

**TITLE 33
LEGISLATIVE RULE
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF WASTE MANAGEMENT**

**SERIES 2
SEWAGE SLUDGE MANAGEMENT RULE**

§33-2-1. General.

1.1. Scope. -- This legislative rule establishes requirements for the permitting siting, bonding, installation, establishment, construction, modification, and operation of any facility that generates, processes, recycles and/or disposes of sewage sludge by whatever means, including, but not limited to, land application, composting, incineration, mixed waste composting, or any other method of handling sewage sludge within the state. This rule applies to any person who owns or operates a sewage sludge facility or who is responsible for the processing or disposal of sewage sludge.

1.2. Authority. -- W. Va. Code §§22-15-8(e), 22-15-20(b) and 22-15-20(q).

1.3. Filing Date. -- May 12, 2000.

1.4. Effective Date. -- June 12, 2000.

1.5. Incorporation by Reference. -- Whenever federal or state statutes or regulations are incorporated into this rule by reference, the reference is to the statute or regulation in effect on the effective date of this rule.

§33-2-2. Definitions.

The following definitions shall apply to this rule unless otherwise specified herein:

2.1. "Agricultural Land" is land on which a food crop, feed crop, or fiber crop is grown. This includes, but is not limited to, range land and land used as pasture.

2.2. "Agronomic rate" means the whole sewage sludge application rate, by dry weight, designed: (1) To provide the amount of nitrogen needed by the food crop, feed crop, fiber crop, cover crop or vegetation on the land; and (2) To minimize the amount of nitrogen in the sewage sludge that passes below the root zone of the crop or vegetation grown on the land to the ground water.

2.3. "Applicant" means the person applying for a commercial solid waste facility permit or similar renewal permit and any person related to such person by virtue of common ownership, common management or family relationships as the director may specify, including the following: spouses, parents, children and siblings.

2.4. "Approved solid waste facility" means a solid waste facility or practice which has a valid permit under W. Va. Code §22-15-1 et seq.

2.5. "Backhauling" means the practice of using the same container to transport solid waste and to

transport any substance or material used as food by humans, animals raised for human consumption or reusable item which may be refilled with any substance or material used as food by humans.

2.6. "Bulking Agent" means materials mixed or composted with sewage sludge such as yard waste, wood chips, leaves and other living or dead plant tissues approved by the chief as suitable to promote the passage of air through a static pile or windrow.

2.7. "Bulk Sewage Sludge Product" is a material derived from sewage sludge that is sold or given away in quantities exceeding one metric ton.

2.8. "Chief" means the chief of the Office of Waste Management of the Division.

2.9. "Class A facility" means a commercial solid waste facility which handles an aggregate of between ten thousand and thirty thousand tons of solid waste per month. Class A facility includes two or more Class B solid waste landfills owned or operated by the same person in the same county, if the aggregate tons of solid waste handled per month by such landfills exceeds nine thousand nine hundred ninety-nine tons of solid waste per month.

2.10. "Class B facility" means a commercial solid waste facility which receives or is expected to receive an average daily quantity of mixed solid waste equal to or exceeding one hundred tons each working day, or serves or is expected to serve a population equal to or exceeding forty thousand persons, but which does not receive solid waste exceeding an aggregate of ten thousand tons per month. Class B facilities do not include construction/demolition facilities.

2.11. "Commercial composting facility" means any solid waste facility processing solid waste by composting, including sludge composting, organic waste or yard waste composting, but does not include a composting facility owned and operated by a person for the sole purpose of composting waste created by that person or such person and other persons on a cost-sharing or nonprofit basis and shall not include land upon which finished or matured compost is applied for use as a soil amendment or conditioner.

2.12. "Commercial recycler" means any person, corporation or business entity whose operation involves the mechanical separation of materials for the purpose of reselling or recycling at least seventy percent (70%) by weight of the materials coming into the commercial recycling facility.

2.13. "Commercial solid waste facility" means any solid waste facility which accepts solid waste generated by sources other than the owner or operator of the facility and does not include an approved solid waste facility owned and operated by a person for the sole purpose of the disposal, processing, or composting of solid wastes created by that person or such person and other persons on a cost-sharing or nonprofit basis and shall not include land upon which reused or recycled materials are legitimately applied for structural fill, road base, mine reclamation and similar applications.

2.14. "Compost" means a humus like material resulting from aerobic, microbial, thermophilic decomposition of organic materials.

2.15. "Composting" means the aerobic, thermophilic decomposition of natural constituents of solid waste to produce a stable, humus-like material.

2.16. "Cured compost" or "finished compost" means compost which has a very low microbial or decomposition rate which will not reheat or cause odors when put into storage and that has been put

through a separate aerated curing cycle stage of thirty to sixty days after the initial composting cycle or compost which meets all regulatory requirements after the initial composting cycle.

2.17. "Curing area" means an area where organic material that has undergone the rapid initial stage of decomposition is further stabilized into a humus-like material.

2.18. "Director" means the director of the division of environmental protection or such person to whom the director has delegated authority or duties pursuant to Chapter 22, Article 1 of the W. Va. Code.

2.19. "Distributor" is a person who prepares the product for distribution and marketing and is responsible for distributing and marketing the product.

2.20. "Division" means the Division of Environmental Protection.

2.21. "Domestic septage" means either liquid or solid material (septage) removed from a septic tank, cesspool, portable toilet, Type III marine sanitation device, or similar treatment works that receives only domestic sewage. Domestic septage does not include liquid or solid material removed from a septic tank, cesspool, or similar treatment works that receives either commercial wastewater or industrial wastewater and does not include grease removed from a grease trap at a restaurant.

