ENVIRONMENTAL PROTECTION

ENVIRONMENTAL REGULATION

Division of Water Quality

Sludge Quality Assurance

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

Proposed Amendments:	**N.J.A.C. 7:14C-1.3, 1.4, 1.6 through 1.10, 1.13**
	Appendix Tables I through III, V, VII, and VIII
Authorized By:	Bradley M. Campbell, Commissioner, Department of Environmental Protection
Filed:	as R. 2005 d.
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:	36-05-09/358
Proposal Number:	

A **public hearing** concerning this proposal will be held on:

Date: Monday, December 19, 2005

Time: 9:30 am to 1:00 pm (or until the end of comments, whichever comes first)

Location: N.J. Department of Environmental Protection

Public Hearing Room, First Floor, 401 E. State Street

Trenton, New Jersey

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

Alice A. Previte, Esq.

Attn: DEP Docket Number __36-05-09/358___

Office of Legal Affairs

Department of Environmental Protection

P.O. Box 402

Trenton, New Jersey 08625-0402

The Department of Environmental Protection (Department) requests that commenters submit comments on disk or CD as well as on paper. Submittal of a disk or CD is not a requirement. 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.

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.

Pursuant to Executive Order No. 66 (1978), the Sludge Quality Assurance Regulations (SQAR) at N.J.A.C. 7:14C were scheduled to expire on October 26, 2005. The expiration date

was extended by 180 days to April 24, 2006 pursuant to 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.

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. SQAR establishes 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 New Jersey Pollutant Discharge Elimination System (NJPDES) rules at N.J.A.C. 7:14A govern permits and allowable components of sludge.

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 is proposing amendments to address questions and comments that it has received on the SQAR in recent years. The amendments will modify the reporting requirements for most treatment works. In the development of the amendments, the Department sought the input and recommendations of the Environmental Laboratory Advisory Committee. This Committee is composed of representatives from publicly owned treatment works, private industrial treatment works and certified laboratories.

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 over 230,000 dry metric tons of sewage sludge for use or disposal in calendar year 2003.

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 required parameters to be analyzed and the number of parameters to be analyzed have been modified over the years. Currently, 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 reasons why they must be reported. 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, governing the 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
Phosphorus	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 submission of heavy metals and selected chemical parameters.
- Category 2 domestic treatment works (permitted flow from 0.1 to 0.999 MGD): semi-annual submission of heavy metals and selected chemical parameters.
- Category 3 domestic treatment works (permitted flow from 1.0 to 4.999 MGD): quarterly submission of heavy metals and selected chemical parameters.
- Category 4 domestic treatment works (permitted flow equal to or greater than 5.0 MGD): monthly submission 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 125 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 was 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 even be true 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 on 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 (see proposed N.J.A.C. 7:14C-1.9(f)).

Industrial treatment works are divided into categories based on annual sludge production. Categories 6 through 9 represent industrial wastewater treatment systems, while Categories 10 through 13 represent public water treatment systems. Categories 6 and 10 are any system with a sludge production greater than zero, but less then 290 dry metric tons per 365 day period. Categories 7 and 11 are any system 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 Categories 6 and 10 facilities submit a Residuals Discharge Monitoring Report in any one calendar month during the year, Categories 7 and 11 facilities submit a Discharge Monitoring Report in any one calendar month in each six-month period, Categories 8 and 12 facilities submit a Discharge Monitoring Report in any one calendar month in each three-month period, and Categories 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) submit a monthly Residuals Waste Characterization Report and a monthly Residuals Transfer Report to the Department.

Throughout the rules, where determined to be appropriate, the Department has replaced the term “reporting” with the term “monitoring." “Monitoring” refers to the time period when samples must be obtained, as opposed to “reporting,” which refers to the period when the data must be submitted. This amendment is intended to highlight the difference between “monitoring” requirements and “reporting” requirements.

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

This section 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 these sludge quality assurance rules.

The Department proposes to readopt this section without change.

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

This section sets forth the reasons for the promulgation of these 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 Department proposes to readopt this section without change.

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

This section contains the definitions of terms used throughout the SQAR.

