ENVIRONMENTAL PROTECTION

WATER RESOURCE MANAGEMENT

Division of Water Quality

Sludge Quality Assurance

Proposed Readoption with Amendments: N.J.A.C. 7:14C and Appendix

Authorized By: Bob Martin, Commissioner, Department of Environmental Protection

Authority: N.J.S.A. 13:1D-9; 13:1E-1 et seq.; 58:10A-1 et seq.; 58:11-49 through 58; 58:11-64 et seq.

Calendar Reference: See Summary below for explanation of exception to calendar requirement.

DEP Docket Number:

Proposal Number:

Submit written comments by (60 days after publication) to:

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The Department of Environmental Protection (Department) requests that commenters submit comments on CD or DVD as well as on paper. Submittal of a CD or DVD is not a requirement. Submittals on CD or DVD must not be access restricted (locked or read only) in order to facilitate use by the Department of the electronically submitted comments. The Department prefers Microsoft Word 6.0 or above. Macintosh™ formats should not be used. Each comment should be identified by the applicable N.J.A.C. citation, with the commenter's name and affiliation following the comment.

This rule proposal document can be viewed or downloaded from the Department's web page at http://www.nj.gov/dep/rules.

The agency proposal follows:

Summary

As the Department has provided a 60-day comment period on this notice of proposal, this notice is excepted from the rulemaking calendar requirement pursuant to N.J.A.C. 1:30-3.3(a)5.

The Sludge Quality Assurance rules (SQAR) at N.J.A.C. 7:14C were scheduled to expire on April 24, 2011. The expiration date was extended by 180 days to October 21, 2011 pursuant to the Administrative Procedure Act, N.J.S.A. 52:14B-5.1c, as a result of the timely filing of this proposal to readopt the rules with amendments. The Department has reviewed the rules and determined that the rules continue to be necessary, reasonable and proper for their intended purpose.

As part of the development of this proposal to readopt N.J.A.C. 7:14C, the Department sought the input and recommendations of the Environmental Laboratory

Advisory Committee (ELAC). ELAC was established by the Department's Office of Quality Assurance for the purpose of obtaining input from a representative cross section of New Jersey certified laboratories on matters related to laboratory certification and practice. The committee is self governing and operates independently of the Department. (www.nj.gov/dep/oqa/elac.html) ELAC is composed of representatives from commercial, government, utility and not for profit public/private laboratories, as well as publicly owned treatment works and private industrial treatment works.

Pursuant to the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., and the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., the Department administers a regulatory program for the use and management of sludge generated by domestic and industrial treatment works in a manner that protects public health and the environment. Of fundamental importance is the need to control sludge quality. Specifically, N.J.S.A. 58:10A-6(f)(7) directs the Department to issue permits to limit concentrations of heavy metals, pesticides, organic chemicals and other contaminants in sludge in conformance with land-based sludge management criteria. The SQAR establish the conditions for sludge quality assurance reporting required of all domestic and industrial treatment works that generate sludge in the State, or that transport sludge into the State for use or disposal. The rules prescribe the method and frequency for reporting on the quantity, quality and management method of sludge generated by such treatment works. The requirements of SQAR are implemented through permits issued under the New Jersey Pollutant Discharge Elimination System (NJPDES) rules at N.J.A.C. 7:14A.

The SQAR were initially promulgated in October 1979. With the SQAR, the Department embarked on a major program of monitoring the quality and quantity of

sludge generated throughout the State by domestic and industrial treatment works. The information submitted by the treatment works with regard to their sludge since the SQAR were promulgated has been extremely useful to the Department in evaluating sludge management plans, and to the generators in developing appropriate sludge management alternatives.

The Department proposes to extend the domestic analytical exemption in the existing rules (applicable to Category 1 domestic treatment works that generate only domestic septage) to small generators with a permitted wastewater flow of less than or equal to 20,000 gallons per day (0.020 million gallons per day), provided that their sludge is removed to, and subsequently monitored as part of the sludge at, an off-site in-State treatment works treating domestic sewage. These generators will no longer be required to perform analyses, but will still be required to track how much sludge is removed and the management site that is used. Under the existing rules, small generators with a permitted wastewater flow less than or equal to 20,000 gallons per day must prepare and submit monitoring report forms any time during the reporting period, which in this case is the calendar year. Accordingly, it is necessary that the effective date for the expanded exemption be on the first day of a calendar year, to be consistent with the reporting period. The Department proposes that this expanded exemption will become operative on January 1, 2012.

The Department also proposes to require electronic submittal of monitoring reports, allow treatment works to analyze sludge by methods approved by the Department's Office of Quality Assurance, require a sludge sampling plan every five years as part of a NJPDES permit application, and update Department addresses.

Domestic Treatment Works

Domestic treatment works receive wastewater from industrial facilities, domestic wastes from private residences, and run-off from various sources that must be treated prior to discharge. Treatment results in an effluent that may be discharged, and sludge materials, including sewage sludge. The chemical composition and biological constituents of the sewage sludge depend upon the composition of the wastewater entering the treatment facilities and the subsequent treatment processes. In New Jersey, domestic treatment works generated just over 237,000 dry metric tons of sewage sludge for use or disposal in calendar year 2009.

The owners or operators of domestic treatment works have been required to submit information on sludge quantity and quality since 1980, when the SQAR first became effective. The parameters to be analyzed have been modified over the years. Under the existing rules, information on 18 heavy metals and selected chemical parameters is required to be submitted under the SQAR at a frequency from once a month to once a year, depending on the size of the domestic treatment works. Table 1 below lists these 18 parameters and the basis for monitoring the parameter. A sludge management method (that is, land application, surface disposal, or incineration) listed under the "Basis for Monitoring" column indicates that there is a numerical limit for that parameter for that management method in N.J.A.C. 7:14A-20, Standards for the Use or Disposal of Residual. Although there are not specific numerical limits in the NJPDES rules for total nitrogen, ammonia nitrogen, nitrate nitrogen, phosphorus, potassium, and calcium, these parameters are necessary to calculate agronomic rates for land application. In addition, total solids is necessary to convert the amount of sludge generated into dry metric tons as required by Federal and State regulations for sludge use or disposal.

TABLE 1

CURRENT SQAR REPORTING PARAMETERS

Heavy Metals and Selected Chemical Parameters	**Basis for Monitoring**
Arsenic	Land application
	Incineration
	Surface disposal
Beryllium	Incineration
Cadmium	Land application
	Incineration
Chromium	Incineration
	Surface disposal
Copper	Land application
Lead	Land application
	Incineration
Mercury	Land application
	Incineration
Molybdenum	Land application
Nickel	Land application
	Incineration
	Surface disposal
Selenium	Land application

Zinc	Land application
Total Nitrogen	Land application
Ammonia Nitrogen	Land application
Nitrate Nitrogen	Land application
Phosphorous	Land application
Potassium	Land application
Calcium	Land application
Total Solids	Dry weight conversion

The frequencies with which SQAR reports for the heavy metals and selected chemical parameters listed above in Table 1 are required to be submitted to the Department are based on the size of the domestic treatment works as follows:

- Category 1 domestic treatment works (permitted flow 0.099 million gallons per day (MGD) or less): annual reporting of heavy metals and selected chemical parameters.
- Category 2 domestic treatment works (permitted flow from 0.1 to 0.999 MGD): semi-annual reporting of heavy metals and selected chemical parameters.
- Category 3 domestic treatment works (permitted flow from 1.0 to 4.999 MGD): quarterly reporting of heavy metals and selected chemical parameters.
- Category 4 domestic treatment works (permitted flow equal to or greater than 5.0 MGD): monthly reporting of heavy metals and selected chemical parameters.

In addition to the above, all domestic treatment works in Categories 3 and 4 are required to submit annually an analysis for 114 inorganic and organic compounds (known as a priority pollutant scan) on Waste Characterization Reports.

