

SUBCHAPTER 20

STANDARDS FOR THE USE OR DISPOSAL OF RESIDUAL

7:14A-20.1

Purpose

- (a) This subchapter establishes:
1. Permit application requirements and standards, which consist of general requirements, pollutant limits, management practices, frequency of monitoring requirements, recordkeeping and operational standards, for residual applied to the land or the land to which residual is applied in conformance with 40 CFR Part 503, unless otherwise specifically stated;
 2. Permit application requirements, standards, prohibitions, and requirements for surface disposal sites and the closure of surface disposal sites;
 3. Permit application requirements and standards for residual reed beds;
 4. Permit application requirements and standards for residual blending and distribution;
 5. Permit application requirements and standards for residual transfer stations; and
 6. Permit application and case-by-case permitting requirements for residual use and disposal practices consistent with 40 CFR Parts 122, 123 and 124.

7:14A-20.2

Applicability

- (a) This subchapter applies to:
1. Any person who prepares residual that is applied to the land, any person who applies residual to the land, residual applied to the land, and the land on which residual is applied;
 2. The operating entity of a surface disposal site, residual placed on a surface disposal site, and the surface disposal site;
 3. The operating entity of residual reed beds, residual placed on reed beds, and the residual reed beds;
 4. The operating entity of a residual blending and distribution operation, residual placed at a residual blending and distribution operation, and the residual blending and distribution operation; and
 5. The operating entity of any treatment works treating domestic sewage, including residual transfer stations, or of any residual-only facility, whether or not the treatment works is otherwise required to obtain a

NJPDES permit unless all requirements implementing standards for residual use or disposal applicable to the treatment works are included in a permit issued under the authority of the New Jersey Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., or the New Jersey Air Pollution Control Act, N.J.S.A. 26:2C-1 et seq.

- (b) The requirements in N.J.A.C. 7:14A-20.7 do not apply when:
 - 1. Bulk material derived from exceptional quality sewage sludge is applied to the land; or
 - 2. A material derived from exceptional quality sewage sludge is sold or given away in a bag or other container to be applied to the land.
- (c) The general requirements in N.J.A.C. 7:14A-20.7(b)1 and the management practices in N.J.A.C. 7:14A-20.7(b)2 do not apply when:
 - 1. Bulk exceptional quality residual is applied to the land. However, the Department may apply any or all of the general requirements in N.J.A.C. 7:14A-20.7(b)1 and the management practices in N.J.A.C. 7:14A-20.7(b)2 to the bulk residual on a case-by-case basis as described at N.J.A.C. 7:14A-20.5(a)3;
 - 2. Bulk material derived from residual is applied to the land if the derived bulk material meets exceptional quality. However, the Department may apply any or all of the general requirements in N.J.A.C. 7:14A-20.7(b)1 and the management practices in N.J.A.C. 7:14A-20.7(b)2 to the bulk material on a case-by-case basis as described at N.J.A.C. 7:14A-20.5(a)3;
 - 3. Residual is sold or given away in a bag or other container for application to the land if the residual sold or given away in a bag or other container for application to the land meets exceptional quality; and
 - 4. A material derived from residual is sold or given away in a bag or other container for application to the land if the derived material meets exceptional quality.
- (d) References in this subchapter to 40 CFR Part 122, Part 258, 503.13, 503.15, 503.17(a), 503.32 and 503.33, with the exception of requirements for domestic septage, incorporate such Federal requirements by reference including future supplements and amendments to these requirements. All other references in this subchapter to 40 CFR Part 503 incorporate such Federal requirements by reference as they existed as of May 5, 1997.
- (e) Where the Statewide Sludge Management Plan (SSMP) and this subchapter conflict, the provisions of this subchapter shall control.

7:14A-20.3

Relationship to other regulations

- (a) This subchapter does not establish:
1. Standards for the firing of residual in an incinerator which receives an air pollution control permit pursuant to N.J.A.C. 7:27;
 2. Requirements for the use or disposal of residual determined to be hazardous in accordance with 40 CFR Part 261 and N.J.A.C. 7:26G;
 3. Requirements for the use or disposal of residual with a concentration of polychlorinated biphenyls (PCBs) equal to or greater than 50 milligrams per kilogram of total solids (dry weight basis) in accordance with 40 CFR Part 761;
 4. Standards for the co-disposal of residual in a municipal solid waste landfill which receives a permit pursuant to 40 CFR Part 258 or N.J.A.C. 7:26; or
 5. Standards for the disposal of residual in a sanitary landfill, as defined at N.J.A.C. 7:26, which receives a permit pursuant to N.J.A.C. 7:26.

7:14A-20.4

Special definitions

The following words and terms have specific meanings when used in this subchapter: "agricultural land," "final cover," "forest," "liner," "lower explosive limit for methane gas," "pasture," "permitting authority," "pollutant limit," "public contact site," "range land" and "runoff." The applicable definitions are set forth at N.J.A.C. 7:14A-1.2.

7:14A-20.5

Establishing limitations, standards and other permit conditions

- (a) The Department shall establish conditions in each NJPDES permit for the use or disposal of residual, as required on a case-by-case basis, to provide for and ensure compliance with all applicable requirements of the Federal and State Acts and the regulations promulgated thereunder, as follows:
1. The Department shall include standards for residual use or disposal in each NJPDES permit unless those standards have been included in a permit issued under the appropriate provisions of the New Jersey Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., or the New Jersey Air Pollution Control Act, N.J.S.A. 26:2C-1 et seq. If any applicable standard for residual use or disposal is promulgated and that standard is more stringent than any limitation on the pollutant or practice in the permit, the Department may initiate proceedings under N.J.A.C. 7:14A-16.4 to modify or revoke and reissue the permit to conform to the standard for residual use or disposal.
 2. For any permit issued to a treatment works treating domestic sewage or

residual-only facility, the Department shall include a reopener clause to allow the incorporation of any applicable standard for residual use or disposal. The Department shall promptly modify or revoke and reissue any permit containing the reopener clause required by this paragraph if an applicable standard for residual use or disposal is more stringent than any requirements for residual use or disposal in the permit, or controls a pollutant or practice not limited in the permit.