2.22. "Energy recovery incinerator" means any solid waste facility at which solid waste is incinerated with the intention of using the resulting energy for the generation of steam, electricity or any other use not specified herein.

2.23. "Exceptional Quality Compost" means compost resulting from sewage sludge, which compost meets the Table 1 metal limits of this rule and which has been treated to achieve Class A pathogen reduction requirements in accordance with 40 CFR 503.32(a) and one of the vector attraction requirements in 40 CFR 503.33(b)(1) through (b)(8).

2.24. "Incineration technologies" means any technology that uses controlled flame combustion to thermally break down solid waste, including refuse-derived fuel, to an ash residue that contains little or no combustible materials, regardless of whether the purpose is processing, disposal, electric or steam generation or any other method by which solid waste is incinerated.

2.25. "Incinerator" means an enclosed device using controlled flame combustion to thermally break down solid waste, including refuse-derived fuel, to an ash residue that contains little or no combustible materials.

2.26. "Land Application Site" means the location where sewage sludge is sprayed or spread onto the land surface; injected below the land surface; or incorporated into the soil so that the sewage sludge can either condition the soil or fertilize the crops or vegetation grown in the soil.

2.27. "Landfill" means any solid waste facility for the disposal of solid waste on or in the land for the purpose of permanent disposal. Such facility is situated, for purposes of W. Va. Code §22-15-1 et seq., in the county where the majority of the spatial area of such facility is located.

2.28. "Materials recovery facility" means any solid waste facility at which source-separated materials or materials recovered through a mixed waste processing facility are manually or mechanically shredded or separated for purposes of reuse and recycling, but does not include a composting facility.

2.29. "Mature compost" means compost which has been produced in an aerobic, microbial, thermophylic manner and which does not exhibit toxic effects to plant species.

2.30. "Mixed solid waste" means solid waste from which materials sought to be reused or recycled have not been source-separated from general solid waste.

2.31. "Mixed waste processing facility" means any solid waste facility at which materials are recovered from mixed solid waste through manual or mechanical means for purposes of reuse, recycling or composting.

2.32. "Municipal solid waste incineration" means the burning of any solid waste collected by any municipal or residential solid waste disposal company.

2.33. "Odor" means a sensation resulting from the stimulation of the human sense of smell.

2.34. "Open dump" means any solid waste disposal which does not have a permit under W. Va. Code §22-15-1 et seq., or is in violation of state law, or where solid waste is disposed in a manner that does not protect the environment.

2.35. "Other Container" is either an open or closed receptacle. This includes, but is not limited to, a bucket, box, carton, and vehicle or trailer with a load capacity of one metric ton or less.

2.36. "Person" or "persons" mean any industrial user, public or private corporation, institution, association, firm or company organized or existing under the laws of this or any other state or country; state of West Virginia; governmental agency, including federal facilities; political subdivision; county commission; municipal corporation; industry; sanitary district; public service district; drainage district; soil conservation district; watershed improvement district; partnership trust; estate; person or individual; group of persons or individuals acting individually or as a group; or any legal entity whatever.

2.37. "Producer" means any person producing sewage sludge at a publicly owned treatment works (POTW).

2.38. "Publicly owned treatment works" or "POTW" means any treatment works owned by the state or any political subdivision thereof, any municipality or any other public entity which processes raw domestic, industrial, or municipal sewage by artificial or natural processes in order to remove or so alter constituents as to render the waste less offensive or dangerous to the public health, comfort or property of any of the inhabitants of this state, before the discharge of the plant effluent into any waters of this state, and which produces sewage sludge.

2.39. "Recycling facility" means any solid waste facility for the purpose of recycling at which neither land disposal nor biological, chemical or thermal transformation of solid waste occurs: Provided, That mixed waste recovery facilities, sludge processing facilities and composting facilities are not considered recycling facilities nor considered to be reusing or recycling solid waste within the meaning of W. Va. Code §22C-4-1 et seq. and 20-11-1 et seq.

2.40. "Representative sample" means a sample collected from a population or whole that exhibits the average or typical properties of the larger population or whole.

2.41. "Sewage sludge" means solid, semi-solid or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage,

scum or solids removed in primary, secondary or advanced wastewater treatment processes and a material derived from sewage sludge. "Sewage sludge" does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator.

2.42. "Sewage sludge processing facility" is a solid waste facility that processes sewage sludge for land application, incineration or disposal at an approved landfill. Such processes include, but are not limited to, composting, lime stabilization, thermophilic digestion and anaerobic digestion.

2.43. "Sludge" means any solid, semisolid, residue or precipitate, separated from or created by a municipal, commercial or industrial waste treatment plant, water supply treatment plant or air pollution control facility or any other such waste having similar origin.

2.44. "Solid waste" means any garbage, paper, litter, refuse, cans, bottles, waste processed for the express purpose of incineration; sludge from a waste treatment plant, water supply treatment plant or air pollution control facility; and other discarded materials, including offensive or unsightly matter, solid, liquid, semisolid or contained liquid or gaseous material resulting from industrial, commercial, mining or community activities but does not include solid or dissolved material in sewage or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources and have permits under W. Va. Code §22-11-1 et seq., or source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954, as amended, including any nuclear or by-product material considered by federal standards to be below regulatory concern, or a hazardous waste either identified or listed under W. Va. Code §22-18-1 et seq., or refuse, slurry, overburden or other wastes or material resulting from coal-fired electric power or steam generation, the exploration, development, production, storage and recovery of coal, oil, and gas and other mineral resources placed or disposed of at a facility which is regulated under W. Va. Code §§22-2-1 et seq., 22-3-1 et seq., 22-4-1 et seq., 22-6-1 et seq., 22-7-1 et seq., 22-8-1 et seq., 22-9-1 et seq. or 22-10-1-1 et seq., so long as such placement or disposal is in conformance with a permit issued pursuant to such chapters.