Industrial Treatment Works

The SQAR also apply to industrial treatment works that generate sludge. Whether a particular generator is classified as an industrial treatment works or a domestic treatment works is determined largely by the type of wastewater treated. If a treatment works treats both industrial process wastewater and domestic wastewater, the classification as an industrial treatment works or domestic treatment works depends on which wastewater contribution is greater. For instance, if a specific treatment works is treating an influent wastewater stream that is 49 percent process wastewater and 51 percent domestic wastewater, the facility would be classified as a domestic treatment works for the purpose of reporting under the SQAR.

An industrial treatment works is designed to treat the specific type of wastewater generated by the industrial processes used at the facility, but it may also treat domestic sewage (that is, sanitary wastewater) generated on-site. The chemical composition of the sludge varies greatly among different treatment works because of the many different industrial processes from which wastewaters are generated. This can be true even for sludge generated at similarly classified treatment works. For example, sludge generated at two different public water treatment systems can vary in quality due to the water source as well as additives used in the treatment process.

The Department has established a database containing the sludge management practices of industrial treatment works using reported information on the quantity and

quality of industrial sludge generated. However, a large number of industrial treatment works discharge their effluent directly into a local municipal sewer system. In many instances this discharge is subject to a permit issued by the local domestic treatment works, which has been delegated that responsibility by the Department. In such instances, the industrial treatment works are required to perform the quality and quantity analyses, but are not required to report information on their sludge quantity and quality to the Department. Although all facilities that generate sludge must comply with the sludge quality and quantity requirements of the SQAR, only those facilities that have Department-issued permits must submit reports to the Department.

Industrial treatment works are divided into categories based on annual sludge production. Categories 6 through 9 are industrial wastewater treatment systems, while Categories 10 through 13 are public water treatment systems. Categories 6 and 10 are systems with a sludge production greater than zero, but less than 290 dry metric tons per 365 day period. Categories 7 and 11 are systems with a sludge production equal to or greater than 290, but less than 1,500 dry metric tons per 365 day period. Categories 8 and 12 are systems with a sludge production equal to or greater than 1,500, but less than 15,000 dry metric tons per 365 day period. Categories 9 and 13 are systems with a sludge production equal to or greater than 15,000 dry metric tons per 365 day period.

The existing SQAR require that Category 6 and 10 facilities submit a Residuals Discharge Monitoring Report in any one calendar month during the year, Category 7 and 11 facilities submit a Discharge Monitoring Report in any one calendar month in each three-month period, Category 8 and 12 facilities submit a Discharge Monitoring Report in any one calendar month in each two-month period, and Category 9 and 13 facilities submit a Discharge Monitoring Report in each calendar month during the year. In

addition, the SQAR require that all industrial treatment works (Category 6 through 13) report information on the quantity of sludge removed by submitting an annual Residuals Waste Characterization Report and a monthly Residuals Transfer Report to the Department.

N.J.A.C. 7:14C-1.1 Scope

N.J.A.C. 7:14C-1.1 sets forth the scope of the rules. All domestic and industrial treatment works that generate sludge in the State of New Jersey or that transport sludge into the State for use or disposal must comply with the rules. The Department proposes to readopt this section without amendment.

N.J.A.C. 7:14C-1.2 Purpose

N.J.A.C. 7:14C-1.2 sets forth the reasons for the promulgation of the rules, which are to determine the degree of chemical contamination present in sludge produced by domestic and industrial treatment works, to maintain a data system used in providing information for a program to reduce the discharge of pollutants from sludge into the environment, and to maintain a data system providing information for environmentally sound sludge management.

The rules establish reporting procedures to monitor the quality and quantity of sludge generated throughout the State by domestic and industrial treatment works. Land-based options for sludge use or disposal have a direct effect on air, soil, surface water and ground water quality. The rules provide the Department with the data necessary to determine the amount of sludge being generated in the State, the quality of the sludge,

and the degree of contaminants present in the sludge, and the methods of sludge use or disposal. The Department proposes to readopt this section without amendment.

N.J.A.C. 7:14C-1.3 Definitions

N.J.A.C. 7:14C-1.3 sets forth the definition of terms used throughout the rules.

The Department proposes to amend the definition of "biochemical oxygen demand" so the defined term precedes the acronym "BOD," and the definition of "chemical oxygen demand" so the defined term precedes the acronym "COD," consistent with the formatting of other defined terms.

The Department proposes to amend the definition of "industrial treatment works," "publicly owned treatment works," "SIU pretreatment works," "sludge," and "suspended solids" to make the definitions of these terms consistent with the definitions of the same terms in the NJPDES regulations at N.J.A.C. 7:14A-1.2. The proposed amendment to the definition of "sludge" clarifies that sludge is the solid residue generated from the physical, chemical or biological treatment of domestic or industrial wastewaters, and that the facility does not need to perform more than one of these types of treatment in order for a material to be considered sludge. Although the Department proposes to amend the definition of "suspended solids" to be consistent with the NJPDES definition, the SQAR definition does not refer to the United States Environmental Protection Agency (USEPA) publication "Methods for Chemical Analysis of Water and Wastes" as the NJPDES definition does. The SQAR definition refers to 40 CFR Part 136, which contains guidelines establishing test procedures for the analysis of pollutants. The Federal regulation is more current than the publication.

The Department proposes to amend the definition of "process wastewater" to remove the unnecessary quotation marks around the word leachate.

The Department proposes a new definition of "sludge use or disposal practice." This definition is consistent with similar definitions of "sewage sludge use or disposal practice" and "residual use or disposal practice," which are found in the NJPDES rules at N.J.A.C. 7:14A-1.2 and the Federal definitions for the National Pollutant Discharge Elimination Systems (NPDES) at 40 CFR 122.2. For the purposes of the SQAR, the definition needs to be worded so that it is broad enough to include both domestic and industrial sludge. "Sewage sludge use or disposal practice" is too narrow a definition since sewage sludge, by definition, does not include industrial sludge. The NJPDES term "residual use or disposal practice" more accurately represents the definition that the Department is looking to add, because it includes both domestic and industrial sludge; however, the term "residual" does not appear in the SQAR. Since "sludge" is a component of the broader term "residual," the Department is proposing to substitute "sludge" for "residual" in the term as defined for the SQAR.

The Department proposes to amend the definition of "sludge-only facility." Proposed amendments would delete the phrase "treating domestic sewage" since the rules and this definition are applicable to both domestic and industrial facilities, and replace the undefined term "methods of sludge use or disposal" with the defined term "sludge use or disposal practice."

N.J.A.C. 7:14C-1.4 Analytical procedures

N.J.A.C. 7:14C-1.4 sets forth the analytical procedures that NJPDES permittees must follow when they test sludge to determine its organic and inorganic content. N.J.A.C. 7:14C-1.4(b) requires that sludge analyses must be performed in accordance with Federal rules at 40 CFR 503.8. Under N.J.A.C. 7:14C-1.4(c), if a specific test procedure is not specified in 40 CFR 503.8, then any applicable test procedure in "Test Methods for Evaluating Solid Waste," EPA Publication SW-846, may be used. N.J.A.C. 7:14C-1.4(c) also provides that a treatment works and a laboratory may use an alternative test procedure other than those specified at 40 CFR 503.8 or Test Methods for Evaluating Solid Waste only upon specific written permission from the Department's Office of Quality Assurance (OQA). The Department proposes to amend the rule to allow a domestic or industrial treatment works to use any appropriate method for sludge analysis for which the laboratory is certified by the OQA. This amendment will not change the practice under the rule, since certification by OQA is, in effect, a written approval for the laboratory to use a particular test method. The Department's New Jersey Sludge Sampling and Analytical Guidance Document will be available on the Department's website at http://www.nj.gov/dep/dwq/sludge.htm on or before the operative date of the amendments. The guidance document contains a list of the analytical procedures that the OQA has determined are applicable to sludge analysis, for which it can certify laboratories. In addition, the Department proposes to delete the reference in the rule to the USEPA's "NPDES Compliance Inspection Manual." The USEPA last updated the manual in 2004; accordingly, it does not include new sampling techniques that have been developed, or may be developed in the future. The New Jersey Sludge Sampling and Analytical Guidance Document contains not only the Federal sampling methods, but also other methods that the Department's OQA has determined

are applicable to sludge, pursuant to N.J.A.C. 7:18, Regulations Governing the Certification of Laboratories and Environmental Measurements (Laboratory Certification rules). The OQA is able to certify laboratories for sludge sampling methods that are more current than are contained in the USEPA manual.