The Department proposes to amend the definition of "domestic treatment works" or "DTW" by changing "privately owned treatment works" to "other treatment works," and by changing "domestic wastewater" to "domestic sewage," so that the defined term includes all treatment works processing primarily "domestic sewage" and "domestic pollutants" as defined elsewhere in this section. This proposed amendment eliminates the existing definition's circular reference to "domestic wastewater," which is defined as "the liquid waste or liquid borne wastes discharged into a domestic treatment works."

Under the existing definition, a domestic treatment works must either be a "publicly owned treatment works" (i.e., a "POTW" owned by a State or by a public body defined in 7:14A-1.2 as a "municipality"), or a "privately owned treatment works." As defined in N.J.A.C. 7:14A-1.2, "privately owned treatment works" has a specialized definition, based on the Federal definition at 40 CFR 122.2, that is limited to any device or system which is not a publicly owned treatment works, and which is "used to treat wastes from any facility whose operator is not the operator of the treatment works."

Some privately owned sewage treatment plants do not "treat wastes from any facility whose operator is not the operator" of the sewage treatment plant. Suppose, for example, that a private college operates a sewage treatment plant that treats "domestic sewage" from that college, but does not treat wastes from any facility other than that college. This sewage treatment plant is not a publicly owned treatment works or a "privately owned treatment works." Accordingly, the proposed amendment broadens the definition to include all treatment works that process primarily domestic sewage and pollutants. The Department also proposes to correct the spelling of “stormwater” in the definition of "domestic treatment works."

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

N.J.A.C. 7:14C-1.4 sets forth the analytical procedures that the regulated community must follow when it tests sludge to determine its organic and inorganic contents.

The Department is proposing to amend N.J.A.C. 7:14C-1.4(c) to update the document number and publication date of the United States Environmental Protection Agency's (USEPA’s) NPDES Compliance Inspection Manual. The Department is working with the Environmental Laboratories Advisory Committee to develop a list of methodologies for sludge analyses which are considered to be the most sensitive and reliable. Upon completion, this will serve as an alternative test procedure approved by the Office of Quality Assurance, as referenced at N.J.A.C. 7:14C-1.4(c).

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 change.

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 regulated facilities. The Department is proposing to amend N.J.A.C. 7:14C-1.6(c) to clarify when the Department will require a regulated entity to submit its sludge sampling plan to the Department. Rather than requiring no sampling plan to be submitted unless unusually high or low pollutant concentration data suggest that the sampling and analytical procedures may be inadequate, the proposed amendment would require the entity to submit a sampling plan when the data suggests that the plan and analysis may be inadequate. This amendment puts the requirement in the affirmative, but does not change its meaning.

The Department is proposing to amend N.J.A.C. 7:14C-1.6(d)3 to add that, for composite samples, sample holding times begin upon combination of the last aliquot. The Department has determined that it is appropriate to start the holding time "clock" after the last aliquot has been added, since before then the sample is not considered a representative sample. The Department suggested this amendment to the Sludge Analytical Workgroup of the Environmental Laboratory Advisory Committee, which concurred with the change.

N.J.A.C. 7:14C-1.7 General Reporting Requirements

This section 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 is proposing to amend N.J.A.C. 7:14C-1.7(a) to add Waste Characterization Report forms to the list of forms that domestic and industrial treatment works are required to submit. The Waste Characterization Report is used for reporting sludge use and disposal information on a dry weight basis. In addition, for domestic treatment works with a permitted wastewater flow greater than or equal to 1.0 mgd, the Waste Characterization Report is used for reporting quality information on the annual priority pollutant scan. This is not a new requirement, since the Waste Characterization Report was included in the rule through the reference to "other equivalent report forms provided by the Department."

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

This section establishes the reporting requirements for all domestic treatment works. Included are the requirements for completion and submission of Residuals Transfer Report, Waste Characterization Report and Discharge Monitoring Report forms.

