use - application for a beneficial use permit.

- (A) No generator of an industrial byproduct shall beneficially use, or give, sell, or otherwise provide for beneficial use, the industrial byproduct without applying for and obtaining an individual beneficial use permit in accordance with this rule except for uses pre-approved in accordance with rule 3745-525-807 of the Administrative Code.
- (B) Applications for a beneficial use permit shall be made on forms prescribed by the director and shall contain the following:
- (1) The name, address, and telephone number of the generator.
 - (2) The name of a designated contact for the generator.
 - (3) A description of each process, including raw materials, that generates the industrial byproduct.
 - (4) A description of the proposed use or uses of the industrial byproduct, including risk assessment and modeling if available.
 - (5) A description of the sampling plan developed and implemented in accordance with rule 3745-525-805 of the Administrative Code for each process that generates an industrial byproduct.
 - (6) An initial characterization of the industrial byproduct in accordance with rule 3745-525-805 of the Administrative Code. The initial characterization shall consist of either of the following:
 - (a) A priority pollutant scan.
 - (b) A set of pollutants identified for the particular industrial byproduct. A report that describes the research methodology used to determine which pollutants may be expected to be found in the industrial byproduct shall be submitted along with the results of the initial characterization, previous testing results, and other generator knowledge. The report shall include but not be limited to information obtained from the agency for toxic substances and disease registry and the United States environmental protection agency office of compliance inspection assistance.
 - (7) A statement that the initial characterization and any subsequent characterizations of the industrial byproduct shall be in accordance with rule 3745-525-805 of the Administrative Code.
 - (8) The following certification statement:

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"I certify, under penalty of law, that the information that will be used to determine compliance with the requirements contained in Chapters 3734. and 6111. of the Revised Code, and all rules thereunder, was prepared under my direction and supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

- (C) An application for a beneficial use permit, and the certification statement, shall both be signed in accordance with rule 3745-500-02 of the Administrative Code.
- (D) The signatures shall constitute personal affirmation that all statements or assertions of fact made in the application are true and complete and comply fully with applicable state requirements and shall subject the signatory to liability under section 2921.13 of the Revised Code.
- (E) An application for a beneficial use permit shall be accompanied by a nonrefundable application fee established in accordance with Chapters 3745. and 6111. of the Revised Code.
- (F) If Ohio EPA determines that an application is incomplete, Ohio EPA shall notify the applicant of the nature of the deficiency. If the applicant has not revised and completed the application and resubmitted it to Ohio EPA within one hundred and eighty days after the date of the notice, the director may deny the incomplete application. At a minimum, an application shall be deemed to be incomplete when the applicant partially or completely fails to provide the information required in accordance with rule 3745-525-808 of the Administrative Code.
- (G) If Ohio EPA determines that additional information is necessary to determine whether the application satisfies rules 3745-525-801 to 3745-525-811 of the Administrative Code, upon request, the applicant shall supply such additional information necessary to satisfy those rules.
- (H) The director shall not approve a beneficial use permit unless the director determines the industrial byproduct:
 - (1) Is an industrial byproduct as defined in rule 3745-525-801 of the Administrative Code.
 - (2) Is not excluded by rule 3745-525-803 of the Administrative Code.
 - (3) Has been sampled in accordance with rule 3745-525-805 of the Administrative Code.

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- (4) Has been characterized in accordance with rule 3745-525-805 and 3745-525-808 of the Administrative Code.
- (5) The proposed use or uses are protective of public health and safety and the environment.
- (6) The proposed use or uses conform to accepted engineering practices and agronomic application rates.
- (7) The proposed use will not violate applicable federal, state and local laws, regulations and ordinances.
- (8) There are no unresolved enforcement actions pending against the generator related to rule 3745-525-801 to 3745-525-811 of the Administrative Code.
- (I) A beneficial use permit shall be effective for one year from the date of issuance, or for whatever other period the director deems appropriate, not to exceed five years.
- (J) The director may impose such special terms or conditions in a beneficial use permit as are appropriate or necessary to ensure compliance with Chapters 3734, and 6111, of the Revised Code, and rules adopted thereunder, and to protect public health and safety and the environment.
- (K) A beneficial use permit may be administratively changed by the director without an application received from the generator for the following reasons:

 - (1) To update administrative information including, but not limited to, the telephone number, address, or name of the generator.
 - (2) To clarify or correct typographical errors contained in the beneficial use permit.
- (L) A beneficial use permit does not relieve the person using the industrial byproduct from the duty of complying with all applicable federal, state and local laws, regulations and ordinances.

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3745-525-809 **Beneficial use - application for a renewal of a beneficial use permit.**

(A) At least one hundred and eighty days prior to its expiration, an application for renewal of a beneficial use permit shall be submitted on forms prescribed by the director, and shall contain the following:

(1) The name, address, and telephone number of the generator.

(2) The name of a designated contact for the generator.

(3) A description of each process, including raw materials, that generates the industrial byproduct.

(4) A description of the proposed use or uses of the industrial byproduct, including risk assessment and modeling if available.

(5) A description of the sampling plan developed and implemented in accordance with rule 3745-525-805 of the Administrative Code for each process that generates an industrial byproduct.

(6) A copy of the laboratory reports for the last three characterizations of the industrial byproduct.