The Department proposes to amend N.J.A.C. 7:14C-1.4(h) to simplify the rule and to clarify that a laboratory must be certified by OQA to perform the analytical procedures required under the SQAR.

N.J.A.C. 7:14C-1.5 Reporting categories

N.J.A.C. 7:14C-1.5 identifies the reporting categories for treatment works. Domestic treatment works are categorized based upon their size. Industrial treatment works are categorized based upon the amount of sludge they produce. The Department proposes to readopt this section without amendment.

N.J.A.C. 7:14C-1.6 Sampling procedures

N.J.A.C. 7:14C-1.6 establishes the procedures for collecting samples of sludge at treatment works. The Department proposes to amend N.J.A.C. 7:14C-1.6(b) to correct a cross-reference relating to the applicable reporting requirements for sludge analysis by industrial treatment works. In addition to requiring a sludge sampling plan when unusually high or low pollutant concentration data suggest that a sampling plan and analysis may be inadequate, the Department proposes to amend N.J.A.C. 7:14C-1.6(c) to require a sludge sampling plan to be submitted every five years as part of a NJPDES permit application. This is consistent with N.J.A.C. 7:14A-2.7(a) in the NJPDES rules, which states that all NJPDES permits shall be issued for fixed terms not to exceed five

years. The Department uses the sludge sampling plans to assist it when issuing NJPDES permits.

The Department proposes to amend N.J.A.C. 7:14C-1.6(c)3 to delete reference to the Field Sampling Procedures Manual. The Department proposes to require permittees to demonstrate that quality assurance and quality control requirements and procedures for sampling and analysis, including decontamination procedures, will be performed consistent with applicable analytical methods, in accordance with N.J.A.C. 7:14C-1.4, Analytical procedures. The applicable analytical methods are those identified by the OQA in accordance with the Laboratory Certification rules, N.J.A.C. 7:18, for which laboratories can be certified. The methods will also be contained in the New Jersey Sludge Sampling and Analytical Guidance Document.

The Department proposes to amend N.J.A.C. 7:14C-1.6(d)2 to replace the requirement that all sludge samples be chilled at four degrees Celsius with the requirement that sludge samples be chilled, if necessary, in accordance with the applicable analytical method in accordance with N.J.A.C. 7:14C-1.4, Analytical procedures. Preservation requirements vary depending upon the parameter being analyzed for, and can more appropriately be found in the applicable analytical method.

The Department proposes to amend N.J.A.C. 7:14C-1.6(d)3 to add a cross-reference to N.J.A.C. 7:14C-1.8(d). N.J.A.C. 7:14C-1.6(d)3 provides that a minimum of five grab samples of equal volume are to be collected to form a composite sample when reporting the information required under N.J.A.C. 7:14C-1.8(c) for domestic treatment works, and N.J.A.C. 7:14C-1.9(c) or (d) for industrial treatment works. N.J.A.C. 7:14C-1.8(c) and (d) and 1.9(c) and (d) refer to parameter lists located in the Appendix, Tables I through VIII, for which domestic and industrial treatment works are required to analyze.

The results are then submitted on a Discharge Monitoring Report or Waste Characterization Report. The Department intends for all analyses performed under N.J.A.C. 7:14C-1.8(c) or (d) and N.J.A.C. 7:14C-1.9(c) or (d) to be done using composite samples.

The Department proposes to amend N.J.A.C. 7:14C-1.6(e) to update the mailing address for the Department's Bureau of Pretreatment and Residuals.

N.J.A.C. 7:14C-1.7 General reporting requirements

N.J.A.C. 7:14C-1.7 includes the requirements for all domestic and industrial treatment works with regard to submitting Residuals Transfer Reports, Waste Characterization Reports and Discharge Monitoring Reports (or other Department approved forms). This section also includes requirements for notification to the Department in the event of any noncompliance with the land-based sludge management criteria, and the Department's right to require additional analyses when necessary to protect public health or the environment.

The Department proposes to amend N.J.A.C. 7:14C-1.7(a), (b) and (e) to update addresses.

As part of a Department-wide initiative to mandate electronic reporting of all data submittals, the Department proposes to amend N.J.A.C. 7:14C-1.7(b) to require mandatory electronic submittal of monitoring report forms. The Department administers the NJPDES Discharge Monitoring Report Online Service, which is a fully operational electronic reporting system with all the necessary legal, security, and electronic signature functionalities that provide a completely paperless reporting system. The Department anticipates that mandating electronic reporting will improve reliability of data entry, and

decrease the number of reports being submitted late or being lost. The Department's web-based system streamlines reporting, which improves the quality of data flow, reduces reporting costs, offers on-line availability of reports and their processing status, and improves the Department's efficiency in data analysis, compliance assessment, and decision-making. Tables 2 and 3 below show the numbers of SQAR facilities by category that currently submit their forms electronically.

TABLE 2

DOMESTIC TREATMENT WORKS THAT CURRENTLY SUBMIT SQAR REPORTS ELECTRONICALLY

SQAR Category	Electronic Data Interchange (EDI) Participants	No. of Facilities	EDI Participants as a Percent of Category
Exempt	25	191	13
1	14	79	18
2	12	67	18
3	10	56	18
4	19	46	46

TABLE 3

INDUSTRIAL TREATMENT WORKS THAT CURRENTLY SUBMIT SQAR REPORTS ELECTRONICALLY

SQAR Category	EDI Participants	No. of Facilities	EDI Participants as a

			Percent of Category
6	17	84	20
7	2	12	17
8	3	8	38
9	5	13	38
10	4	28	14
11	0	7	0
12	0	3	0
13	3	5	60

The overall percentages of domestic treatment works and industrial treatment works voluntarily participating in electronic data reporting is 18 percent and 21 percent, respectively. The Department proposes to phase in the mandatory electronic reporting, based on SQAR reporting category. The Department will send notices to facilities by category, rather than to all facilities at once, advising them of the electronic reporting requirement. A domestic or industrial treatment works will have 180 days after receipt of a written notification to enroll in the electronic reporting program. Additional stakeholder outreach and training sessions, specific to the Department's electronic reporting program, will be scheduled to ensure successful implementation of paperless reporting. As discussed in the Economic Impact, internet access and Microsoft Excel, a readily available software product, will be required.

N.J.A.C. 7:14C-1.8 Specific reporting requirements for domestic treatment works

N.J.A.C. 7:14C-1.8 establishes the reporting requirements for all domestic treatment works (Categories 1 through 4). Included are the requirements for completion

and submission of Residuals Transfer Report, Waste Characterization Report and Discharge Monitoring Report forms.

The Department proposes to delete N.J.A.C. 7:14C-1.8(a)3. This condition requires that, by each individual sludge management method, the respective quantities of domestic sewage sludge removed for use or disposal be reported every year on an annual Waste Characterization Report form. The Department has determined that it is unnecessary to collect this level of detail on the annual Waste Characterization Report form since this same information is being collected on the Residuals Transfer Report form. The Department proposes to renumber existing N.J.A.C. 7:14C-1.8(a)4 as N.J.A.C. 7:14C-1.8(a)3.

The Department proposes to amend N.J.A.C. 7:14C-1.8(d) to replace the requirement that treatment works analyze domestic wastewater sludge in one calendar month (beginning on the first day of the calendar month and ending on the last day of the calendar month) per year with the requirement that the treatment works sample once per year. The existing language could be misinterpreted as requiring samples to be obtained throughout an entire calendar month. Such a long sampling time would decrease the integrity of the sample because of the volatile nature of many of the compounds being analyzed. Together with the amendment to N.J.A.C. 7:14C-1.6(d)3, which references N.J.A.C. 7:14C-1.8(d), these changes are intended to clarify the sampling protocol for Appendix Table II through VI compounds.

N.J.A.C. 7:14C-1.9 Specific reporting requirements for industrial treatment works

N.J.A.C. 7:14C-1.9 establishes the reporting requirements for all industrial treatment works (Categories 6 through 13). Included are the requirements for completion

and submission of Residuals Transfer Report, Waste Characterization Report and Discharge Monitoring Report forms. Specific requirements for facilities in Categories 6 through 13 that do not have a NJPDES permit (under N.J.A.C. 7:14A) are also found in this section.

