CHAPTER 275. LAND APPLICATION OF SEWAGE SLUDGE

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Authority

The provisions of this Chapter 275 issued under section 105(a) of the Solid Waste Management Act (35 P.S. § 6018.105(a)); sections 5(a), 304 and 402 of The Clean Streams Law (35 P.S. §§ 691.5(a), 691.304 and 691.402); and sections 1905-A, 1917-A and 1920-A of The Administrative Code of 1929 (71 P.S. §§ 510-5, 510-17 and 510-20), unless otherwise noted.

Source

The provisions of this Chapter 275 adopted April 8, 1988, effective April 9, 1988, 18 Pa.B. 1681, unless otherwise noted.

Cross References


Subchapter A. [Reserved]

§ 275.1. [Reserved].

Source

Subchapter B. [Reserved]

§§ 275.101 and 275.102. [Reserved].

Source
The provisions of these §§ 275.101 and 275.102 reserved January 24, 1997, effective May 27, 1997, 27 Pa.B. 521. Immediately preceding text appears at serial pages (170618) and (145831).

§ 275.103. [Reserved].

Source

Cross References
This section cited in 25 Pa. Code § 275.222 (relating to annual operation report).

§ 275.104. [Reserved].

Source

Cross References

§§ 275.105—275.107. [Reserved].

Source

Subchapter C. GENERAL OPERATING REQUIREMENTS FOR THE
LAND APPLICATION OF SEWAGE SLUDGE

GENERAL

Sec.
275.201. General provisions.
275.202. Areas where the land application of sewage sludge is prohibited.
275.203. Limitations on land application of sewage sludge.
275.204. Storage of sewage sludge.
275.205. Erosion control.
275.207. Continuing analysis of sludge.
275.208. Permit area markers.

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RECORDKEEPING AND REPORTING

275.221. Daily operational records.
275.222. Annual operation report.

Cross References

GENERAL

§ 275.201. General provisions.

(a) A person or municipality may not land apply sewage sludge unless the person or municipality is operating under a permit for the land application of sewage sludge issued by the Department under this article.

(b) A person or municipality that land applies sewage sludge under a permit issued under this chapter shall comply with the following:

(1) The requirements of the act, this subchapter and the additional operating requirements for the specific type of operation that are in Subchapter D, E or F (relating to additional requirements for agricultural utilization; additional requirements for land reclamation; and additional requirements for surface land disposal).

(2) The plans and specifications in the permit, the terms and conditions of the permit, the environmental protection acts, this title and orders issued by the Department.

(3) The Department’s guidelines for the use of sewage sludge for agricultural utilization or land reclamation, unless the person or municipality is operating under a permit that allows use of the loading rate guidelines for land reclamation or surface land disposal, in which case the person or municipality shall comply with the applicable guidelines for the operation.

Authority
The provisions of this § 275.201 amended under the Solid Waste Management Act (35 P.S. §§ 6018.101—6018.1003); sections 5(b), 304 and 402 of The Clean Streams Law (35 P.S. §§ 691.5(b), 691.304 and 691.402); the Municipal Waste Planning, Recycling and Waste Reduction Act (53 P.S. §§ 4000.101—4000.1904); and sections 1917-A and 1920-A of The Administrative Code of 1929 (71 P.S. §§ 510-17 and 510-20).

Source
§ 275.202. Areas where the land application of sewage sludge is prohibited.

Except for areas permitted by the Department prior to April 9, 1988, the land application of sewage sludge may not be conducted:

1. Within 100 feet of an intermittent or perennial stream.
2. Within 300 feet of a water source, unless otherwise approved by the Department, in writing.
3. Within 1,000 feet upgradient of a surface water source unless otherwise approved by the Department, in writing.
5. Within 50 feet of a property line within which the sludge is applied, unless otherwise approved by the Department, in writing.
6. Within 100 feet of a sinkhole or area draining into a sinkhole.
7. Within 25 feet of the perimeter of an undrained depression.
8. In or within 100 feet of an exceptional value wetland as defined in § 105.17 (relating to wetlands).

Authority


Source


Cross References


§ 275.203. Limitations on land application of sewage sludge.