2.45. "Solid waste disposal" means the practice of disposing of solid waste including placing, depositing, dumping or throwing or causing to be placed, deposited, dumped or thrown any solid waste.

2.46. "Solid waste facility" means any system, facility, land, contiguous land, improvements on the land, structures or other appurtenances or methods used for processing, recycling or disposing of solid waste, including landfills, transfer stations, materials recovery facilities, mixed waste processing facilities, sewage sludge processing facilities, commercial composting facilities and other such facilities not herein specified but not including land upon which sewage sludge is applied in accordance with W. Va. Code §22-15-20. Such facility shall be deemed to be situated, for purposes of this rule, in the county where the majority of the spatial area of such facility is located: Provided, That a salvage yard licensed and regulated pursuant to the terms of W. Va. Code §17-23-et seq., is not a solid waste facility.

2.47. "Solid waste facility operator" means any person or persons possessing or exercising operational, managerial or financial control over a commercial solid waste facility, whether or not such person holds a certificate of convenience and necessity or a permit for such a facility.

2.48. "Source separated materials" means materials separated from general solid waste at the point of origin for the purpose of reuse and recycling but does not mean sewage sludge.

2.49. "Source separated organic waste" means readily degradable organic material such as food waste, yard waste and wood waste, except pressure-treated wood waste, which is collected separately

from the mixed solid waste stream. It does not include sewage sludge or domestic septage.

2.50. "Stabilization" means the decomposition of organic material to the point where it neither reheats when wetted nor gives off offensive odors and does not include pathogens, toxins or vectors in excess of Federal regulations 40CFR503.

§33-2-3. Standards for Use, Disposal and Processing of Sewage Sludge.

3.1. Incorporation of Federal Regulations. -- Federal regulations 40CFR503, excluding sections 503.10(b)(1) and 503.20 through 503.29 inclusive, in effect on the effective date this rule, are hereby fully incorporated and implemented as a part of this rule promulgated under the authority of W. Va. Code §22-15-20. Provided, That in instances where similar provisions exist, the more stringent requirements (state or federal) shall apply.

3.2. Sewage Sludge Land Application Siting Restrictions and Location Standards.

3.2.a. Except as provided in subsection 3.2.b of this rule, sewage sludge shall not be applied to land that meets any of the following conditions:

3.2.a.1. Land that is frozen, snow-covered, or known to be flooded on a regular basis unless the applicant can demonstrate to the director that the land application will not cause runoff into streams or wetlands.

3.2.a.2. Land within fifty (50) feet of surface water to include streams, springs, ponds, wetlands, or other collection points for surface water.

3.2.a.3. Land within two hundred (200) feet of drinking water supply wells or other personal water supply.

3.2.a.4. Land within two hundred (200) feet of an occupied dwelling.

3.2.a.5. Land within fifty (50) feet of a federal or state highway.

3.2.a.6. Land within one hundred (100) feet of an adjacent property owner's property line.

3.2.a.7. Land from which drainage leads into a sinkhole.

3.2.a.8. Land that has been tested and determined to have a pH of less than 6.2, unless the pH is adjusted to 6.2 or greater.

3.2.a.9. Land that has a slope greater than 15%.

3.2.a.10. Land that has a seasonal high groundwater table less than 2 feet from the surface.

3.2.a.11. Land that has less than 6 inches of soil over bedrock or an impervious pan.

3.2.a.12. Land containing soil with surface permeability of less than 0.6 inches/hour or greater than 6 inches/hour.

3.2.a.13. Other land determined by the director to be unsuitable for application of sewage

sludge.

3.2.a.14. The prohibitions of 3.2.a.4, 5, 6, 8, 9, 11 and 12 may be waived by the Division in any land application permit for exceptional quality compost upon a showing by the applicant that the application of exceptional quality compost will not cause significant environmental impact. The applicant shall include in writing the justification for such request in its application for a land application permit.

3.2.b. Sewage sludge products which meet the Table 1 metals limits of this rule, and which have been treated to achieve Class A pathogen reduction requirements in accordance with 40 CFR 503.32(a) and one of the vector attraction reduction requirements in 40 CFR 503.33(b)1 through (b)8, and which are sold or given away in a bag or other container and exceptional quality compost which is land applied in accordance with 4.1.c.3 of this rule, are not subject to the requirements of 3.2.a.1 through 3.2.a.12 of this rule, except that these sewage sludge products shall not be applied to land that meets the any of the following conditions:

3.2.b.1. Land within 50 feet of any surface water, or surface water collection point.

3.2.b.2. Land with a slope greater than 15%.

3.2.b.3. Land from which drainage leads to a sinkhole.