The Department proposes to delete N.J.A.C. 7:14C-1.9(a)3 for the reason discussed above in the summary of N.J.A.C. 7:14C-1.8(a)3, and to renumber existing N.J.A.C. 7:14C-1.9(a)4 as N.J.A.C. 7:14C-1.9(a)3.

N.J.A.C. 7:14C-1.10 Access

N.J.A.C. 7:14C-1.10 establishes that the owner or operator of a domestic or industrial treatment works shall provide access to the treatment works' premises and related records to the Department or its designated agent. The Department proposes to readopt this section without amendment.

N.J.A.C. 7:14C-1.11 Non-compliance

N.J.A.C. 7:14C-1.11 establishes that a failure to submit the required sludge reports in the manner prescribed by this chapter, or any willful falsification of information contained in these reports shall constitute a violation of the New Jersey Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq.

The Department proposes to amend this section to remove reference to N.J.A.C. 7:19-6.14 because this penalty provision was previously repealed. (See 26 N.J.R. 4912 (a) and 27 N.J.R. 1265(a).) The penalty for failing to comply with this rule is specified at N.J.A.C. 7:14-8.

N.J.A.C. 7:14C-1.12 Implementation

N.J.A.C. 7:14C-1.12 establishes when new domestic and industrial treatment works, as well as out of State treatment works that transport sludge into the State for use or disposal, are required to comply with this chapter. The Department proposes to readopt this section without amendment.

N.J.A.C. 7:14C-1.13 Exemptions and reductions in reporting and analytical requirements

N.J.A.C. 7:14C-1.13 establishes exemptions and reductions in reporting requirements for certain domestic and industrial treatment works. Specifically, the rule exempts Category 1 domestic treatment works that generate only domestic septage from submitting a Waste Characterization Report form as required by N.J.A.C. 7:14C-1.8(a) and to perform analyses and submit a Discharge Monitoring Report form as required by N.J.A.C. 7:14C-1.8(c). The Department proposes to amend N.J.A.C. 7:14C-1.13(a)1 to expand the analytical and reporting exemption to small sewage sludge generators that have a permitted wastewater flow of less than or equal to 20,000 gallons per day (0.020 million gallons per day) that remove their sludge to an off-site in-State treatment works treating domestic sewage. These generators will no longer be required to perform analyses, but will still be required to track how much sludge is removed and the management site that is used. (See N.J.A.C. 7:14C-1.8(b).) There are approximately 114 small domestic treatment works in the State that would qualify for the proposed exemption. Thirty-two of these are associated with educational institutions. Together, these 114 domestic treatment works generate less than one percent of the total sludge produced in the State. However, the Department has determined that a disproportionate

amount of staff time is spent resolving reporting issues associated with these small treatment works. The Department does not anticipate that the expansion of the exemption will have an impact on the environment, in light of the small quantity of sludge that these facilities generate.

The proposed exemption from analytical requirements is further appropriate due to the likelihood that the analysis will be inaccurate for these small facilities. Many analytical methods applicable to sludge instruct the laboratory to prepare a specific known weight of a solid material for analysis. However, the sample aliquot may contain significant amounts of moisture. Therefore, laboratories must determine the percentage of solids in each sample first, then use that information to select a portion of the sample for analysis. In other words, the lower the percent solids of a sludge, the larger the sample size must be. This system of using sufficient sample size is most practical down to a total solids in the range of one percent. Below this value, the sample size becomes prohibitively large for analytical processing. Since a majority of domestic treatment works with a permitted wastewater flow of less than or equal to 20,000 gallons per day generate a sludge with low total solids (that is, less than one percent), the Department has determined that it is appropriate to exempt them from analytical requirements, provided that their sludge will be ultimately sampled as part of the total sludge generated at a regional treatment works. As domestic treatment works increase in size beyond 20,000 gallons per day, the percent solids of the sludge increases, thereby allowing an accurate sample to be obtained that can reasonably be prepared using the required methods.

Under N.J.A.C. 7:14C-1.13(a)2, the exemption from analysis and reporting would not apply if the quantity or quality of pollutants in the discharge going into the treatment works changes such that the sludge coming out of the treatment works would violate

land-based sludge management criteria. The Department would require the treatment works, even if limited in size, to analyze its sludge and submit reports to the Department. This is consistent with the NJPDES rules at N.J.A.C. 7:14A-6.7(b), which requires NJPDES permittees to notify the Department if an alteration or addition at a facility could significantly change the nature or increase the quantity of pollutants discharged, or may result in noncompliance with permit requirements. Under proposed new N.J.A.C. 7:14C-1.13(a)2i the treatment works operator must report to the Department within five days any change in the quantity or quality of pollutants in the discharge into the treatment works that would cause the sludge from the treatment works to violate the land-based sludge management criteria. The reporting is necessary in order that the Department is aware of conditions that could affect the treatment works' compliance with the SQAR. Existing N.J.A.C. 7:14C-1.13(a)2 through 4 are proposed to be recodified as (a)3 through 5.

The Department proposes to amend N.J.A.C. 7:14C-1.13(b)3iii to correct a cross-reference. The existing condition indicates that an industrial treatment works may request an exemption or reduction in the information required to be submitted where the industrial treatment works can demonstrate that an exemption or reduction is warranted based on the criteria in N.J.A.C. 7:14C-1.13(b)3. The criteria for obtaining an exemption or reduction are outlined in N.J.A.C. 7:14C-1.13(b)4.

The Department proposes to amend the heading to the section because the section exempts certain facilities from both reporting and analyses.

N.J.A.C. 7:14C-1.14 Severability

N.J.A.C. 7:14C-1.14 establishes severability among provisions of this chapter. The Department proposes to readopt this section without amendment.

Appendix

The Appendix to N.J.A.C. 7:14C consists of eight tables containing parameters that could potentially be analyzed for, depending upon the type and quantity of sludge removed for use or disposal. The Department proposes to readopt the Appendix without amendment.

Social Impact

The rules proposed to be readopted with amendments will continue to provide a reasonable and necessary program for sludge quality assurance reporting by domestic and industrial treatment works that generate sludge in the State or transport sludge into the State for use or disposal. The rules governing the sampling and analysis of domestic and industrial sludge ensure that domestic and industrial treatment works maintain a sludge quality that is commensurate with their chosen management alternative. The rules will enable the Department and generators to make environmentally sound sludge management decisions in a manner that protects the public health, welfare, and safety. The Department uses the sludge quality data obtained under the rules to inform the public about the quality of sludge in New Jersey, in part through the sludge quality production data that it posts on its website. (See www.nj.gov/dep/dwq/sludge.htm.)

The proposed amendments extend the domestic analytical exemption to small generators with a permitted wastewater flow of less than or equal to 20,000 gallons per day (0.020 mgd) that remove their sludge to a treatment works treating domestic sewage.

The Department has determined that since the 114 small domestic treatment works that would qualify for this new exemption generate less than one percent of the total sludge produced in the State, this exemption would not have an adverse effect on public health, welfare, and safety or the environment. These domestic treatment works are exempt only if they transport their sludge to a larger treatment works. Therefore, their sludge will ultimately be tested as part of the larger treatment works sludge production.

Domestic sewage may be treated (or partially treated) at its source in such devices as septic tanks and portable toilets, or it may be treated in publicly owned, privately owned, or State- or Federally-owned treatment works. A treatment works may treat domestic sewage alone or in combination with liquid industrial wastewater. A treatment works may also treat industrial wastewater alone. Each treatment works treats the wastewater to a certain level of treatment (that is, primary, secondary or tertiary). Each increased level of treatment (to meet more stringent effluent limitations mandated by statute) results in increased amounts of sludge as well as increased amounts of pollutants being removed from the influent. The rules proposed to be readopted with amendments will continue to provide the regulatory mechanism for the collection of basic data on sludge characteristics (quantity and quality), which, as stated above, will enable the Department and sludge generators to make environmentally sound sludge management decisions that protect the public health, welfare, and safety.