(7) A statement that any subsequent characterizations of the industrial byproduct shall be in accordance with rule 3745-525-806 of the Administrative Code.

(8) The following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the requirements contained in Chapters 3734. and 6111. of the Revised Code, and all rules thereunder, was prepared under my direction and supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(B) An application for renewal of a beneficial use permit, and the certification statement, shall both be signed in accordance with rule 3745-500-02 of the Administrative Code.

(C) The signatures shall constitute personal affirmation that all statements or assertions of fact made in the application are true and complete and comply fully with applicable state requirements and shall subject the signatory to liability under section 2921.13 of the Revised Code.

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- (D) An application for a renewal of a beneficial use permit shall be accompanied by a nonrefundable application fee established in accordance with Chapters 3745. and 6111. of the Revised Code.
- (E) If Ohio EPA determines that an application is incomplete, Ohio EPA shall notify the applicant of the nature of the deficiency. If the applicant has not revised and completed the application and resubmitted it to Ohio EPA within one hundred and eighty days after the date of the notice, the director may deny the incomplete application. At a minimum, an application shall be deemed to be incomplete when the applicant partially or completely fails to provide the information required in accordance with rule 3745-525-810 of the Administrative Code.
- (F) If Ohio EPA determines that additional information is necessary to determine whether the application satisfies rules 3745-525-801 to 3745-525-812 of the Administrative Code, upon request, the applicant shall supply such additional information necessary to satisfy those rules.
- (G) The director may impose such special terms or conditions in a renewal of a beneficial use permit as are appropriate or necessary to ensure compliance with Chapters 3734. and 6111. of the Revised Code, and rules adopted thereunder, and to protect public health and safety and the environment.
- (H) The director shall not renew a beneficial use permit unless the director determines the industrial byproduct:
- (1) Is an industrial byproduct as defined in rule 3745-525-801 of the Administrative Code.
 - (2) Is not excluded by rule 3745-525-803 of the Administrative Code.
 - (3) Has been sampled in accordance with rule 3745-525-805 of the Administrative Code.
 - (4) Has been characterized in accordance with rule 3745-525-805 and 3745-525-808 of the Administrative Code.
 - (5) The proposed use or uses are protective of public health and safety and the environment.
 - (6) The proposed use or uses conform to accepted engineering practices and agronomic application rates.
 - (7) The proposed use or uses will not violate applicable federal, state and local laws, regulations and ordinances.

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- (8) The generator maintained records in accordance with rule 3745-525-811 of the Administrative Code.
- (9) The generator is in substantial compliance with the expiring beneficial use permit and with applicable provisions of rule 3745-525-801 to 3745-525-811 of the Administrative Code.
- (10) There are no unresolved enforcement actions pending against the generator related to rules 3745-525-801 to 3745-525-811 of the Administrative Code.

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3745-525-810 Beneficial use - suspension or revocation of a beneficial use permit.

(A) The director may suspend or revoke a beneficial use permit if the director determines that any of the terms or conditions of the permit or any of the requirements of rules 3745-525-801 to 3745-525-811 of the Administrative Code have been or will be violated.

(B) The director may suspend or revoke a beneficial use permit at the request of the permit holder.

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3745-525-811

Beneficial use - records and reports.

(A) A generator of industrial byproducts which are intended for beneficial use shall maintain records that contain the following for each beneficially used industrial byproduct:

(1) The name, address, and telephone number of the generator of the industrial byproduct.

(2) A description of the process, including raw materials, that generates the industrial byproduct.

(3) Records of the annual volume of industrial byproduct generated.

(4) All records detailing modeling and risk assessments on the industrial byproduct or use of the industrial byproduct.

(5) A sampling plan developed in accordance with SW-846, Chapter Nine as described in rule 3745-500-03 of the Administrative Code, for the industrial byproduct intended for beneficial use.

(6) All laboratory reports of all characterizations of the industrial byproduct.

(7) A statement that authorizes Ohio EPA staff to conduct inspections of the processes that generate industrial byproduct.

(8) A statement that authorizes Ohio EPA staff to collect samples of industrial byproduct.

(9) Records of the direct recipients of industrial byproduct, and the volume of industrial byproduct provided to each recipient.

(10) The following annual certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the requirements contained in Chapters 3734. and 6111. of the Revised Code, and all rules thereunder, was prepared under my direction and supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(B) The certification statement shall be signed by one of the following persons:

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- (1) In the case of a corporation, by a principal executive officer of at least the level of vice president or the principal executive officer's duly authorized representative, if such representative is responsible for the overall operation of the facility.
- (2) In the case of a partnership, by a general partner.
- (3) In the case of a proprietorship, by the proprietor.
- (4) In the case of a municipal, state, federal, or other government facility, by the principal executive officer, the ranking elected official or other duly authorized employee.
- (C) The signature shall constitute personal affirmation that all statements or assertions of fact in the records are true and complete and comply fully with applicable state requirements and shall subject the signatory to liability under section 2921.13 of the Revised Code.
- (D) For a minimum of five years, all records shall be maintained at the generating facility and shall be made available to Ohio EPA upon request.
- (E) Whenever changes in the raw materials or processes of the generator result in the identification of new pollutants, a generator of industrial byproducts which are intended for beneficial use shall submit a report to Ohio EPA. The report shall identify the pollutants. All subsequent characterizations of the industrial byproduct shall include the new pollutants.