3. On a case-by-case basis, the Department may impose requirements for the use or disposal of residual in addition to or more stringent than the requirements in this subchapter when necessary to protect public health or the environment from any adverse effect of the pollutant in the residual. This authority shall include, but not be limited to, the following:
 - i. The authority to require compliance with pollutant limits for additional constituents which the Department has evidence exceed the range found in sewage sludge produced in the State as determined by the Sludge Quality Assurance Regulations, N.J.A.C. 7:14-4, or which exceed acceptable levels in USEPA's Technical Support Document for Land Application of Sewage Sludge, EPA 822/R-93-001a and 001b, November 1992 or Technical Support Document for Surface Disposal of Sewage Sludge, EPA 822/R-93-002, November 1992, as amended and supplemented;
 - ii. For bulk exceptional quality residual, the authority to require compliance with any or all of the general requirements in N.J.A.C. 7:14A-20.7(b)1 and the management practices in N.J.A.C. 7:14A-20.7(b)2 upon the Department's determination that the general requirements or management practices are needed to protect public health and the environment, to prevent the loss of excess nutrients to the waters of the State, or to address the release of air contaminants consistent with the Air Pollution Control Act, N.J.S.A. 26:2C-1 et seq.;
 - iii. For all residual applied in accordance with N.J.A.C. 7:14A-20.7(h), the authority to establish additional steps in the treatment, delivery, storage, and land application of residual to control the release of air contaminants (including, but not limited to, ammonia) consistent with the Air Pollution Control Act, N.J.S.A. 26:2C-1 et seq. These additional steps shall include, but not be limited to, the requirement to increase the maturity of marketable residual products by achieving additional temperature reduction and moisture reduction; and
 - iv. For sites where bulk residual is applied under N.J.A.C. 7:14A-20.7(h), the authority to require a permit or a Letter of Land Application Management Approval to be obtained upon the

Department's determination that a permit or Letter of Land Application Management Approval is needed to protect public health and the environment, to prevent the discharge of excess nutrients to the waters of the State, or to address the release of air contaminants consistent with the Air Pollution Control Act, N.J.S.A. 26:2C-1 et seq..

- (b) The Department shall set forth the basis for permit conditions imposed under (a) above in a fact sheet issued pursuant to N.J.A.C. 7:14A-15.8, or, if the requirements are based on site-specific factors, a Letter of Land Application Management Approval issued pursuant to N.J.A.C. 7:14A-20.7(h) for the residual land application site.
- (c) Innovative or alternative technologies and systems for residual use or disposal shall be regulated on a case-by-case basis in conformance with the requirements for the technology which most closely resembles the innovative or alternative technology system.
- (d) The Department may designate any person subject to the standards for residual use or disposal as a "treatment works treating domestic sewage" or "residual-only facility" as defined by N.J.A.C. 7:14A-1.2, where it is found that a permit is necessary to protect public health and the environment from the adverse effects of a residual or to ensure compliance with the technical standards for residual use or disposal. Any person designated as a "treatment works treating domestic sewage" or "residual-only facility" shall submit an application for a permit under N.J.A.C. 7:14A-4 within 180 days of being notified by the Department that a permit is required. The basis for the Department's decision to designate a person as a "treatment works treating domestic sewage" or "residual-only facility" under this paragraph shall be stated in the fact sheet or statement of basis for the permit.

7:14A-20.6

Environmental assessment

- (a) In addition to the information required by N.J.A.C. 7:14A-4, an applicant for a NJPDES permit for residual use or disposal shall submit an environmental assessment for the location where a residual will be prepared to be applied to the land, the location where a residual was placed on a surface disposal site, or the location of any other treatment works treating domestic sewage (TWTDS) or residual-only facility required to obtain a permit pursuant to this subchapter. The magnitude and detail of the environmental assessment shall be determined by the Department and shall be relative to the nature, scale and location of the proposed TWTDS or residual-only facility. Where the permitted activity shall not require the construction of additional infrastructure the Department shall waive this requirement. At a minimum, the environmental assessment shall conform to the environmental assessment requirements of the Department's applicable NJPDES Permit Technical

Manual in effect at the time of submission of the assessment and shall include:

1. A written description of facility operations, including volumes of residual to be handled, methods of handling, facility layout, and use or disposal of any end products;
 2. An analysis of the impact that the proposed TWTDS or residual-only facility will have on local transportation patterns, drainage and soil characteristics, surface and ground water quality, endangered or threatened wildlife and vegetation, stormwater and wastewater collection/treatment capability, water supply capability, ambient acoustical conditions and air quality;
 3. A description of how the TWTDS or residual-only facility will conform or conflict with the objectives of any applicable Federal, State, or local land use and/or environmental requirements for areas within two miles of the perimeter of a proposed large facility (residual production equal to or greater than 15,000 metric tons per 365 day period), or within one mile of the perimeter of a proposed small facility (residual production less than 15,000 metric tons per 365 day period); and
 4. Where a potential conflict between the TWTDS or residual only-facility and the objectives of land use and/or environmental requirements is identified under (a)3 above, a description of the mitigation efforts to be undertaken to minimize any such conflict.
- (b) An environmental assessment is not required for the following:
1. The land to which residual is applied or will be applied;
 2. An existing treatment works where the construction of additional infrastructure is not required to conduct the proposed activity; and
 3. A residual use or disposal practice that qualifies for authorization under a general permit in accordance with N.J.A.C. 7:14A-6.13.