Economic Impact

The rules proposed to be readopted with amendments will continue to require domestic treatment works to monitor and report sludge quantity and quality information at a level that is proportional to the amount of wastewater treated, and will require

industrial treatment works to monitor and report using a similar approach. Larger treatment works are required to report more frequently than smaller treatment works.

Over the last 30 years, there have been many changes to the SQAR. Some of these changes have increased reporting in anticipation of Federal action to adopt standards for the use or disposal of sludge. However, many of these changes have sought to reduce monitoring and reporting burdens on the regulated community when the Department has determined it to be possible. Over time, the Department has continually looked at the rules to ensure that reporting burdens and costs are commensurate with the risk associated with the use or disposal of sludge.

At N.J.A.C. 7:14C-1.7(b), as part of a Department-wide initiative, the Department proposes to establish the requirement for mandatory electronic submittal of monitoring report forms. The Department believes this proposed amendment will result in a positive economic benefit. Savings will include the cost of paper used to print the monitoring report forms, the cost of the envelopes used to mail the monitoring report forms, and the cost of the postage and handling. The Department believes that most, if not all, wastewater treatment plants have a computer, internet access, and a working email address. Access to Microsoft Excel is also required for electronic submittal of report forms. Microsoft offers Excel on its website for $139.99 (www.microsoft.com). These things, along with an executed agreement to do business electronically with the Department, would allow permittees to submit monitoring report forms to the Department electronically. If a wastewater treatment plant does not have a computer with access to the internet on site, public libraries offer internet service where monitoring report forms could be submitted.

As discussed in the Summary above, domestic treatment works are divided into categories based on their permitted flow, while industrial treatment works are divided into categories based on their annual sludge production. These categories are used to identify the monitoring and reporting frequencies for sludge produced by domestic and industrial treatment works.

There are 160 industrial treatment works in Categories 6 through 13. Table 4 below provides the current number of industrial treatment works by category.

TABLE 4

CURRENT INDUSTRIAL TREATMENT WORKS

Category	Number of Treatment Works	Number of Required Analyses Per Year
6	84	1
7	12	4
8	8	6
9	13	12
10	28	1
11	7	4
12	3	6
13	5	12

An industrial treatment works in Categories 6 through 9 is required to analyze only those compounds in the Appendix that are used, stored, manufactured, or produced at the facility. Since the parameters often vary, the costs will vary as well. The

Department has contacted several industrial treatment works and found that the typical sludge analytical cost for most industrial treatment works is less than $1,000 per sample. Out of the 117 industrial treatment works in Categories 6 through 9 submitting sludge data to the Department, there are only 33 industrial treatment works in these categories required to perform more than an annual analysis. These are primarily the 33 largest industrial sludge generators submitting results under the SQAR, with the largest eight required to submit the results of six analyses per year. The 13 industrial treatment works submitting monthly monitoring reports are required to perform analyses on primarily nutrients-only as part of the General NJPDES Permit for the land application of food processing residuals. Based upon a survey of representative industrial treatment works in these categories, sludge analytical costs are not considered to be a significant expense to the industry. Nevertheless, the Department believes that the cost in reporting for these industrial treatment works in these categories is offset by the need for the Department to obtain accurate information on the quality of sludge generated by the facilities. In addition, N.J.A.C. 7:14C-1.13(b) provides broad reduction and exemption opportunities for industrial treatment works for, among other things, frequency of removal or parameters that may not be consistently detected or detected at levels that are not considered to be a concern. The Department will continue to work with these sludge generators upon renewal of their NJPDES permits to minimize cost impacts where reductions or exemptions can be justified.

There are 43 public water treatment systems in Categories 10 through 13 as shown in Table 2 above. The analytical cost per sample for these categories is similar to the costs for domestic treatment works discussed below.

There are 439 domestic treatment works in Categories 1 through 4. Table 5 below provides the current number of domestic treatment works by category.

TABLE 5

CURRENT DOMESTIC TREATMENT WORKS

Category	Number of Treatment Works	Number of Required Analyses Per Year
Exempt	191*	0
1	79	1
2	67	2
3	56	4
4	46	12

* This number includes 77 domestic septage only facilities that are already exempt from performing sludge analyses and the 114 domestic treatment works less than or equal to 20,000 gpd proposed to be exempted.

As shown in Table 5, the smallest domestic sludge generators are currently required to do an annual analysis. Based upon a survey of representative domestic treatment works in these categories, these facilities also typically pay a New Jersey certified laboratory to perform sampling. The total cost for annual sampling and analysis has been determined to be about $500.00 per year. The largest generators are required to do monthly testing, and typically do the sampling themselves. The total cost for monthly analysis is approximately $350.00 per sample. In addition, the largest treatment works

are required to perform an annual priority pollutant scan, which costs about $800.00. Therefore, the total cost for the largest domestic sludge generators is about $5,000 a year.

The proposed amendments will result in the elimination of submitting a Discharge Monitoring Report and a production Waste Characterization Report form for qualifying small domestic sludge generators that have a permitted flow less than or equal to 20,000 gpd that remove their sludge to an off-site in-State treatment works treating domestic sewage. While these generators will no longer be required to perform sludge analyses, they will still be required to track how much sludge is removed and the management site that is used. There are approximately 114 generators eligible for the exemption which would eliminate 114 Discharge Monitoring Reports and 114 production Waste Characterization Reports. The typical annual sludge analytical cost for the eligible Category 1 domestic wastewater treatment systems is approximately $500.00. While the monetary savings is relatively small compared to a facility's operating budget, there is also a time savings in not having to complete the Discharge Monitoring Reports and production Waste Characterization Reports. Thus, this change will provide a positive economic impact for small domestic treatment works, without adversely affecting public health or the environment.

The Department believes that the rules proposed for readoption with amendments will make the SQAR program more efficient and easier to implement for both the Department and the regulated community.

Environmental Impact

The Department expects that the SQAR, as proposed to be readopted with amendments, will continue to have positive environmental impacts.

The sludge quality information obtained under the rules will continue to be utilized by the Department and the various treatment works to develop acceptable sludge management alternatives. Sludge generators are required to report the total volume of sludge delivered to each separate management alternative. This allows better tracking and verification with the management site's reports (required to be submitted under the SQAR, or as may be required under the NJPDES rules at N.J.A.C. 7:14A-20, depending on the terms of the facility's NJPDES permit). Submitting information for sludge removed as total quantity per sludge management alternative facilitates cross-checking against the records of receipt of the management site.

Land-based options for sludge use or disposal have a direct effect on the environment. Accordingly, to the extent that the rules improve the quality of the sludge, the rules have a positive environmental impact. As sludges vary in composition, according to the type of wastewater treated, information on the nature and concentration of contaminants of concern is crucial in order to ensure that the most cost effective and sound land-based alternatives are chosen.

The information that the rules require has shown that sludge quality has improved over time. Thus, the quantity of pollutants entering the air, land and water via various management methods has decreased over time. In addition, imposing cradle to grave tracking of sludge generation has resulted in fewer surface disposal sites (stockpiles, lagoons) and illegal discharges.

The rules proposed for readoption with amendments include an analytical reporting exemption for domestic treatment works that have a permitted wastewater flow less than or equal to 20,000 gallons per day (0.020 mgd) that remove their sludge to an off-site in-State treatment works treating domestic sewage. The exemption of the 114

domestic treatment works that qualify for the proposed exemption is not expected to have any impact upon public health, welfare, and safety or the environment since these facilities generate less than one percent of the total sludge produced in the State. Sludge removed from these small facilities must be removed to a treatment works treating domestic sewage where the sludge becomes a part of the sludge produced by the receiving treatment works treating domestic sewage, which is separately sampled and tested under the SQAR.

The rules proposed for readoption with amendments will continue to have a positive environmental impact within the State by ensuring that sludge generated or managed in the State by domestic or industrial treatment works is tested for various pollutants. The proposed amendments will enable the Department to more effectively administer the SQAR by ensuring the availability of necessary information while at the same time relieving facilities of unnecessary reporting requirements.