3.2.c. No person or entity shall be allowed to apply sewage sludge to land in a manner that will result in exceeding the maximum soil concentration for arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, or zinc, as listed in Table 3 of this rule and the soil testing requirements of this rule. The director is authorized to issue variances to this subdivision to allow land application to soils where the background levels of metals in the soil exceed the maximum soil concentrations of metals listed in Table 3: Provided, that the sewage sludge analyses, soil analyses, and pollutant loss rates from erosion, leaching, and volatilization demonstrate that the land application of the sewage sludge, at a loading rate prescribed by the director, will not cause additional net accumulation of any metal in the soil already exceeding the maximum soil concentration listed in Table 3. Any such variance issued by the director shall contain a requirement to annually monitor the soil concentration of each metal exceeding the Table 3 limit for as long as the site is utilized for the land application of sewage sludge or sewage sludge products.

3.2.c.1. Analytical methods in SW-846 shall be used to analyze all soil metals samples required by this rule.

3.2.c.2. The director shall assign an individual and lifetime loading rate for each land application site for which a permit is required pursuant to 4.1.c of this rule by considering background soil concentrations and maximum allowable pollutant concentrations as per Table 1 and per Table 3 of this rule. New soil analyses for those metals listed in Table 3 shall be required at each land application site whenever the site has received for land application fifty percent of the assigned lifetime loading rate.

3.2.c.3. If circumstances at sewage sludge processing facilities result in short term excursions of Table 1 criteria, written notification must be given to the Chief of the Office of Water Resources within five days of the determination of any such excursions. A written plan to identify and correct the problem must be submitted for the facility within sixty days. The director may develop temporary loading rates, for a period not to exceed one year, based on the provisional limitations of Table 2 of this rule and on results from monthly sewage sludge and wastewater samples taken at the facility.

3.2.d. No person shall be allowed to land apply so much sewage sludge as to exceed the agronomic rate for that land or a rate of fifteen dry tons per acre per year, whichever is less: Provided, That up to twenty-five dry tons per acre per year may be applied in the reclamation of surface mine land.

3.2.e. No person shall be allowed to store sewage sludge at a land application site for a period longer than one week; except storage shall be allowed for no longer than three months where provisions, approved by the chief of the Office of Water Resources of the Division, have been made to prevent leachate runoff into surface or groundwater. Septage storage shall only be allowed in-tank and for no more than three days, or as otherwise authorized by the chief of the Office of Water Resources of the Division.

3.2.f. No person shall be allowed to land apply sludge except during the hours of daylight.

3.2.g. Exceptional quality compost may be stored at a distributor's property that is not a land application site or sewage sludge processing facility for a period of up to three months. Upon written request by the distributor and with the approval of the Division, the exceptional quality compost may be stored on the distributor's property for an additional three months. These time limitations for storage do not apply to exceptional quality compost contained in a bag or other container which is closed, and are in addition to and shall not affect the time limitations for storage in 3.2.e and 3.3.a.1 of this rule.

3.3. Sewage Sludge Processing Facility Operational and Design Requirements.

3.3.a. Sewage sludge processing facilities must adhere to the following requirements:

3.3.a.1. Areas used for processing, curing and storage of raw materials, intermediate and final products, loading and unloading areas, impoundments, pipelines, ditches, pumps and drums, sumps and tanks, must be designed, constructed and operated to prevent release of contaminants to the groundwater and surface water. Storage of finished products from the facility shall be limited to one year.

3.3.a.2. The facility must be designed and operated to control vectors and odors.

3.3.a.3. The facility must not be operated or constructed within the one hundred year flood plain unless provisions have been made to prevent the encroachment of flood waters upon the facility.

3.3.a.4. All land areas within the boundaries of a sewage sludge processing facility upon which sewage sludge, intermediate or final products come in direct contact with the land surface must be protected in accordance with the Groundwater Protection Act, W. Va. Code §22-12-1 et seq., and the rules promulgated thereunder, including 46CSR12, 46CSR58, and 46CSR59.

3.3.b. Any person operating a sewage sludge processing facility shall conduct off-site odor monitoring. The frequency of odor monitoring shall be quarterly or as otherwise specified by the director. The Barnebey-Cheney scentometer or other instrument, device or technique designated by the director may be used as a guide in the enforcement of this rule and may be used in the determination of the objectionability of an odor.

3.3.b.1. When an odor is determined to be objectionable and repetitious by the director, the director may require the facility to conduct related studies within a specified time period. These studies may include, but are not limited to, sampling and analysis to identify the specific chemical compound(s) which are causing the objectionable odor, analysis of samples by odor panels, air dispersion modeling

studies, and evaluation of applicable odor control devices and odor control programs.

3.4. Leachate Management Requirements.

3.4.a. Any liquid which comes in contact with sewage sludge at a sewage sludge processing facility must be handled as leachate and is subject to the requirements of W. Va. Code §22-11 and 12, and the rules promulgated thereunder.

3.5. Storm Water Requirements.

3.5.a. Storm water drainage must be directed around and away from the operating area. All storm water must be collected and discharged in compliance with State Water Quality Standards and the permit issued by the Office of Water Resources of the Division.

3.6. Landfill Disposal of Sewage Sludge.

3.6.a. Sewage sludge disposed in a landfill shall contain at least twenty percent (20%) solids by weight. This requirement may be met by adding or blending sand, sawdust, lime, soil, or other materials that have been approved by the director prior to disposal. Alternative sludge disposal methods can be utilized upon obtaining prior written approval from the chief.

3.6.b. Sewage sludge may not represent more than twenty-five percent (25%) by weight of the total weight of waste disposed of at the landfill on any working day.

3.6.c. No facility may accept for landfilling in any month sewage sludge in excess of twenty-five percent (25%) of the total tons of solid waste accepted at the facility for landfilling in the preceding month.

3.6.d. Sewage sludge shall not be used as daily cover by a landfill.