(a) No sewage sludge may be applied to land where the regional groundwater table is less than 4 feet from the surface.
(b) No sewage sludge may be disposed or applied so as to adversely affect the food chain, cause odors or allow vectors.
(c) Prior to land application, sewage sludge shall be stabilized according to a method approved by the Department.
(d) Sewage sludge may not be applied to land where:
   1. Root vegetables or vegetables which are eaten raw are grown or will be grown within 2 years.
   2. Tobacco is grown or will be grown.
(e) Sewage sludge shall be applied to the soil surface or incorporated in a manner that prevents ponding or standing accumulations of liquid or sludge.

(f) No person or municipality may use spray irrigation equipment to apply sewage sludge unless the person has demonstrated to the Department in the permit application that the equipment will not cause aerosol transport offsite, and the Department has approved the equipment as part of the permit.

(g) Livestock may not be allowed to graze for at least 2 months after the application of sludge.

§ 275.204. Storage of sewage sludge.

No person or municipality may store sewage sludge on the site unless the sewage sludge is:

1. Stabilized.
2. Stored as part of the operator’s permit.
3. Stored in a manner that is consistent with Chapter 285 Subchapter A (relating to storage of municipal waste).

Cross References
This section cited in 25 Pa. Code § 275.221 (relating to daily operational records).

§ 275.205. Erosion control.

(a) The operator shall manage surface water and control erosion and sedimentation to meet the applicable requirements of Chapter 102 (relating to erosion and sediment control).

(b) For land reclamation, rills and gullies shall be filled, graded or otherwise stabilized and the area reseeded or replanted when rills or gullies deeper than 9 inches form in areas where sewage sludge has been applied or stored.

(c) For agricultural utilization and land disposal, rills and gullies shall be filled, graded or otherwise stabilized and, when necessary, the area reseeded or replanted, when rills or gullies deeper than 3 inches form in areas where sewage sludge has been applied or stored.

(d) The Department will require that rills or gullies of lesser size be stabilized and the area reseeded or replanted if the rills or gullies may result in additional erosion, sedimentation or pollution.


(a) The operator may not cause or allow a point or nonpoint source discharge of pollution from or on the facility to surface waters of this Commonwealth.

(b) The facility shall be operated to prevent and control surface and groundwater pollution. An operator shall operate and maintain necessary surface and groundwater treatment facilities until surface or groundwater pollution from or on the facility has been permanently abated.

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(c) The operator may not cause or allow pollution of groundwater within or outside of the site. The operator may not cause or allow a discharge of a contaminant into groundwater except as authorized by a permit from the Department.

§ 275.207. Continuing analysis of sludge.
(a) The operator shall submit to the Department a chemical analysis of the sewage sludge under § 275.104 (Reserved) every 4 months following the first application of sludge, unless the Department approves a different schedule in the permit.
(b) The operator shall perform and submit to the Department additional analyses if there has been a significant change in the quality of sludge.
(c) The Department may modify the approved sludge application rate if there has been a significant change in the quality of sludge.

§ 275.208. Permit area markers.
(a) Permit area markers shall:
   (1) Be posted prior to, and maintained for the duration of, land application operations at the site.
   (2) Be clearly visible, readable and uniform throughout land application operations.
(b) Permit area markers for the land disposal of sewage sludge shall also be permanently fixed and made of a durable material, and shall be maintained through the post closure care period.

RECORDKEEPING AND REPORTING

§ 275.221. Daily operational records.
(a) A person or municipality that disposes of sewage sludge by land application shall make and maintain an operational record for each day that the sludge is applied.
(b) The daily operational record, which shall be recorded on a form supplied by the Department, shall include the following:
   (1) The type, percent solids and weight or volume of the sewage sludge disposed.
   (2) The source from which the sewage sludge originated.
   (3) The transporters of the sewage sludge.
   (4) The particular map location of the area currently being used for land application of sewage sludge, and the areas where sewage sludge was previously applied.
   (5) A record of deviations from the permit.
   (6) General weather conditions during disposal.
   (7) The application rate for sewage sludge.
(8) A record of actions taken to correct violations of the act, the environmental protection acts and this title.

(c) If sewage sludge is being stored at the site, the operator shall maintain, on forms provided by the Department, accurate operational records sufficient to determine whether the waste is being stored in accordance with § 275.204 (relating to storage of sewage sludge).