Federal Standards Analysis

Executive Order No. 27 (1994) and N.J.S.A. 52:14B-1 et seq. (P.L. 1995, c.65) require State agencies that adopt, readopt, or amend State regulations that exceed any Federal standards or requirements to include in the rulemaking document a Federal standards analysis. Some of the proposed SQAR requirements regarding sewage sludge (that is, sludge generated by domestic treatment works) may be considered more stringent than corresponding Federal sludge quality provisions. However, there is no comparable Federal program for testing industrial sludge.

In 1993, under the authority of Section 405(d) and (e) of the Clean Water Act, the USEPA promulgated Federal sludge management regulations at 40 CFR Part 503. The

Federal regulations established general requirements, pollutant limits, management practices, and operational standards for the final use or disposal of sewage sludge generated during the treatment of domestic sewage in a treatment works. The USEPA established a monitoring frequency, from annual to monthly, based upon the metric tons of sewage sludge generated by the domestic treatment works on an annual basis. The Department subsequently incorporated the provisions of the Federal rule for land application into the NJPDES regulations at N.J.A.C. 7:14A-20.

The Federal regulations at 40 CFR Part 503 also require all Publicly Owned Treatment Works with a wastewater design flow over one million gallons per day (MGD) to submit basic information on sludge quantity and quality (publicly owned treatment works under one MGD are required to perform analyses, but not to report the results). The parameters required to be monitored under Federal regulation are included under N.J.A.C. 7:14C, Table I of the Appendix. However, Table I includes additional parameters not required to be monitored under the Federal rule. Two of these parameters are potassium and calcium. The Department uses both potassium and calcium data to determine the agronomic rate for land application under N.J.A.C. 7:14A-20. The cost of performing these two additional analyses is estimated to be less than $50.00 per sample. Therefore, considering that data for potassium and calcium are necessary to maintain a record of typical concentrations expected for these parameters in order to determine agronomic rates, the Department has determined that the benefit of obtaining the data justifies the additional cost. In addition, the Appendix, Table I includes the requirement for some domestic treatment works to monitor for radionuclides and/or dioxins and PCBs on a case-by-case basis. However, in order to require certain facilities to monitor for these parameters, the Department will set forth the basis in a NJPDES permit issued

pursuant to N.J.A.C. 7:14A. Therefore, any domestic treatment works required to monitor for these parameters will have an opportunity to comment pursuant to procedures set forth at N.J.A.C. 7:14A.

The USEPA, under 40 CFR Part 503, does not require the analysis of additional parameters, such as volatile organics, acid extractables, base-neutrals, pesticides and PCBs. The rules proposed for readoption with amendments are more stringent than the Federal requirements in that the rules require some domestic treatment works to perform analyses for these parameters. The SQAR only require domestic treatment works with a design flow equal to or greater than one MGD to submit an annual priority pollutant scan for these parameters. This is more stringent than the current Federal requirements at 40 CFR Part 503, but is consistent with Federal rules at 40 CFR Part 122. (See 60 Fed. Reg. 62570-62575 (December 6, 1995).) In addition, the Department is retaining the requirement for domestic treatment works with a design flow greater than one MGD to submit a priority pollutant scan because N.J.A.C. 7:14A-20.5 requires treatment works to comply with standards, including standards for some of the parameters on a priority pollutant scan indicated above, for sludge use or disposal identified in the USEPA's Technical Support Documents for Land Application and Surface Disposal. (See 29 N.J.R. 2127-2128.)

As stated above, the USEPA established sludge monitoring frequencies based upon the dry metric tons of sewage sludge generated by the domestic treatment works. The Department has established consistent monitoring requirements in its sludge use or disposal rules at N.J.A.C. 7:14A-20. However, for the purpose of determining reporting frequency under the SQAR for generators, existing N.J.A.C. 7:14C establishes the frequency of monitoring based on the design flow of the domestic treatment works. The

monitoring frequencies at N.J.A.C. 7:14C are at least as stringent as the Federal rules. For some domestic treatment works, the reporting frequencies under N.J.A.C. 7:14C are more stringent than required under the Federal regulations.

The Department considered changing the reporting method for domestic treatment works from wastewater flow to dry metric tons of sludge produced, but rejected the idea. Approximately 34 percent of domestic treatment works, including most of the largest domestic treatment works, would have been eligible for a reduction in reporting the residuals Discharge Monitoring Report required under N.J.A.C. 7:14C-1.8(c) if the method of determining the SQAR categories were changed. The Department does not believe that current demographics for the State support such a change at this time. The Department believes that the current more conservative reporting structure is warranted, in light of the State's population density. However, in contrast, the Department does believe that an exemption for the smallest 114 domestic generators is warranted. This number represents about 30 percent of the domestic treatment works universe currently required to perform analyses under the rules.

As stated above, there is no comparable Federal program for monitoring the quality of sludge generated by industrial treatment works. In developing its rules for residual use or disposal at N.J.A.C. 7:14A-20, the Department used standards established by Federal rule at 40 CFR Part 503 for sewage sludge for all nonhazardous sludge. This approach is consistent with the 1987 amendments to the Clean Water Act (Section 405(f)), as well as with N.J.S.A. 58:10A-4 and 6. (See 28 N.J.R. 389 (February 5, 1996).) The Department believes its program requiring data on the quality of sludge generated by industrial treatment works is necessary to ensure that the land-based management of the

industrial sludge will not have adverse effects on air, surface water and ground water, or human health.

Where possible, the Department has established requirements based on the size of the treatment works. Where the SQAR are more stringent than Federal rules, the Department has determined that the need for the additional data is necessary to ensure that land-based sludge management alternatives will not have adverse effects upon public health or the environment.

Jobs Impact

The rules proposed for readoption with amendments will continue to have a positive environmental impact within the State by ensuring that sludge generated or managed in the State by domestic or industrial treatment works is tested for various pollutants. Consequently, the employment opportunities that these requirements may have created will continue as well.

The rules proposed for readoption with amendments include a requirement at N.J.A.C. 7:14C-1.7(b) that all monitoring reports be submitted to the Department electronically. In addition, a proposed amendment at N.J.A.C. 7:14C-1.13(a)1 provides for an analytical reporting exemption for domestic treatment works that have a permitted wastewater flow less than or equal to 20,000 gallons per day (0.020 mgd) that remove their sludge to an off-site in-State treatment works treating domestic sewage.

Mandatory electronic submittal may result in an increase in the need for computer-related services at wastewater treatment plants. Nevertheless, the resulting job impact to wastewater treatment plants from the proposed amendment is not anticipated to be significant since the only requirements are for treatment works to have access to a

computer, the internet, email and Microsoft Excel. The Department believes that there will be no net loss or gain in jobs from the proposed amendment.

The Department has determined that there are approximately 114 domestic treatment works that would qualify for the proposed exemption at N.J.A.C. 7:14C-1.13(a). This would relieve 114 facilities from the requirement to submit the annual Discharge Monitoring Report found at N.J.A.C. 7:14C-1.8(c), resulting in 114 fewer Discharge Monitoring Reports being analyzed for by New Jersey certified laboratories every year. As the Economic Impact describes in greater detail, the Department estimates that the 114 domestic treatment plants will each save about $500.00 per year because of this proposed amendment, for a total savings of about $57,000 per year. Since the 114 domestic facilities are spread across the State, and since there are numerous New Jersey certified laboratories that are contracted to perform the analyses, the Department believes that the $57,000 in lost revenue to certified laboratories will not be significant for any one laboratory, such that jobs will be affected. In addition, the Department does not believe that sludge sampling or analyses make up a significant portion of the revenue for laboratories certified by the Department.

Agriculture Industry Impact

The Department does not anticipate that the rules proposed for readoption with amendments will have any impact upon agriculture in New Jersey. The rules apply to generators of sludge, rather than to those who apply sludge to the land. There are no agricultural facilities in the State that are generators of sludge.

Regulatory Flexibility Analysis

In accordance with the New Jersey Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq., the Department has determined that of the approximately 700 domestic and industrial treatment works currently submitting sludge quality data to the Department, approximately 300 may be considered small businesses. These include small commercial establishments that operate systems engaged in the collection and treatment of sanitary wastewater as well as treatment systems designed to treat process wastewater at industrial facilities. The rules proposed for readoption with amendments will continue in effect the requirement that these systems track sludge quantity and quality at domestic and industrial treatment works.