7:14A-20.7 Land application

- (a) In addition to the information required in N.J.A.C. 7:14A-4 and 20.6, an applicant for a NJPDES permit to prepare residual for land application shall submit the following:
1. Information on the characteristics of the residual proposed to be applied, and information on the characteristics of all residual additives, to the extent known at the time that the permit application is submitted, including, but not limited to:
 - i. The origin and volume of the residual and residual additives;
 - ii. A dated analysis of the residual and residual additives on a mg/kg dry weight basis (or other unit as specified) for the following constituents:

Total solids (percent by weight)
pH (standard units)
Total Kjeldahl Nitrogen
Ammonia-Nitrogen
Nitrate-Nitrogen
Calcium
Potassium
Phosphorus
Water extractable phosphorus (WEP)
Arsenic
Cadmium
Copper
Lead
Mercury
Molybdenum
Nickel
Selenium
Zinc
Radium 226 (pCi/g)
Radium 228 (pCi/g)

- iii. A summary of all data generated pursuant to the Sludge Quality Assurance Regulations (SQAR), N.J.A.C. 7:14C, for the previous 12-month period;
 - iv. Additional quality analyses (including characteristics pursuant to N.J.A.C. 7:26G) as may be deemed necessary by the Department through evaluation of past SQAR reports or other relevant information, such as information on the characteristics of all residual additives or on industrial discharges which might contribute constituents not normally evaluated under the SQAR program or that may exceed levels identified in USEPA's Technical Support Document for Land Application of Sewage Sludge, EPA 822/R-93-001a and 001b, November 1992.
2. Where the sources of residual to be land applied are not known at the time of permit application, requests for approval to land apply residual shall be submitted in accordance with N.J.A.C. 7:14A-20.11.
 3. For bulk residual that is not of exceptional quality, requests for approval to land apply residual shall be submitted in accordance with the following:
 - i. For each residual land application site identified at the time of permit application, the applicant shall include in the permit application an application for a Letter of Land Application Management Approval (LLAMA) and, in accordance with the applicable NJPDES Permit Technical Manual, supply

information necessary to determine if the site is appropriate for land application and a description of how the site is or will be managed, including, but not limited to, the following:

- (1) A residual land application site evaluation that includes, at a minimum, a description of easements, distances to surface water, distances to drinking water wells, distances to occupied dwellings, local transportation patterns, depth to ground water, depth to bedrock, slope, soil drainage class, pH, flooding, site soil texture and parent geologic material, the design and location of any existing or proposed residual storage installations, fields where residual is proposed to be applied (with the acreages identified), and proposed buffer zones;
 - (2) A written analysis of operational considerations including, at a minimum, crop type, crop end use, residual application methods, whole residual application rates and seasonal limitations;
 - (3) An original or clear copy of the appropriate Soil Conservation Service Soil Survey Map showing the residual land application site;
 - (4) An original or clear copy of a 1:24,000 scale (7.5 minute Quadrangle) United States Geological Survey Topographic Map showing the exact location of the residual land application site and indicating the sheet name from which the map portion was taken;
 - (5) An original or clear copy of the municipal tax map showing the location of the residual land application site and indicating the sheet name from which the map portion was taken;
 - (6) A clear copy of an aerial photograph showing the location of the residual land application site; and
 - (7) A conservation plan or soil erosion and sediment control plan (as applicable) certified by the County Soil Conservation District; a written determination from the Natural Resources Conservation Service that no conservation plan is required for the site; or an equivalent conservation plan that is developed by a person trained in nutrient management and conservation/erosion control planning and that is approved by the Department solely for the purposes of this subchapter.
- ii. Where proposed residual land application sites are not identified at the time of permit application, the applicant shall submit a

notification plan for the Department's approval that, at a minimum:

- (1) Describes the geographical area covered by the plan; and
 - (2) Describes the form of advance public notice that, at a minimum, will be supplied to all landowners and occupants adjacent to or abutting a proposed residual land application site. This requirement may be satisfied through public notice in a newspaper of local circulation. Notice shall include, at a minimum, the name and address of the permittee, the name and address of the proposed residual land application site, a description of the activities that are proposed to occur at the residual land application site, and the name and address of the Bureau within the Department to which the permittee must submit an application for a LLAMA;
 - iii. Following issuance of a permit, when a new land application site is proposed, a permittee shall submit an application to the Department for a Letter of Land Application Management Approval, where required pursuant to (h) below. An additional copy of the complete application for a LLAMA shall be simultaneously submitted to the municipal clerk of the municipality(ies) where the residual land application site is located. The application for a LLAMA shall include information necessary to determine if the proposed residual land application site is appropriate for land application and a description of how the site is or will be managed, including, but not limited to, the following:
 - (1) Information required pursuant to (a)3i above; and
 - (2) Information necessary for the Department to determine if the request is in conformance with a notification plan approved by the Department pursuant to (a)3ii above; and
 - iv. A LLAMA renewal application, including all information required pursuant to (a)3 above, is due at the time of the renewal application for the permit under which the LLAMA is issued. A LLAMA expires or is revoked concurrently with the permit under which the LLAMA is issued. If the permit under which the LLAMA is issued is administratively continued under N.J.A.C. 7:14A-2.8, then the LLAMA issued under that permit is also administratively continued. Nothing in this section shall prevent the Department from revoking a LLAMA for due cause, independent of the permit under which the LLAMA is issued.
4. In order for the Department to approve a permit application for the land application of a residual other than sewage sludge, or for any new

residual stabilization process or technology not previously permitted in the State, the applicant shall demonstrate, in addition to the requirements of (a)1 through 3 above, the following:

- i. That the land application of the residual will benefit soil physical properties, soil fertility and/or cover vegetation;
 - ii. An understanding of the impacts of the residual on soil fertility, soil physical properties and plant growth;
 - iii. That the land application of a particular residual has a scientific basis and has been successfully tested or demonstrated in a field application or pilot program;
 - iv. That the new residual stabilization process or technology has been successfully tested or demonstrated in a pilot program to achieve the standards applicable to the intended use of residual processed; and
 - v. Control of the stabilization process, and of product maintenance and handling, in a manner that prevents air contamination (including, but not limited to, particulates or odors) subsequent to achievement of a marketable residual product; and
 5. A sampling plan that details all measurement, sampling and analytical procedures. The plan shall:
 - i. Identify each sampling point, established at a location that ensures sample homogeneity and best represents the physical and chemical quality of all pre-process and in-process materials, and all marketable residual product that is removed for use or disposal, as necessary to demonstrate compliance with applicable standards;
 - ii. Identify the equipment to be utilized for sampling. The equipment shall be constructed of materials that will not contaminate or react with the marketable residual product (for example, galvanized or zinc coated items shall not be used); and
 - iii. Demonstrate quality assurance and quality control requirements and procedures for sampling and analysis, including preservation and decontamination procedures, consistent with the Department's Field Sampling Procedures Manual.
- (b) For the land application of residual, the following general requirements and management practices shall apply, unless otherwise specifically stated:
1. In lieu of the general requirements in 40 CFR 503.12:
 - i. No person shall apply residual to the land except in accordance with the requirements of this subchapter.
 - ii. No person shall apply bulk residual subject to the cumulative

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pollutant loading rates in 40 CFR 503.13(b)2 to agricultural land, forest, a public contact site, or a reclamation site if any of the cumulative pollutant loading rates in 40 CFR 503.13(b)2 has been reached.

- iii. No person shall apply domestic septage to agricultural land, forest, or a reclamation site except in accordance with (f) below.
- iv. The person who prepares bulk residual that is applied to agricultural land, forest, a public contact site, or a reclamation site shall provide the person who applies the bulk residual written notification of information necessary to determine the agronomic rate pursuant to (g) below.
- v. The person who applies residual to the land shall obtain information needed to comply with the requirements in this subchapter. In addition, before bulk residual subject to the cumulative pollutant loading rates in 40 CFR 503.13(b)2 is applied to the land, the person who proposes to apply the bulk residual shall comply with the requirements in 40 CFR 503.12(e) and shall also contact the Department to determine whether bulk residual was applied to the site prior to July 20, 1993. The cumulative amount of each pollutant that was applied to the site in the bulk residual and that was required to be tracked by the Department prior to July 20, 1993, shall be used to determine the additional amount of each pollutant which can be applied to the site after July 20, 1993 pursuant to 40 CFR 503.13(a)2i.
- vi. The person who prepares bulk residual shall notify and provide information necessary to comply with the requirements of this subchapter to the person who applies bulk residual to the land.
- vii. The person who prepares residual shall notify and provide information necessary to comply with the requirements of this subchapter to any person who further prepares the residual for application to the land.
- viii. The person who applies bulk residual to the land shall provide the owner or lease holder of the land on which the bulk residual is applied notice and necessary information to comply with the requirements of this subchapter.
- ix. Any person who prepares bulk residual in New Jersey that is applied to land in a State other than New Jersey shall submit to the Department written proof of compliance with or satisfaction of all applicable statutes, regulations, and guidelines of the state in which land application will occur.
- (x) Out-of-State generators that transport residual into the State to be applied to the land shall comply with the requirements of (l)

below.

2. In lieu of the management practices in 40 CFR 503.14:
 - i. Bulk residual shall not be applied to the land if it is likely to adversely affect a threatened or endangered species listed under Section 4 of the Federal Endangered Species Act, 16 U.S.C. §1533 or its designated critical habitat.
 - ii. Unless otherwise specified by the Department in a permit or a LLAMA, bulk residual shall not be:
 - (1) Applied to land that is flooded, frozen, or snow-covered so that the bulk residual enters a wetland or other waters of the State;
 - (2) Applied during or after precipitation on ground where water is ponded, soils are saturated with water to within two feet of the ground surface, soil depth is less than two feet over bedrock formations, or land experiences seasonal flooding;
 - (3) Applied to agricultural land, forest, or a reclamation site that is 200 feet or less from surface waters of the State, as defined in N.J.A.C. 7:14A-1.2;
 - (4) Applied to the land, except in accordance with (g) below; or
 - (5) Applied to land that is within 1,500 feet of a public community water supply well, or within 300 feet of a public non-community or non-public water supply well.
- (c) The applicable requirements and pollutant limits in 40 CFR 503.13(a) and (b) shall be met.
- (d) Residual shall not be applied to the land unless the operational standards for pathogen and vector attraction reduction pursuant to 40 CFR 503.15(a) and (c) are met. Compliance with the operational standards for pathogen reduction is not required for pathogen-free material; however, the Department may impose operational standards for vector attraction reduction on pathogen-free material on a case-by-case basis through a NJPDES permit depending on the physical and chemical characteristics of the material to be land applied.
- (e) Foreign material shall be removed from residual prior to the application of residual to the land. Foreign material removed from residual shall be managed in accordance with applicable State and Federal law and regulations.
- (f) In accordance with the SSMP, it is the Department's policy that the use of

domestic treatment works is the most environmentally sound and controllable method for management of domestic septage. However, the land application of domestic septage shall be permitted on a case-by-case basis where the applicant demonstrates that no reasonable alternative exists, subject to the following requirements:

1. Domestic septage shall not be applied to the land unless, at a minimum, the Class B pathogen reduction requirements pursuant to 40 CFR 503.32(b) and one of the vector attraction reduction requirements in 40 CFR 503.33(b)(1) through (b)(10) are met;
 2. Domestic septage must be applied at a whole residual application rate that is equal to or less than the agronomic rate in accordance with (g) below;
 3. Domestic septage must be screened through a number 4 mesh screen to remove foreign material;
 4. Domestic septage must be certified to be from domestic sources only, analyzed pursuant to (a)1 above and satisfy the pollutant limits in 40 CFR 503.13(a) and (b); and
 5. Domestic septage shall be applied to the land only in accordance with one of the land application programs described at (h) below.
- (g) Bulk residual shall be applied to the land at a whole residual application rate that is equal to or less than the agronomic rate as specified by the Department in a permit based on best professional judgment unless, in the case of a reclamation site, otherwise approved by the Department.
- (h) Residual applied to the land shall conform to one of the following programs based on the level of quality, pathogen reduction and vector attraction reduction achieved:
1. Exceptional quality residual shall be applied only in accordance with the following requirements:
 - i. The residual shall be monitored, records kept and information reported in accordance with (i), (j) and (k) below;
 - ii. Residual may be applied in bulk, or sold or given away in a bag or other container;
 - iii. Residual that is sold, offered for sale, or intended for sale as a fertilizer, soil conditioner or agricultural liming material shall be licensed by the New Jersey Department of Agriculture pursuant to the New Jersey Commercial Fertilizer and Soil Conditioner Act, N.J.S.A. 4:9-15.1 et seq., or the New Jersey Agricultural Liming Materials Act, N.J.S.A. 4:9-21.1 et seq., unless permit conditions for distribution are otherwise established by the Department in accordance with N.J.A.C. 7:14A-20.5; and

- iv. Residual shall be labeled or accompanied by the appropriate instructional literature based on the mode of marketing and conforming to the Department's applicable NJPDES Permit Technical Manual and the labeling requirements established by the New Jersey Department of Agriculture pursuant to the New Jersey Commercial Fertilizer and Soil Conditioner Act, N.J.S.A. 4:9-15.1 et seq., the New Jersey Agricultural Liming Materials Act, N.J.S.A. 4:9-21.1 et seq., or distribution requirements specified by the Department in a permit.
- 2. Residual that is not exceptional quality shall be applied only if it meets the ceiling concentrations in 40 CFR 503.13(b)(1); meets the Class B pathogen requirements in 40 CFR 503.32(b); and meets one of the vector attraction reduction requirements in 40 CFR 503.33(b)(1) through (8) or will meet one of the vector attraction reduction requirements in 40 CFR 503.33(b)(9) or (b)(10). Such residual shall be applied only in accordance with the following requirements:
 - i. The residual shall be monitored, records kept and information reported in accordance with (i), (j) and (k) below;
 - ii. The residual shall be applied in bulk only and shall not be applied to a lawn or home garden;
 - iii. The general requirements at (b)1 above and the management practices at (b)2 above apply;
 - iv. If the residual does not meet the Class A pathogen requirements in 40 CFR 503.32(a) then the site restrictions at 40 CFR 503.32(b)(5) shall apply;
 - v. If the residual does not meet the pollutant concentrations in 40 CFR 503.13(b)(3) then the cumulative pollutant loading rates in 40 CFR 503.13(b)(2) shall not be exceeded and shall be tracked, recorded and reported in accordance with (i), (j) and (k) below;
 - vi. A conservation plan or soil erosion and sediment control plan (as applicable) pursuant to (a)3i(7) above; and
 - vii. A LLAMA shall be obtained for all residual land application sites pursuant to (a)3 above prior to the initial application of residual to the residual land application site. The recipient of the LLAMA shall ensure that the person who applies residual to a land application site complies with the conditions of a LLAMA.
- (i) For residual that is to be applied to the land, the frequency of monitoring for the pollutants listed in Table 1, Table 2 and Table 3 of 40 CFR 503.13, for the pathogen density requirements in 40 CFR 503.32(a) and 40 CFR 503.32(b)(2) through (b)(4), when applicable, and for the vector attraction reduction requirements in 40 CFR 503.33(b)(1) through (b)(8), when applicable, shall be the frequency specified in Table 1 of 40 CFR 503.16(a)

unless otherwise specified below:

1. For sewage sludge, the frequency of monitoring shall be as specified in Table 1 of 40 CFR 503.16(a) or quarterly, whichever is more frequent, except as allowed under (i)2 and 3 below;
 2. After any residual has been monitored for two years at the frequency in Table 1 of 40 CFR 503.16(a) or (i)1 above, the permittee may request the Department to reduce the frequency of monitoring as specified in 40 CFR 503.16(a)(2);
 3. When a single source of sewage sludge totaling less than 290 metric tons per year (see Table 1 of 40 CFR 503.16(a)) is removed for application to the land no more frequently than three times per year, then monitoring shall be performed at least once prior to each removal;
 4. Process parameter monitoring necessary to demonstrate whether any of the pathogen reduction requirements in 40 CFR 503.32(a)(3), (a)(4), (a)(5), (a)(7), (a)(8) and/or 40 CFR 503.32(b)(3) or (b)(4) are met (for example, temperature, time, percent total solids and pH) must be performed each day that the process(es) intended to meet any of the requirements is operated and as often each day as necessary;
 5. Process parameter monitoring necessary to demonstrate whether vector attraction reduction requirements in 40 CFR 503.33(b)(1), (b)(5), (b)(6), (b)(7) and (b)(8) are met (for example, volatile solids, time, temperature, pH and percent total solids) must be performed each day that the process(es) intended to meet any of the requirements is operated and as often each day as necessary; and
 6. For residual additives, the frequency of monitoring for the pollutants listed in Table 1, Table 2 and Table 3 of 40 CFR 503.13, or for other pollutants identified pursuant to (a)1 above, shall be, at a minimum, once every calendar year, and within 30 days of any source change.
- (j) For residual that is to be applied to the land, recordkeeping shall conform to the requirements of 40 CFR 503.17(a) and the following additional information shall be retained for five years (unless otherwise required by 40 CFR Part 503):
1. Daily records of the sources of residual generated, received and processed as well as the quantity of residual generated, received and processed;
 2. If bulk residual is not exceptional quality, the person who prepares the residual shall keep daily records of the destination of the residual, including, but not limited to, the location, by either street address, lot and block number or latitude and longitude of each site, the quantity of residual delivered and applied to each site, and the whole residual application rate in accordance with (g) above;