§ 275.222. Annual operation report.

(a) A person or municipality that applies sewage sludge to land under this chapter shall submit to the Department an annual operation report for each permitted facility on or before March 1 of each year.

(b) The annual operation report, which shall be submitted on a form supplied by the Department, shall include the following:

(1) The weight or volume of each type of sewage sludge received.

(2) The type, percent solids and weight or volume of sewage sludge received from each source from which the waste originated.

(3) A current certificate of insurance, as specified in § 271.374(a) (relating to proof of insurance coverage), evidencing continuous coverage for public liability insurance as required by § 271.371 (relating to insurance requirement).

(4) Changes in ownership of the land where the operation is conducted or a change in a lease agreement for the use of the land that may affect or alter the operator’s rights upon the lands.

(5) The annual groundwater monitoring evaluation if groundwater monitoring is required by the Department.

(6) For agricultural utilization and land disposal facilities which have received sludge in the calendar year, a chemical analysis of soil for each soil series at the facility for pH, phosphorus, cadmium, zinc, copper, nickel, lead, chromium and mercury unless otherwise specified by the Department in the permit. The procedure for soil sampling and analysis shall be consistent with the Department guidelines.

(7) For land disposal of sewage sludge, a written update of the total bond liability for the facility under § 271.331 (relating to bond and trust amount determination). If additional bond is determined to be necessary, it shall be submitted to the Department within 90 days after the annual report is due.

(c) The annual operation report shall also contain a topographic map of the same scale and contour interval as the map required under § 275.103 (Reserved), showing the field boundaries where sewage sludge has been applied.

(d) The annual operation report shall be accompanied by a nonrefundable annual permit administration fee in the form of a check payable to the “Commonwealth of Pennsylvania” for the following amounts:

(1) Two hundred dollars for the agricultural utilization of sewage sludge.
(2) One thousand one hundred dollars for land reclamation and land disposal.

Cross References
This section cited in 25 Pa. Code § 271.411 (relating to when a penalty will be assessed); and 25 Pa. Code § 275.418 (relating to soil analysis).

Subchapter D. ADDITIONAL REQUIREMENTS FOR AGRICULTURAL UTILIZATION

Sec. 275.301. [Reserved].

ADDITIONAL OPERATING REQUIREMENTS

Sec. 275.311. General requirements.
275.312. Site characteristics.
275.313. Application to soil.
275.314. Weather.
275.316. Soil-pore water monitoring.

§ 275.301. [Reserved].

Source

ADDITIONAL OPERATING REQUIREMENTS

§ 275.311. General requirements.
(a) In addition to the requirements of Subchapter C (relating to general operating requirements for the land application of sewage sludge), a person or municipality that applies sewage sludge for agricultural utilization shall comply with this section and §§ 275.312—275.316 (relating to site characteristics; application to soil; weather; water quality monitoring; and soil-pore water monitoring), unless the person or municipality has obtained a permit from the Department for land reclamation or surface land disposal. In that case, the person or municipality shall comply with the applicable provisions of Subchapter E or F (relating to additional requirements for land reclamation; and Reserved).
(b) No person or municipality may apply sewage sludge for agricultural utilization that contains a constituent in such high concentrations that it requires a loading rate which would give the sludge little or no nutrient value in the soil.
No person or municipality may apply sewage sludge to a site unless the site complies with the following:

1. The site has soils that fall within the United States Department of Agriculture textural classes of sandy loam, loam, sandy clay loam, silty clay loam or silt loam, unless otherwise approved by the Department in the permit.

2. The soils have a minimum depth from surface to bedrock of 20 inches.

3. The site has a minimum depth from surface to seasonal high water table of 20 inches. The operator may establish this minimum depth through the use of a tile drain system, if approved by the Department in the permit.

4. Slopes to be utilized for sludge application do not exceed 15%, except as follows:
   (i) Slopes up to 20% may be approved in the permit for the surface application of sludge to well established hayfields, pastures and cover crops, or on no-till crops where the previous no-till crop was harvested in a manner that left adequate residue.
   (ii) Slopes up to 25% may be approved in the permit for the subsurface injection of sludge if the following are met:
      A. The sludge is applied to well established hayfields, pastures and cover crops, or on no-till crops where the previous no-till crop was harvested in a manner that left adequate residue.
      B. The injection unit is capable of uniformly injecting the sludge beneath the surface on the slope to prevent ponding, runoff and other nuisances.