At N.J.A.C. 7:14C-1.7(b), as part of a Department-wide initiative, the Department proposes to require mandatory electronic submittal of monitoring reports. The Department's web-based system streamlines reporting which improves the quality of data flow, reduces reporting costs to the wastewater treatment plants, offers on-line availability of reports and their processing status, and improves the Department's efficiency in data analyses, compliance assessment, and decision-making.

The Department has endeavored to design the SQAR to minimize adverse effects upon small business. To that end, the Department has developed reduced reporting and certain exemptions for the smallest facilities. For example, it is estimated that all small businesses, if not already exempt from analytical requirements, are in the lowest reporting category for their respective treatment works requiring only annual analyses. Additional exemptions are offered if the facility removes no sludge during the required monitoring period.

At proposed N.J.A.C. 7:14C-1.13(a), the Department has added an exemption for domestic treatment works with a permitted wastewater flow of less than or equal to

20,000 gallons per day (0.020 mgd) that remove their sludge to a treatment works treating domestic sewage. Many of these types of facilities serve small mobile home parks, commercial strip malls and office parks that can be classified as small businesses. Under this proposed exemption, these facilities are only required to report an annual Residuals Transfer Report, which has no analytical costs.

For industrial treatment works, the existing rules at N.J.A.C. 7:14C-1.5 divide industrial treatment works into categories based on sludge production. Industrial treatment works that produce less than 290 dry metric tons per year, which will include most small businesses, are only required to perform an annual analysis and then only if sludge is removed. In addition, proposed N.J.A.C. 7:14-1.13(b) provides for additional exemptions for industrial treatment works based on, among other things, the type of sludge produced and the frequency of sludge removal.

Smart Growth Impact

Executive Order No. 4 (2002) requires State agencies that adopt, amend or repeal any rules adopted pursuant to Section 4(a) of the Administrative Procedure Act (N.J.S.A. 52:14B-4(a)), to describe the impact of the proposed rules on the achievement of Smart Growth and implementation of New Jersey State Development and Redevelopment Plan (State Plan). The rules proposed for readoption with amendments do not relate to the State's land use and development policies in a way that would either encourage or discourage any development or redevelopment in this State contrary to the guiding principles of the State Plan. As a result, the Department does not expect this rulemaking to have an impact on the State's achievement of smart growth or implementation of the State Plan.

The rules proposed for readoption with amendments support the principles of smart growth by enabling the Department and sludge generators to make environmentally sound sludge management decisions in a manner that protects the public health, welfare, and safety. Thus, ensuring that the quality of sludge generated for use or disposal is compatible with the method of sludge use or disposal chosen supports the goals of the State Plan.

Housing Affordability Impact

Pursuant to N.J.S.A. 52:14B-4, as amended effective July 17, 2008 by P.L. 2008, c. 46, the Department has evaluated the rules proposed for readoption to determine their impact, if any, on the affordability of housing. The Department has determined that the rules proposed for readoption will have no impact because it is extremely unlikely that the rules will evoke a change in the average costs associated with housing. The subject of the rules proposed for readoption is reporting procedures to monitor the quality and quantity of sludge generated throughout the State by domestic and industrial treatment works, which have little or no impact on housing or its affordability.

Smart Growth Development Impact

Pursuant to N.J.S.A. 52:14B-4, as amended effective July 17, 2008, by P.L. 2008, c. 46, the Department has determined that the rules proposed for readoption will result in an insignificant impact because it is extremely unlikely that the rules will evoke a change in housing production within Planning areas 1 or 2, or within designated centers. The rules proposed for readoption have no direct impact on the continued use and habitability of existing residences; rather, they regulate reporting procedures to monitor the quality

and quantity of sludge generated throughout the State by domestic and industrial treatment works. Therefore, the rules proposed for readoption will not evoke a change in housing production in Planning areas 1 or 2, or within designated centers.

Full text of the proposed readoption may be found in the New Jersey Administrative Code at N.J.A.C. 7:14C.

Full text of the proposed amendments follows (additions indicated in boldface **thus**; deletions indicated in brackets [thus]):

7:14C-1.3 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings unless the context clearly indicates otherwise. Unless otherwise specified below, all words and terms shall be as defined in "The New Jersey Pollutant Discharge Elimination System," N.J.A.C. 7:14A.

"Biochemical oxygen demand" or "BOD" [(biochemical oxygen demand)] means the quantity of dissolved oxygen in milligrams per liter (mg/l) either in an effluent or in a waterbody, required during stabilization of decomposable organic matter by aerobic biochemical action as determined by approved analytical procedures set forth in 40 CFR Part 136.

"Chemical oxygen demand" or "COD" [(chemical oxygen demand)] means a measure of the oxygen required to oxidize all compounds in water, both organic and inorganic (in

milligrams per liter, mg/l) in a waste sample under specific conditions of an oxidizing agent, temperature and time as determined by approved analytical procedures set forth in 40 CFR Part 136.

…

"Industrial treatment works" means a treatment works which treats primarily process wastewater and/or industrial pollutants as determined by the percentage of process wastewater, or mass loading of BOD, COD or suspended solids in the wastewater flow. Industrial treatment works shall also include any treatment works**,** whether publicly or privately owned**,** which treats primarily wastewater or leachate from a municipal solid waste facility or a potable water treatment plant. This definition shall [also encompass] **include** SIU pretreatment works.

…

"Process wastewater" means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product. Process wastewater includes, but is not limited to, ["]leachate["] and cooling water other than non-contact cooling water. This definition includes the terms commercial wastewater and industrial wastewater as used in 40 CFR Part 503.

…

"Publicly owned treatment works" or "POTW" means any device or system used in the storage and treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a State or municipality. This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment. Treatment works associated with potable water treatment and solid waste facilities shall be considered industrial treatment works for [the] purpose**s** of this chapter.

…

"SIU pretreatment works" means any treatment works serving exclusively a SIU facility and treating the facility's process wastewater, or a combination of its process [wastewater] and [its] domestic wastewater, prior to the discharge thereof into a domestic treatment works.

"Sludge" means the solid residue and associated liquid resulting from physical, chemical, [and/] or biological treatment of domestic or industrial wastewaters.

"Sludge-only facility" means any treatment works [treating domestic sewage] whose [methods of] sludge use or disposal [are] **practice is** required to obtain a permit under 40 CFR 122.1(b)(3) or N.J.A.C. 7:14A-20.

….

"Sludge use or disposal practice" means the collection, storage, treatment, transportation, processing, monitoring, use, or disposal of sludge.

"Suspended solids" means the total nonfilterable residue as determined by [approved] analytical procedures set forth in 40 CFR Part 136.

…

7:14C-1.4 Analytical procedures

(a)-(b) (No change.)

(c) Where an applicable laboratory method for sludge analysis is not provided for in 40 CFR 503.8, the analysis shall be conducted in accordance with the test procedures in "Test Methods for Evaluating Solid Waste," EPA Publication SW-846, incorporated herein by reference, including amendments and revisions. If an applicable approved test procedure is not specified in either 40 CFR 503.8 or EPA Publication SW-846, [the analysis shall be conducted in accordance with the test procedures specified for sludge in the USEPA's "NPDES Compliance Inspection Manual," EPA 305-X-03-004, July 2004, incorporated herein by reference, as amended or supplemented, or] the domestic or industrial treatment works [shall obtain approval from the Office of Quality Assurance under N.J.A.C. 7:18 for an alternative analytical procedure. Laboratories may only use alternative test procedures upon specific written permission from the Office of Quality Assurance, P.O. Box 424, Trenton, New Jersey 08625-0424.] **any appropriate method**

for sludge analysis for which a laboratory is certified by the Department's Office of Quality Assurance may be used.

(d)-(g) (No change.)

(h) All sludge analyses required under this chapter shall be performed by laboratories certified by the Department pursuant to N.J.A.C. 7:18 for the [analysis of the specified parameter. The laboratories shall use the] analytical procedures specified in (b) and (c) above.