3. For bulk exceptional quality residual, the person who prepares the residual shall keep daily records of the bulk distribution outlets and the quantity of residual delivered to each outlet;
 4. Where not otherwise specified in 40 CFR 503.17(a), information necessary to demonstrate compliance with the applicable land application program(s) pursuant to (h) above;
 5. Records necessary to demonstrate compliance with (i) above; and
 6. Records on the quantity and quality of all residual generated and/or received for processing pursuant to the Sludge Quality Assurance Regulations, N.J.A.C. 7:14C. A 12 month moving mean and median shall be kept for all parameters specified under 40 CFR 503.13.
- (k) For the land application of residual, in lieu of the reporting requirements of 40 CFR 503.18, the frequency of reporting to the Department of the records kept under (j) above shall be in accordance with N.J.A.C. 7:14A-6.8.
- (l) Out-of-State generators that transport residual into the State of New Jersey to be applied to the land shall, at a minimum, comply with all applicable requirements for the land application of residual pursuant to this subchapter and the following additional notice requirements:
1. In order for the Department to determine the applicable requirements under this subchapter, any person who prepares residual out-of-State for land application in New Jersey shall provide notice to the Department at least 120 days prior to the date that person intends to commence operations for the land application of residual. This notice shall, at a minimum, include:
 - i. Information on each residual land application site as required to be submitted pursuant to (a)3 and (b)1ix above, as applicable;
 - ii. Copies of those permits and approvals issued by the permitting authority for the state in which the residual is prepared;
 - iii. The name, address and phone number of a contact for the permitting authority for the state in which the residual is prepared; and
 - iv. A listing of any brand names under which a marketable residual product will be distributed.
 2. Upon receipt of notification pursuant to (l)1 above, the Department shall notify the person who prepares residual of the applicable requirements of this subchapter.
 3. The Department shall waive some or all of the requirements for record keeping and reporting pursuant to (j) and (k) above if equivalent information is already kept and reported to the permitting authority for the out-of-State generator.

- (m) See N.J.A.C. 7:14A-20.2(b) and (c) for situations in which the requirements in this section and in (b) above, respectively, do not apply.

7:14A-20.8 Surface disposal of residual

- (a) The storage of residual or material derived from residual for more than six months constitutes surface disposal and is prohibited under this subchapter.
- (b) The placement of residual or material derived from residual as fill (for example, to bring a site to grade or at depths greater than one foot) constitutes surface disposal and is prohibited under this subchapter.
- (c) The prohibitions in (a) and (b) above do not apply if:
 - 1. The person who prepares the residual demonstrates that the land on which the residual remains is not a surface disposal site. The demonstration shall explain why residual must remain on the land for longer than six months prior to final use or disposal, discuss the approximate time period during which the residual shall be used or disposed, and provide documentation of ultimate management arrangements. The demonstration shall be submitted to the Department in writing and retained by the person who prepares residual for the period that the residual remains on the land. If the Department determines that a demonstration is not in conformance with this subchapter, then the Department will notify the person who prepares the residual that the prohibitions in (a) and (b) above apply;
 - 2. The site where the residual is placed is permitted and meets the requirements as a sanitary landfill under the New Jersey Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq.;
 - 3. The residual is approved for beneficial use or categorically approved for beneficial use pursuant to N.J.A.C. 7:26-1.7(g); or
 - 4. The surface disposal site existed prior to January 5, 2009, was in conformance with all relevant laws and regulations when the discharge commenced and is the subject of and is in compliance with a valid NJPDES discharge to groundwater permit issued pursuant to N.J.A.C. 7:14A-7.
- (d) The operating entity of a surface disposal site that does not qualify for an exemption in accordance with (c) above shall submit a closure and post closure plan to the Department for approval in accordance with the requirements of (f) below by July 5, 2009 and cease discharge by January 5, 2010 or at such earlier date established by the Department to protect public health or the environment consistent with N.J.A.C. 7:14A-20.5.
- (e) For in-situ, closed surface disposal sites, the following management practices shall apply:
 - 1. The closure of a surface disposal site shall not restrict the flow of a

base flood, unless otherwise approved by the Department under the Flood Hazard Area Control rules, N.J.A.C. 7:13;