3.7. Exceptional Quality Compost. -- No person shall sell or give away exceptional quality compost in quantities exceeding one metric ton unless the following requirements are met.

3.7.a. Any person who composts sewage sludge shall notify the Division in writing of their intent to distribute exceptional quality compost in quantities exceeding one metric ton at least 30 days prior to the initial distribution in this state.

3.7.b. Any person who composts sewage sludge shall maintain distribution records for exceptional quality compost, including the name and address of each person receiving bulk quantities of exceptional quality compost in excess of one metric ton; the quantity of exceptional quality compost received by each person; and the results of all tests conducted as part of their monitoring program.

3.7.c. The information required under Subdivision 3.7.b of this rule shall be reported to the Division on a monthly basis.

3.7.d. The person who composts sewage sludge shall prepare a written certification that he has complied with the requirements of 3.7.a, 3.7.b, and 3.7.c of this rule and shall provide such certification to any person to whom he distributes exceptional quality compost in quantities exceeding one metric ton and to the division in the monthly report required by subdivision 3.7.c.

3.7.e. No person shall land apply or further distribute exceptional quality compost in quantities exceeding one metric ton unless a certification has been issued in accordance with 3.7.d herein.

3.7.f. Exceptional quality compost sold or given away in a bag or other container shall not be subject to the requirements of this subsection 3.7.

§33-2-4. Permits Required.

4.1. Applicability.

4.1.a. No person may construct or operate a sewage sludge processing facility (including mixed waste composting facilities which utilize sewage sludge) or a commercial solid waste facility which processes or handles sewage sludge or materials derived from sewage sludge without first obtaining a solid waste facility permit.

4.1.b. On and after the effective date of this rule, all permitted facilities shall submit an application to modify such permit.

4.1.c. Except as provided in 4.1.c.1, 4.1.c.2 and 4.1.c.3 of this rule, no person may land apply sewage sludge without first obtaining a land application permit: Provided, That land application permit requirements may be incorporated into a modification of a facility's WV/NPDES permit required under W Va. Code §22-11-1 et seq.

4.1.c.1. A land application permit is not required for sewage sludge products which meet the Table 1 metals limits of this rule, and which have been treated to achieve Class A pathogen reduction requirements in accordance with 40 CFR 503.32(a) and one of the vector attraction reduction requirements in 40 CFR 503.33(b)1 through (b)8, and which are sold or given away in a bag or other container;

4.1.c.2. Any person who land applies bulk sewage sludge products which meet the Table 1 metals limits of this rule, and which have been treated to achieve Class A pathogen reduction requirements in accordance with 40 CFR 503.32(a) and one of the vector attraction reduction requirements in 40 CFR 503.33(b)1 through (b)8, is not required to obtain a land application permit for sites where such products are applied on agricultural land less than two acres in size and the annual quantity of sludge product applied to that site does not exceed two dry tons per acre, except that those products derived from domestic septage shall not be exempt from permitting requirements. This exemption from permitting does not apply to multiple sites on the same parcel of land, and does not exempt sewage sludge processing facilities from any other permitting or reporting requirements of this rule or of the Sewage Sludge Management Act, W. Va. Code §22-15-20.

4.1.c.3. Any person who land applies exceptional quality compost is not required to obtain a land application permit for sites where such compost is applied on land two acres or less in size and the quantity of exceptional quality compost applied to that site does not exceed the agronomic rate for the land or a rate of fifteen dry tons per acre, whichever is less. This exemption from permitting does not apply to multiple sites on the same parcel of land and does not exempt sewage sludge processing facilities from any other permitting or reporting requirements of this rule or of the Sewage Sludge Management Act, W. Va. Code §22-15-20.

4.1.c.4. The Division may on a site-by-site basis prohibit the land application of exceptional

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quality compost in bulk quantities in excess of one metric ton without a permit, when such land application results in a nuisance, causes objectionable odors or otherwise may cause harm to the environment. Under such circumstances, the Division may require the person to apply for a land application permit in accordance with subdivision 4.2.c of this rule, and take such other actions deemed necessary to address the problems created at the land application site.

4.1.d. For those publicly owned treatment works (POTW's) or privately owned treatment works which produce sewage sludge and are regulated by the Division pursuant to a water pollution control permit, including a West Virginia national pollutant discharge elimination system WV/NPDES permit required under W. Va. Code §22-11-1 et seq., a sewage sludge processing facility modification will be obtained by the applicant as a part of the existing WV/NPDES permit and shall include a sewage sludge management plan approved by the director. Upon approval by the director, POTWs may accept sewage sludge from other publicly or privately owned treatment works on a cost-sharing or non-profit basis under its WV/NPDES permit without being considered a commercial solid waste facility.

4.1.e. Facilities which are surface disposal sites as defined in 40CFR503, Subpart C, are hereby defined as "landfills" and must meet all requirements of 33CSR1 applicable to landfills.

4.1.f. Permits issued under subdivision 4.1.a of this rule, shall be subject to the provisions of 33CSR1, section 3 (excluding the provisions for liner requirements) and the closure requirements of 33CSR1, section 6.

4.1.g. Permits issued under subdivision 4.1.d. of this rule, shall be subject to the permit issuance procedures, procedures for permit modifications, suspension and revocation, procedures for transfer of permits, and the procedures for permit appeals of 47CSR10 but are not subject to the procedures outlined in subdivisions 4.1.e, 4.1.f and 4.1.h of this rule.