7:14C-1.6 Sampling procedures

(a) (No change.)

(b) Where a treatment works generates several different types of sludges (for example, primary, secondary or advanced wastewater treatment sludges) each of which is removed separately for use or disposal, separate composite samples for each different type of sludge shall be analyzed and reported pursuant to N.J.A.C. 7:14C-1.8(c) for domestic treatment works and N.J.A.C. 7:14C-1.9[(b) or](c) **or (d)** for industrial treatment works. All reports shall be clearly marked as to the origin of the sludge sample.

(c) Each domestic treatment works and industrial treatment works shall develop and maintain on file on-site a sludge sampling plan that details its sampling and analytical procedures. The Department will require the sampling plan to be submitted **every five**

years as part of the NJPDES permit application or when unusually high or low pollutant concentration data, contained in SQAR reports or other information, suggest that the sampling and analytical procedures used by the treatment works may be inadequate. The plan shall:

1.-2. (No change.)

3. Demonstrate how quality assurance and quality control requirements and procedures for sampling and analysis, including decontamination procedures, consistent with the [Department's Field Sampling Procedures Manual, May 1992, as amended or supplemented,] **applicable analytical method in accordance with N.J.A.C. 7:14C-1.4, Analytical procedures,** will be met. [Copies of the Manual may be obtained by contacting the Maps and Publications Sales Office, Bureau of Revenue, P.O. Box 417, Trenton, New Jersey 08625-0417.]

(d) Samples shall be prepared in accordance with the following:

1. (No change.)

2. [All]**When required,** samples shall be chilled [at four degrees Celsius] during compositing, holding, and transporting **as specified in the applicable analytical method in accordance with N.J.A.C. 7:14C-1.4, Analytical procedures.**

3. Domestic and industrial treatment works shall form composite samples for reporting the information required under N.J.A.C. 7:14C-1.8(c) **or (d)** for domestic treatment works, and N.J.A.C. 7:14C-1.9(c) or (d) for industrial treatment works, by using a minimum of five grab samples of equal volumes collected at the time sludge is removed for use or disposal during the monitoring period. Sample holding times begin upon combination of the last aliquot.

(e) Procedures for sampling or compositing may be modified upon written approval of the Department based upon site specific operational requirements. Requests for modifications shall be sent to **Mail Code: 401-02B**, Bureau of Pretreatment and Residuals, Division of Water Quality, P.O. Box [029] **420,** Trenton, New Jersey 08625-[0029]**0420**.

7:14C-1.7 General reporting requirements

(a) Each domestic and industrial treatment works shall submit the information required under N.J.A.C. 7:14C-1.8 and 1.9 to the Department on, as applicable, Discharge Monitoring Report (DMR) forms, Residual Transfer Report (RTR) forms, Waste Characterization Report (WCR) forms, or other equivalent report forms provided by the Department. Forms may be obtained from the Department at [the address provided in (b) below] **Mail Code: 401-02B, Bureau of Pretreatment and Residuals, Permit Administration Section, Division of Water Quality, P.O. Box 420, Trenton, New Jersey 08625-0420.**

(b) All **monitoring** report forms shall be submitted to [the Bureau of Permits Management] **Mail Code: 401-02B, Bureau of Pretreatment and Residuals**, **Permit Administration Section**, Division of Water Quality, P.O. Box [029] **420,** Trenton, New Jersey 08625-[0029]**0420 until such time that the Department requires monitoring report forms to be submitted electronically. Within 180 days after receipt of written notification from the Department, all monitoring report forms as required under N.J.A.C. 7:14C-1.8 or 1.9 shall be submitted to the Department electronically in a manner compatible with the Department's computer system.**

(c)-(d) (No change.)

(e) Each domestic or industrial treatment works shall report any noncompliance with the land-based sludge management criteria to the Department. The noncompliance with the land-based sludge management criteria shall be orally reported within 24 hours of the domestic or industrial treatment works becoming aware of the noncompliance to the Bureau of Pretreatment and Residuals at (609) 633-3823 and to the ultimate sludge management alternative. A written submission shall be made within five days thereafter to: [Chief] **Mail Code: 401-02B**, Bureau of Pretreatment and Residuals, Division of Water Quality, P.O. Box [029] **420,** Trenton, New Jersey 08625-[0029]**0420**, with a copy to the ultimate sludge management alternative, and shall include the following information:

1.-4. (No change.)

(f) (No change.)

7:14C-1.8 Specific reporting requirements for domestic treatment works

(a) Each domestic treatment works in Category 1 through 4 (see N.J.A.C. 7:14C-1.5) shall, for each calendar year (January 1 through December 31), submit to the Department by March 1 of the year following the monitoring year a WCR form containing the following information:

1. (No change.)

2. The total quantity of domestic wastewater sludge removed for use or disposal on a dry weight basis in metric tons per year; **and**

[3. By individual sludge management method, the respective quantities of domestic wastewater sludge removed for use or disposal on a dry weight basis in metric tons per year; and]

[4.]**3.** The total solids content (percent by weight) for each form of domestic wastewater sludge removed for use or disposal.

(b)-(c) (No change.)

(d) Each domestic treatment works in Category 3 or 4 shall[, for one calendar month (beginning on the first day of the calendar month and ending on the last day of the calendar month) per year,] analyze the domestic wastewater sludge removed for use or disposal for the parameters listed in the Appendix, Tables II through VI **once per year**. The domestic treatment works shall submit the results of the analyses to the Department on a WCR form by March 1 of the year following the year in which the monitoring [month] occurs.

7:14C-1.9 Specific reporting requirements for industrial treatment works

(a) Each industrial treatment works in Category 6 through 13 (see N.J.A.C. 7:14C-1.5) shall, for each calendar year (January 1 through December 31), submit to the Department by March 1 of the year following the monitoring year a WCR form containing the following information:

1. (No change.)

2. The total quantity of process wastewater sludge removed for use or disposal on a dry weight basis in metric tons per year; **and**

[3. By individual sludge management method, the respective quantities of process wastewater sludge removed for use or disposal on a dry weight basis in metric tons per year; and]

[4.]**3.** The total solids content (percent by weight) of each form of process wastewater sludge removed for use or disposal;

(b)-(h) (No change.)

7:14C-1.11 Non-compliance

A failure to submit the required sludge reports in the manner prescribed by this chapter or any willful falsification of information contained in these reports shall constitute a violation of the New Jersey Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq. and shall be subject to the penalties contained in N.J.A.C. 7:14-8[and 7:19-6.14].

7:14C-1.13 Exemptions and reductions in reporting **and analytical** requirements

(a) The following exemptions and reductions in reporting requirements are applicable to domestic treatment works:

1. [A]**Subject to the limitations at (a)2 below, a** Category 1 domestic treatment works (see N.J.A.C. 7:14C-1.5) that generates only domestic septage**, or that has a permitted flow of 0.020 mgd or less and that removes all sewage sludge generated to an off-site in-State treatment works treating domestic sewage** is exempt from the following:

i. – ii. (No change.)

2. The exemption at (a)1 above does not apply if the nature or quantity of pollutants in the discharge into the treatment works changes such that the sludge from the treatment works would violate the land-based sludge management criteria.

i. Such change in the discharge into the treatment works shall be reported to the Department within five days of the treatment works operator's becoming aware of the change.

Recodify 2. – 4. as 3. – 5. (No change in text.)

(b) The following exemptions and reductions in reporting requirements are applicable to industrial treatment works:

1.-2. (No change.)

3. An industrial treatment works may request an exemption from or reduction in the information required to be submitted under these rules at any time after the industrial treatment works submits its first sludge analysis report under N.J.A.C. 7:14C-1.9. The Department may grant an exemption or reduction based on the following:

i-ii. (No change.)

iii. Where an industrial treatment works can demonstrate to the Department's satisfaction, based on the criteria in (b)[3]**4** below, that removal schedules or historical sludge quality justify a reduction or exemption, the Department may grant a reduction in or an

exemption from any of the reporting requirements at any time after submission of the first required report.

4. (No change.)

(c) (No change.)