2. A closed surface disposal site shall not be located in an unstable area;
3. The leachate collection system for a closed surface disposal site that has a liner and leachate collection system shall be operated and maintained for a minimum of five years after the Department approves closure of the surface disposal site. Leachate from a closed surface disposal site that has a liner and leachate collection system shall be collected and shall be disposed in accordance with applicable requirements for a minimum of five years after the Department approves closure of the surface disposal site;
4. When a final cover is placed on a surface disposal site at closure, the concentration of methane gas in air in any structure within the surface disposal site shall not exceed 25 percent of the lower explosive limit for methane gas and the concentration of methane gas in air at the property line of the surface disposal site shall not exceed the lower explosive limit for methane gas for a minimum of five years after the Department approves closure of the surface disposal site;
5. The owner of a closed surface disposal site shall provide written notification to the subsequent owner of the site that residual was placed on the land. As part of closure of the surface disposal site, a detailed description of the surface disposal site shall be recorded, along with the deed, with the appropriate county recording office. The description shall include the quantity and quality of residual disposed, a map indicating the location and depth of residual on the site, the depth and type of cover material (if applicable), the dates the surface disposal site was in use and all such other information as may be of interest to potential landowners, and shall remain in the legal record of the property in perpetuity;
6. A food crop, a feed crop, or a fiber crop shall not be grown on a closed surface disposal site, unless the owner/operator of the surface disposal site demonstrates to the Department that through management practices public health and the environment will be protected from any adverse effects of pollutants in residual when crops are grown;
7. Animals shall not be grazed on a closed surface disposal site, unless the owner/operator of the surface disposal site demonstrates to the Department that through management practices public health and the environment will be protected from any adverse effects of pollutants in residual when animals are grazed;
8. The operating entity must implement and maintain a ground water monitoring program in compliance with N.J.A.C. 7:9C for a minimum of five years after the Department approves closure of the surface disposal site; and

9. Public access to a closed surface disposal site shall be restricted for a minimum of five years after the Department approves closure of the surface disposal site.
- (f) In addition to the requirements of N.J.A.C. 7:14A-4 and 20.6, a surface disposal site closure plan shall include the following minimum information:
1. The approximate date discharge to the surface disposal site ceased or will cease;
 2. A description of the surface disposal site including approximate acreage, and lateral and vertical extent of the surface disposal site;
 3. A discussion of the characteristics of the residual present in the surface disposal site, including:
 - i. The origin and volume of the residual;
 - ii. Dated quality analyses of the residual on a mg/kg dry weight basis including analyses of all constituents required to be analyzed in accordance with the Sludge Quality Assurance Regulations (SQAR), N.J.A.C. 7:14C. The number of samples required to be analyzed shall be based on a statistical method as described in the Department's Field Sampling Procedures Manual, or as otherwise approved by the Department;
 - iii. Additional quality analyses may be required if deemed necessary by the Department through evaluation of past SQAR reports or other relevant information, such as information on industrial discharges that might contribute constituents not normally evaluated under the SQAR program; and
 - iv. A discussion, or where applicable, analyses pursuant to 40 CFR 503.25, explaining how pathogen requirements or vector attraction reduction requirements were achieved;
 4. A description of the proposed method of closure, including plans for the removal and/or in-situ closure of residual remaining at the surface disposal site, and an implementation schedule for each component of the closure plan;
 5. For in-situ closure proposals, the following information:
 - i. A calculation of the surface run-off across the surface disposal site shall be prepared using a 24-hour, 25-year storm event with estimates of the effect of such run-off on treatment capacity, storage capacity, erosion, flooding, impacts on surface water quality and related details; and
 - ii. Information to document compliance with the management practices set forth at (e) above;
 6. A soil erosion and sediment control plan certified by the local Soil

Conservation District in accordance with the Soil Erosion and Sediment Control Act of 1975, or as amended (N.J.S.A. 4:24-39 et seq.), unless such planning is determined inapplicable by an agency with concurrent jurisdiction; and

7. Any other information required by N.J.A.C. 7:14A-7.14 for residual surface impoundments.

7:14A-20.9 Reed beds

- (a) In addition to the information required in N.J.A.C. 7:14A-4 and 20.6, an applicant for a NJPDES permit to discharge residual to a reed bed shall submit:
 1. Information on the characteristics of the residual proposed to be discharged, to the extent known at the time that the permit application is submitted, including, but not limited to;
 - i. The origin and volume of the residual;
 - ii. A dated analysis of the residual to be discharged for total solids (percent by weight), volatile solids (weight as a percent of total solids), and pH (standard units);
 - iii. A summary of all data generated pursuant to the Sludge Quality Assurance Regulations (SQAR), N.J.A.C. 7:14C, for the previous 12-month period;
 - iv. Additional analyses of the quality of the residual (including characteristics pursuant to N.J.A.C. 7:26G) as the Department determines necessary based upon an evaluation of past SQAR reports or other relevant information, such as information on industrial discharges that might contribute constituents not normally evaluated under the Sludge Quality Assurance Regulations (SQAR), N.J.A.C. 7:14C;
 2. The proposed loading rate for the discharge of residual to the reed bed, based on the type of residual to be discharged and the total solids content of the residual to be discharged; and
 3. An operation and maintenance manual that describes, at a minimum, how the management practices in (b) below will be followed.
- (b) For a residual reed bed, the following management practices shall apply:
 1. There shall be no standing water in a reed bed 48 hours following loading, except during periods of severe inclement weather.
 2. Plants shall be harvested during winter dormancy, as weather permits, after the plants have turned brown. Approximately 10 inches of stubble shall be left standing after harvesting.
 3. Once the reed bed is mature, debris, weeds and vegetative waste shall be removed during the annual reed harvest in a manner that will not

disturb the reed plants. During the first year of operation, in order to protect the reed plants, unwanted weed growth shall be removed as necessary, whether or not during the annual reed harvest. Methods of weed removal that do not require workers to enter a bed are preferred, and should be attempted first.