5. Soil pH is 6.5 or greater prior to land application, unless the Department allows the operator to increase pH by application of sludge or other material, in which case soil pH shall be 6.5 or greater within 6 months following the first application of sludge.

6. Except as provided in paragraph (5), soil pH at the site shall be maintained at 6.5 or greater for the life of land application operations and for 2 additional years following the last application of sludge to the site.

7. If the site is planted with nursery crops that require a pH of less than 6.5, the Department may approve a soil pH of 5.8 or greater in the permit.

Notes of Decisions

General Comments

This regulation is not ambiguous. P.A.S.S., Inc. v. Department of Environmental Protection, 1995 EHB 1308.

Cross References

§ 275.313. Application to soil.

(a) Except as provided in subsection (b), sewage sludge that is applied to the surface of soil shall be incorporated into the soil within 24 hours of application.

(b) If the approved operation plan provides for the surface application of sludge for top or side dressing on hayfields, for pastures, for cover crops or for no-till crops when the previous no-till crop was harvested for grain in a manner that left adequate crop residue, the Department may do one of the following:

(1) Approve another time period for incorporating sludge into the soil as part of the permit.

(2) Not require incorporation as part of the permit.

Cross References
This section cited in 25 Pa. Code § 275.311 (relating to general requirements).

§ 275.314. Weather.

(a) No person or municipality may apply sewage sludge when the ground is saturated or covered with snow, or during periods of rain.

(b) No person or municipality may apply sewage sludge when the ground is frozen, unless the Department has approved the application in the permit and the following conditions exist:

(1) The slopes at the site do not exceed 3%.

(2) The site contains sufficient vegetation or a well-established cover crop to prevent runoff of sludge.

(3) Application of sludge is consistent with Department guidelines for winter application.

(4) No sludge storage capacity or other means of storage or disposal exists at the generating facility.

Cross References
This section cited in 25 Pa. Code § 275.311 (relating to general requirements).

§ 275.315. Water quality monitoring.

If required by the Department, the operator shall conduct ground water monitoring that meets the requirements of §§ 275.521—275.528 (Reserved), or another plan for accurately monitoring groundwater that is approved in the permit.

Cross References
This section cited in 25 Pa. Code § 275.311 (relating to general requirements).
§ 275.316. Soil-pore water monitoring.
If required by the Department, the operator shall conduct soil-pore water monitoring that meets the requirements of § 275.515 (Reserved), or another plan for accurately monitoring soil-pore water that is approved in the permit.

Cross References
This section cited in 25 Pa. Code § 275.311 (relating to general requirements).

Subchapter E. ADDITIONAL REQUIREMENTS FOR LAND RECLAMATION
Sec.
275.401. [Reserved].

ADDITIONAL OPERATING REQUIREMENTS

275.411. General requirements.
275.412. Site characteristics.
275.413. Application to soil.
275.414. Weather.
275.415. Revegetation.
275.418. Soil analysis.

Cross References
This subchapter cited in 25 Pa. Code § 275.311 (relating to general requirements).

§ 275.401. [Reserved].

Source

ADDITIONAL OPERATING REQUIREMENTS

§ 275.411. General requirements.
In addition to the requirements of Subchapter C (relating to general operating requirements for the land application of sewage sludge), a person or municipality that has obtained a land reclamation permit for the surface land application of sewage sludge shall comply with this section and §§ 275.412—275.418.

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§ 275.412. Site characteristics.

No person or municipality may apply sewage sludge under a land reclamation permit unless the site complies with the following:

1. Slopes to be utilized for sludge application do not exceed 20%. The Department may approve slopes of up to 35% in the permit if the applicant demonstrates to the Department’s satisfaction that the slopes will not cause erosion or offsite runoff.

2. Soil pH is 6.5 or greater prior to sludge application unless the Department in the permit allows the operator to increase pH by application of sludge or other material. In that case, soil pH shall be 6 or greater at the end of the first year following the initial application of sludge and 6.5 or greater at the end of the second year following the initial application of sludge.