4.1.h. Permits issued under subdivision 4.1.e of this rule, shall be subject to the procedures of 33CSR1 section 3 and the closure requirements of 33CSR1 section 6.

4.1.i. Permits issued under subdivision 4.1.c of this rule except for land application modifications made in WV/NPDES permits under subdivision 4.1.d of this rule shall be subject to the permit issuance procedures (subsections 3.17 through 3.29 inclusive) of 33CSR1 and are not subject to the procedures outlined in subdivisions 4.1.e, 4.1.f and 4.1.g of this rule.

4.2. General, Processing Facility, and Land Application Permit Application Requirements. -- Persons required to obtain a permit pursuant to this rule must provide the following information, in the form and manner prescribed by the chief of the Office of Waste Management or the Office of Water Resources of the Division as appropriate. The form may require information in addition to that required by this subsection.

4.2.a. Permit Application General Requirements. -- All applicants must provide the following information:

4.2.a.1. The name, address, and location of the facility;

4.2.a.2. A description of the activities conducted or to be conducted by the applicant;

4.2.a.3. The operator's and owner's name, address, telephone number, ownership status, and status as a federal, state, private, public or other entity;

- 4.2.a.4. Other environmental permits issued by any local, state or federal agency;
 - 4.2.a.5. A description of the specific source(s) of sewage sludge;
 - 4.2.a.6. The amount of sewage sludge actually generated, processed, land applied, or disposed;
 - 4.2.a.7. The content of heavy metals, pathogens, toxins or vectors and moisture (percent solids) present in the sewage sludge;
 - 4.2.a.8. Each location that the sewage sludge is stored, land applied or otherwise disposed of; the amount so stored, land applied or otherwise disposed of; and the capacity of that location to accept sewage sludge;
 - 4.2.a.9. Information relative to the quality of the sewage sludge(s) or product(s) derived from sewage sludge as required by 40CFR503, and
 - 4.2.a.10. A detailed design and a description of the method used to collect and control leachate and surface water runoff, including the method for treatment and disposal of leachate generated.
- 4.2.b. Sewage Sludge Processing Facility Permit Application Requirements. -- All applicants for permits for sewage sludge processing facilities, except facilities located at the site where sewage sludge is generated, must submit the following additional information:
- 4.2.b.1. An engineering report to construct a sewage sludge processing facility must contain, at a minimum, the following:
 - 4.2.b.1.A. A regional map, or maps, (of appropriate scale) that delineate the entire service area of the proposed facility; existing and proposed collection, processing, and disposal operations; the location of the closest population centers; and the transportation systems including highways, airports, railways and waterways;
 - 4.2.b.1.B. A vicinity map (minimum scale of 1"=2000') that delineates the area within one mile of the facility boundaries, zoning and land use, residences, potable water supplies, surface waters, access roads, bridges, railroads, airports, historic sites, and other existing and proposed man-made or natural features relating to the project;
 - 4.2.b.1.C. A site plan (minimum scale of 1"=200' with five foot contour intervals) that delineates property boundaries, the location of existing and proposed soil boring, monitoring wells, buildings and appurtenances, fences, gates, roads, parking areas, drainage, culverts, storage facilities or areas, loading areas; existing and proposed elevation contours and direction of prevailing winds; and the location of residences, potable wells, surface water bodies, and drainage swales located within the site and in the site plan area; and
 - 4.2.b.1.D. A map indicating wetlands and flood plains within 1,000 feet of the site, if any.
 - 4.2.b.2. A description of the operation of the facility, detailed engineering plans and specifications for the entire facility, must be submitted by the applicant including at a minimum:

4.2.b.2.A. A schedule of operation, including the days and hours that the facility will be open, preparations before opening, and procedures followed after closing for the day;

4.2.b.2.B. Anticipated daily traffic flow to and from the facility, including the number of trips by private or public collection vehicles, and the quantity of material contained in each vehicle;

4.2.b.2.C. The procedure for unloading trucks (including frequency, rate, and method);

4.2.b.2.D. Special precautions or procedures for operation during wind, heavy rain, snow, and freezing conditions;

4.2.b.2.E. A description of the ultimate use for the finished compost or other product, a marketing plan for the finished compost, method for removal from the site, and a plan for use or disposal of those finished products that cannot be used in the expected manner due to poor quality or change in market conditions;

4.2.b.2.F. A (description) copy of the label or other information source, by the distributor, that outlines the type of waste the compost product was derived from, a list of any restrictions on use, and recommended safe uses and application rates;

4.2.b.2.G. Identification of the personnel required to operate and maintain the facility and their job descriptions/responsibilities;

4.2.b.2.H. A detailed description of the source, and anticipated quality, and quantity of any bulking agent to be used in the process; and

4.2.b.2.I. A detailed description of the quantity, quality and specific source of the sewage sludge received or anticipated to be received.

4.2.b.3. The permit application must contain an operating engineering report which must include, at a minimum, the following:

4.2.b.3.A. Detailed engineering plans and specifications for the entire sewage sludge processing facility, including manufacturer's performance data for the selected equipment;

4.2.b.3.B. Contingency plans detailing corrective (or remedial) action to be taken in the event of equipment breakdown; air pollution (odors); unacceptable waste delivered to the facility; groundwater contamination; spills; and undesirable conditions such as fires, dust, noise, vectors, lack of a market for the compost product and unusual traffic conditions; and

4.2.b.3.C. An Operation and Maintenance Manual. -- The manual must contain general design information, detailed operational information and instructions. In addition, the manual must list the specific procedures used or to be used in monitoring, sampling and analyzing sewage sludge and the finished product, and record keeping requirements.