4. A reed bed shall be evacuated when the depth of residual in the bed reaches six inches from the top of the freeboard.
- (c) Residual shall be loaded onto a reed bed no more than once every 14 days after plants reach maturity, unless otherwise approved by the Department in a permit. Less frequent loading rates will be set forth in the permit during the time that plants are maturing or as required due to unfavorable loading conditions (for example, in the presence of standing water).
 - (d) The permittee shall take composite samples representative of the residual discharged to a reed bed and analyze them in accordance with the reporting requirements of, and frequency required in, the Sludge Quality Assurance Regulations, N.J.A.C. 7:14C.
 - (e) The permittee shall take one sample per calendar year that is representative of the residual discharged to a reed bed, and analyze it for pH and volatile solids.
 - (f) The permittee shall take an annual composite sample that is representative of the residual removed from a reed bed, and analyze it for the parameters at (d) and (e) above, if residual is removed from a reed bed for ultimate use or disposal during the calendar year.
 - (g) The permittee shall, no later than 180 days prior to the anticipated date of evacuation of a reed bed, submit to the Department for approval a plan for removal and management of all accumulated residual. The plan shall include and identify all residual removal and management activities that will be conducted prior to, during, and after a reed bed is taken out of service and residual removed. This plan shall include, at a minimum, the procedure for removing the residual from the reed bed, a description and analysis of the residual, method of management of the residual, anticipated date for evacuation of each bed, and approximate volume of residual material to be removed.
 - (h) Phragmites rhizomes shall be removed from the residual prior to the transportation of residual to an operation that will process it for land application.

7:14A-20.10 Residual transfer stations

- (a) In addition to the information required by N.J.A.C. 7:14A-4 and 20.6, an applicant for a NJPDES permit for a residual transfer station shall submit application information for residual transfer stations required pursuant to the Statewide Sludge Management Plan and the applicable NJPDES Permit

Technical Manual adopted pursuant to N.J.S.A. 13:1D-111.

- (b) Transfer of residual transport containers directly from vehicle to vehicle, including truck to train, for shipment to a residual management site or facility authorized by the permitting authority, is not considered a residual transfer station under this subchapter provided the following conditions are met:
 - 1. The contents of each residual transport container shall remain in the residual transport container during transfer between vehicles; and
 - 2. The transfer of residual transport containers shall not result in off-site nuisances, including, but not limited to, dust, odor and noise.

7:14A-20.11 Generic residual quality determinations

- (a) It shall be the responsibility of the person who prepares residual to ensure that all residual accepted for processing is compatible with the applicable residual quality limitations;
- (b) A person who prepares residual to be applied to the land may accept a residual which does not meet the residual quality limitations of 40 CFR 503.13 provided the residual is to be blended with other residual and the final residual to be applied to the land meets the appropriate pollutant limits under 40 CFR 503.13, subject to the following:
 - 1. Written Department approval pursuant to (c) below is required to accept sewage sludge for blending from domestic treatment works sources not known at the time of permit application where the median or mean pollutant concentration (based on a 12 month moving mean and median) for the source exceeds the residual quality limitations imposed on the person who prepares the residual pursuant to 40 CFR 503.13; and
 - 2. Written Department approval pursuant to (c) below is required to accept residual from industrial treatment works sources not known at the time of permit application regardless of quality.
- (c) The following information shall be submitted in order to obtain a generic residual quality determination:
 - 1. For requests to process specific residuals, information shall be provided on the characteristics of the residual and analyses conducted in accordance with N.J.A.C. 7:14A-20.7(a)1 for the previous 12 month period, which shall be analyzed for mean, median and range for each parameter; and
 - 2. For blending requests, a process schematic shall be provided on how complete blending of residuals will be achieved as well as technical documentation on achievement of residual quality limitations pursuant to 40 CFR 503.13 (including mass balance calculations).

7:14A-20.12

Residual blending and distribution

- (a) Only exceptional quality residual generated and distributed in accordance with this subchapter shall be used for residual blending and distribution.
- (b) The storage of bulk exceptional quality residual in excess of 100 cubic yards, or the storage of material derived from exceptional quality residual in excess of 2,500 cubic yards, is prohibited except in accordance with a NJPDES permit.
- (c) On or before July 5, 2009, the operating entity of an existing residual blending and distribution site that is required to obtain a NJPDES permit pursuant to (b) above shall submit a complete permit application, or cease operation and remove all residual and material derived from residual.
- (d) An applicant for a residual blending and distribution permit shall submit the information required at N.J.A.C. 7:14A-4 and, in accordance with the applicable NJPDES Permit Technical Manual, shall demonstrate that the site is appropriate for residual blending and distribution, including a description of how the site is or will be managed. The demonstration shall include, at a minimum:
 - 1. A plot plan showing all marketable residual product blending and storage areas, including the dimensions of all storage areas indicated in feet, showing maximum storage pile height, length and width;
 - 2. A copy of a NJPDES stormwater permit, if applicable, or a written determination from the Department that a stormwater permit is not required;
 - 3. A copy of a Soil Erosion and Sediment Control Plan, certified by the local Soil Conservation District, or an equivalent Department-approved erosion control plan, developed by a person trained in soil erosion and sediment control planning, for the site or part of the site affected; and
 - 4. The maximum daily volume of exceptional quality residual proposed to be accepted, as well as the proposed maximum volume of exceptional quality residual and material derived from exceptional quality residual proposed to be stored at any one time.
- (e) In addition to the information required in (d) above, an applicant for a permit to store material derived from exceptional quality residual in excess of 10,000 cubic yards shall submit:
 - 1. An environmental assessment in accordance with N.J.A.C. 7:14A-20.6; and
 - 2. A proposed groundwater monitoring program in compliance with N.J.A.C. 7:9C and 7:14A-7. This requirement shall be waived if the applicant submits and the Department approves a plan to implement site institutional controls, such as impervious surfaces with runoff

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collection and management, such that there is no discharge to groundwater.

- (f) Subsection (b) through (e) above do not apply to operations in which all phases of handling, storing and blending occur in a completely enclosed setting.