3. Except as provided in paragraph (2), soil pH at the site shall be maintained at 6.5 or greater during the life of application operations and for 2 additional years following final sludge application.

Cross References
This section cited in 25 Pa. Code § 275.411 (relating to general requirements).

§ 275.413. Application to soil.

The operator shall incorporate sewage sludge into the soil within 24 hours following surface application.

Cross References
This section cited in 25 Pa. Code § 275.411 (relating to general requirements).

§ 275.414. Weather.

(a) The operator may not apply sewage sludge:

1. When the ground is saturated, snow covered, frozen or during periods of rain.

2. Between October 15 and April 15.

(b) The Department may approve the storage of sewage sludge between October 15 and May 30 in the permit if the operator makes a satisfactory demonstration under Chapter 285, Subchapter A (relating to storage of municipal waste). The storage may not exceed in amount the sludge necessary to reclaim the permitted area that was prepared for sewage sludge application prior to October 15.

Cross References
This section cited in 25 Pa. Code § 275.411 (relating to general requirements).

§ 275.415. Revegetation.

(a) Vegetation shall be established on land affected by land reclamation.
(b) Revegetation shall provide for an effective and permanent vegetative cover of the same seasonal variety native to the area of land to be affected and capable of self-regeneration and plant succession. Introduced species may be used in the revegetation process if approved by the Department in the revegetation plan. Vegetative cover shall be considered of the same seasonal variety when it consists of a mixture of species that is of equal or superior utility to native vegetation during each season of the year.

(c) Revegetation shall provide a quick germinating, fast-growing vegetative cover capable of stabilizing the soil surface from erosion.

(d) Disturbed areas shall be seeded and planted when weather and planting conditions permit but the seeding and planting of disturbed areas shall be performed no later than the first normal period for favorable planting after final grading and sludge application.

(e) Mulch shall be applied to regraded areas at rates adequate to control erosion, promote germination of seeds and increase the moisture retention of the soil.

(f) The standard for successful revegetation shall be the percent ground cover of the vegetation which exists on undisturbed lands that are nearby or adjacent to the area where land reclamation is proposed. The Department will not approve less than 70% ground cover of permanent plant species. No more than 1% of the area may have less than 30% ground cover. No single or contiguous area exceeding 3,000 square feet may have less than 30% ground cover.

(g) The Department may require a chemical analysis of the vegetation.

(h) Vegetation may not be harvested for 2 years following the application of sewage sludge, unless otherwise approved by the Department.

Cross References
This section cited in 25 Pa. Code § 275.411 (relating to general requirements).

If required by the Department, the operator shall conduct groundwater monitoring that meets the requirements of §§ 275.521—275.528, or another plan for accurately monitoring groundwater that is approved in the permit.

Cross References
This section cited in 25 Pa. Code § 275.411 (relating to general requirements).

If required by the Department, the operator shall conduct soil-pore water monitoring that meets the requirements of § 275.515 (Reserved), or another plan for accurately monitoring soil-pore water that is approved in the permit.

Cross References
This section cited in 25 Pa. Code § 275.411 (relating to general requirements).
§ 275.418. Soil analysis.
If the land to which sewage sludge is applied will be used for agriculture, the operator shall conduct a soil analysis 2 years after the application of sewage sludge to the land. The soil analysis shall be consistent with § 275.222(b)(6) (relating to annual operation report).

Cross References
This section cited in 25 Pa. Code § 275.411 (relating to general requirements).

Subchapter F. [Reserved]

Cross References
This subchapter cited in 25 Pa. Code § 275.311 (relating to general requirements).

§§ 275.501—275.503. [Reserved].

Source

§§ 275.511—275.514. [Reserved].

Source

§ 275.515. [Reserved].

Source

Cross References

§§ 275.516 and 275.517. [Reserved].

Source
§§ 275.521—275.528. [Reserved].

Source


Cross References


§ 275.531. [Reserved].

Source


Subchapter G. [Reserved]

§§ 275.601—275.603. [Reserved].

Source


§§ 275.611—275.614. [Reserved].

Source