4.2.b.4. A description of the design of the facility, including:

4.2.b.4.A. The type, size, and associated detention times of equipment used in the handling, processing, and storage of sewage sludge;

4.2.b.4.B. The method of measuring, shredding, mixing, and proportioning input materials;

4.2.b.4.C. A description and sizing of the storage facilities for amendment, bulking agent, and finished product;

4.2.b.4.D. The separation, processing, storage, and ultimate disposal of materials that cannot be composted, if applicable;

4.2.b.4.E. The location of all temperature and any other type of monitoring points, and the frequency of monitoring;

4.2.b.4.F. A process flow diagram of the entire process, including all major equipment and flow streams. The flow streams must indicate the quantity of material on a wet weight, dry weight, and volumetric basis;

4.2.b.4.G. The aeration capacity of the system;

4.2.b.4.H. The method of supplying and regulating airflow;

4.2.b.4.I. The expected mass balance through the composting system;

4.2.b.4.J. A description of how the (temperature) monitoring equipment will ensure that facility qualifies as a process to further reduce pathogens, toxins, heavy metals and/or vectors; and

4.2.b.4.K. A description of the air emission collection and control technologies.

4.2.b.5. A description of existing and potential land-use of the area within one mile of the facility.

4.2.b.6. A certified copy of any municipal or county zoning restrictions, if applicable.

4.2.c. Land Application Permit Application Requirement. -- Persons performing land application of sewage sludge or materials derived from sewage sludge must submit the following information to the chief of the Office of Water Resources of the Division in addition to that required under subdivision 4.2.a. of this rule:

4.2.c.1. Soil analysis for all land application sites including but not limited to pH, potassium, phosphorus, nitrogen, all metals listed in Table 1 of this rule and any additional chemical analysis required by the director;

4.2.c.2. Information relative to the nitrogen content of the sludge(s) or product(s) derived from sewage sludge to be land applied;

4.2.c.3. A soils map with application sites clearly defined;

4.2.c.4. An agreement between the preparer of sewage sludge(s) or material(s) derived from sewage sludge, the applier, and the owner of the land application site indicating each party's concurrence with the application, and certifying that each will comply with applicable requirements of 40CFR503. and

this rule;

4.2.c.5. A description of existing and future uses of the land application site;

4.2.c.6. Information relative to past application(s) of sewage sludge or material(s) derived from sewage sludge as necessary to comply with section 40CFR503.12 and this rule;

4.2.c.7. Information relative to past fertilizer applications to the site;

4.2.c.8. In addition to the chemical analyses required in subdivision 4.2.a of this rule, any additional chemical analyses of sewage sludge(s) or material(s) derived from sewage sludge, requested by the chief of the Office of Water Resources of the Division, including, but not limited to sodium, chloride, fluoride, calcium and sulfates;

4.2.c.9. A description of the methods to be used for land application;

4.2.c.10. A description of the methods for transportation of sludge to the site;

4.2.c.11. A copy of the NPDES permit for the POTW from which the sludge or material originated;

4.2.c.12. Information relative to the significant industrial users of the POTW from which the sludge or material originated;

4.2.c.13. A description of the methods by which pathogen control and vector attraction reduction are being achieved; and

4.2.c.14. A description of the methods to be utilized to adjust and maintain the soil to a minimum pH of 6.2 for at least 5 years from the date of application.

§33-2-5. General, Processing Facility, and Land Application Permit Requirements.

5.1. Permit General Requirements. -- All permits issued pursuant to this rule shall contain the following:

5.1.a. Any requirement of 40CFR503, including but not limited to:

5.1.a.1. Limitations on the concentrations of pollutants (heavy metals), toxins, vectors and pathogens in the sewage sludge or sewage sludge products;

5.1.a.2. Requirements relative to monitoring sewage sludge and sewage sludge product quality and reporting the results of those analyses for pH, percent solids, organic nitrogen, potassium, phosphorus, calcium, magnesium, total nitrogen, ammonia nitrogen, pathogen test results, vector attraction verification; and all heavy metals listed in Table 1 of this rule except that the frequency of monitoring shall be as described in Appendix A of this rule; except that permits issued for land application of domestic septage shall contain requirements to monitor the soil at the land application sites in lieu of sampling individual domestic septic tank systems. Such permits for domestic septage shall contain a provision requiring a manifest listing each source of domestic septage and certifying that the domestic septage contains no industrial or commercial waste products;

5.1.a.3. Requirements relative to reporting and certification;

5.1.a.4. Requirement to pay fees as identified in section 6 of this rule;

5.1.a.5. Requirements for the proper collection, control and disposal of leachate and stormwater runoff for the protection of groundwater, surface waters, and potable waters in the area;

5.1.a.6. Requirements to retain records for the facility for a minimum of five years;

5.1.a.7. Requirements to monitor and report monthly to the Division the specific source and quantity of sewage sludge generated, treated, stored, processed, composted, disposed, or placed;

5.1.a.8. Requirements not to exceed a commercial solid waste facility's tonnage limits, where applicable;

5.1.a.9. Requirements to provide copies of monthly reports to the county or regional solid waste authority in which the facility or land application site(s) is located;

5.1.a.10. Any other requirements, including additional monitoring, determined to be necessary by the director to insure compliance with state and federal regulations;

5.2. Processing Facility Permit Requirements. -- In addition to the requirements of subsection 5.1. of this rule, any solid waste facility permit issued to a sewage sludge processing facility, pursuant to this rule, must contain the following:

5.2.a. Operational requirements relative to pathogen control in accordance with 40CFR503.32. and its Appendix B;

5.2.b. Operational requirements relative to vector attraction reduction in accordance with 40CFR503.33;

5.2.c. Requirements to routinely monitor and report information relative to the quality of raw materials used in the sewage sludge processing facility including but not limited to: sewage sludge, bulking agents, and kiln dust; except that the frequency of monitoring shall be as described in Appendix A of this rule;

5.2.d. Limitations for the pollutant concentrations of the end product of the sewage sludge processing facility;

5.2.e. Labeling requirements as per 40CFR503.14.e, if applicable, and subsection 3.2.b of this rule;

5.2.f. Requirements for the implementation of practices to prevent the contamination of ground and surface waters, including liners if necessary;

5.2.g. For commercial sewage sludge processing facilities, requirements for reporting in accordance with 33CSR1 subsection 4.12.; and

5.2.h. Requirements for the implementation of practices to protect air quality in and around the

facility.

5.3. Land Application Permit Requirements. -- In addition to the requirements of subsection 5.1 of this rule, any land application permit issued pursuant to this rule shall contain the following:

5.3.a. Requirements delineating the sites for which land application is approved;

5.3.b. Limitations on the maximum amount of sewage sludge allowed to be land applied;

5.3.c. Requirements implementing the siting restrictions and location standards of subsection 3.2 of this rule;

5.3.d. Requirements limiting the types of crops that may be grown on land used for application of sewage sludge and the time between application of sewage sludge and the harvesting of crops, in accordance with 40CFR503.32.(b);

5.3.e. Restrictions on animal grazing and public access, in accordance with 40CFR503.32.(b);

5.3.f. Applicable vector attraction reduction requirements of 40CFR503.33; and

5.3.g. Applicable pathogen reduction requirements of 40CFR503.32 and its Appendix B; except that domestic septage shall be held at or above a pH of 12.0 for a period of at least two hours before being applied to land at any location.

§33-2-6. Fee and Bonding Requirements.

6.1. Applicability. -- Any producer, processor, or transporter of sewage sludge for land application shall be subject to non-refundable fees, as described herein, which shall be used to cover the costs of the sewage sludge management program. The fees established herein in subdivisions 6.4.a and 6.4.b of this rule shall be assessed on forms prescribed by the chief of the Office of Water Resources of the Division and shall be paid to said chief quarterly.

6.2. Water Quality Management Fund. -- Fees collected for land application shall be deposited in the special revenue fund designated the "Water Quality Management Fund" established under the provisions of W. Va. Code §22-11-10 except as otherwise specified herein.

6.3. Bonding. -- The director may require a surety bond, deposit or similar instrument in an amount sufficient to cover the cost of future environmental remediation from producers, processors, or transporters of sewage sludge.

6.4. Fee Assessments.

6.4.a. Producers, processors, or transporters of sewage sludge or material derived from sewage sludge for land application shall be assessed a sewage sludge management program fee calculated as \$5.00 per actual ton of sludge times the proportion of solids in the sludge for sludge with maximum metals concentrations not exceeding those listed in Table 1 of this rule.

6.4.b. All sewage sludge placed in, or used in a landfill disposal cell by a solid waste facility shall be subject to the same tipping and other fees as levied on the disposal of solid waste under W. Va.

Code §22; Provided, That no such fees, excepting assessment fees required by this subdivision, shall be levied upon the application of sewage sludge to land outside a solid waste facility in accordance with the statute and this rule.

6.4.c. Fees generated pursuant to subdivision 6.4.a. shall be reviewed periodically by the director and shall be adjusted as necessary to assure that total collections shall not exceed \$200,000 per year.

TABLE 1**MAXIMUM CONCENTRATION OF METALS IN SEWAGE SLUDGE
FOR LAND APPLICATION**

Metal	Concentration (mg/kg)
Arsenic	20
Cadmium	39
Chromium	1000
Copper	1500
Lead	250
Mercury	10
Molybdenum	18
Nickel	200
Selenium	36
Zinc	2800

TABLE 2**PROVISIONAL MAXIMUM CONCENTRATION OF METALS IN SEWAGE SLUDGE
FOR PRODUCERS NOT MEETING TABLE 1 CRITERIA**

Metal	Concentration (mg/kg)
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7500

TABLE 3

MAXIMUM ALLOWABLE SOIL CONCENTRATIONS

Metal	Concentration (mg/kg)
Arsenic	13.0
Cadmium.....	2.4
Chromium	290
Copper.....	92
Lead	85
Mercury.....	2.4
Molybdenum.....	4.6
Nickel.....	83*
Selenium	10
Zinc	290**

* For sandy to silt loam soils with a permeability greater than 2.0 inches per hour, the maximum allowable soil concentration for nickel is 50 mg/kg.

** For those sites with greater than 30% legume species, the maximum allowable soil concentration for zinc is 130 mg/kg for sandy to silt loam soils with permeability greater than 2.0 inches per hour and 200 mg/kg for other soil types.

APPENDIX A

FREQUENCY OF MONITORING

AMOUNT OF SEWAGE SLUDGE RECEIVED (Actual dry tons per 365 per day)	FREQUENCY OF MONITORING
Greater than zero but less than 290.....	once every 6 months
Equal to or greater than 290 but less than 1,5000	once per quarter (4 times per year)
Equal to or greater than 1,500 but less than 15,000	once per month (12 times per month)
Equal to or greater than 15,000	once per week