Proposed amended N.J.A.C 7:14C-1.8(a) requires an annual submission of specified information on a Waste Characterization Report by March 1 of the year following the monitoring year. Category 1 domestic treatment works are already required to submit the production Waste Characterization Report annually, so there is no change for these facilities. However, for

Category 2 through 4 domestic treatment works, the proposed amendment results in a reduction of the frequency of submission of a Waste Characterization Report from monthly to annually. This requirement is consistent with the requirement of the Federal rule at 40 CFR Part 503, which requires annual submittal of information on the amount of sludge removed. When the Department first started collecting information on sludge production in dry metric ton units, the information was required to be reported on Discharge Monitoring Report forms. However, after the Department's new data monitoring system came on-line in July 2000, the new Waste Characterization Report forms were made available. At that time, the Department determined that the new Waste Characterization Report forms would be better to collect information on dry metric tons and management methods. The change from Discharge Monitoring Report to Waste Characterization Report at proposed amended N.J.A.C. 7:14C-1.8(a) reflects the current use of Waste Characterization Report forms for this purpose. In addition, throughout these rules, the Department requires monitoring report forms to be submitted by "the first day of the third month following the end of the monitoring period." To be consistent with the reporting requirement used throughout these rules, the Department has changed the reporting due date from February 19th to March 1st for the annual reports required by N.J.A.C. 7:14C-1.8(a).

The Department proposes to recodify existing N.J.A.C. 7:14C-1.8(a)1i, ii, iii, and iv as (a)1, 2, 3, and 4. Additionally, the Department proposes to recodify the requirements for submitting a Residuals Transfer Report under N.J.A.C 7:14C-1.8(a) from N.J.A.C. 7:14C-1.8(a)2 and (b) to N.J.A.C. 7:14C-1.8(b)1 and (b)2. N.J.A.C. 7:14C-1.8(b)1 would apply to Category 1 facilities, and N.J.A.C. 7:14C-1.8(b)2 would apply to facilities in Categories 2 through 4. The proposed amendment would change the citation, but it would not change the underlying

requirement that a Category 1 facility submits an annual Residuals Transfer Report, and the requirement that facilities in Categories 2 through 4 submit a monthly Residuals Transfer Report.

Existing N.J.A.C. 7:14C-1.8(c) requires each domestic treatment works to analyze domestic wastewater sludge removed for the parameters listed in the Appendix, Table I. See the discussion under the Appendix section for more information on proposed changes to the Appendix, Table I.

Existing N.J.A.C. 7:14C-1.8(d) requires domestic treatment works in Category 3 or 4 to analyze domestic wastewater sludge removed for parameters listed in the Appendix, Tables II through VI. See the discussion under the Appendix section for more information on proposed changes to the Appendix, Tables II through VI.

The Department is proposing to amend N.J.A.C. 7:14C-1.8(d) to add the requirement that the priority pollutant scan Waste Characterization Report form be submitted by March 1, instead of February 19, of the year following the monitoring period. Throughout these rules, the Department requires monitoring report forms to be submitted by "the first day of the third month following the end of the monitoring period." To be consistent with the reporting requirement used throughout these rules, the Department has changed the reporting due date from February 19th to March 1st for the annual reports required by N.J.A.C. 7:14C-1.8(d).

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

This section 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 have never received a NJPDES permit under N.J.A.C. 7:14A are also found in this section.

The Department is proposing to amend N.J.A.C. 7:14C-1.9(a) to eliminate the requirement that all facilities in Categories 6 through 13 submit a monthly production Waste Characterization Report. Instead, proposed amended N.J.A.C. 7:14C-1.9(a) requires an annual Waste Characterization Report be submitted by March 1 of the year following the monitoring year. The Department has determined that it is appropriate to collect information on the Waste Characterization Report annually, rather than monthly. The Department uses the Waste Characterization Reports to prepare an annual statistical report of management methods used by industrial treatment works. Submittal of annual Waste Characterization Report forms facilitates the tabulation of this report; however, because the Department's report is prepared annually, the Department needs the forms only once per year, rather than monthly. The Department proposes to recodify the requirement to submit a Residuals Transfer Report under existing N.J.A.C. 7:14C-1.9(a)2 as N.J.A.C. 7:14C-1.9(b). The requirement to submit a monthly Residuals Transfer Report for all industrial treatment works has not changed, although the Department may grant a reduction pursuant to N.J.A.C. 7:14C-1.13 based on, among other things, the frequency of sludge removal.

The Department proposes to recodify N.J.A.C. 7:14C-1.9(a)1ii, iii, iv and v as (a)1, 2, 3, and 4, with all references to “month” being changed to “year." Existing N.J.A.C. 7:14C-1.9(a)1i has been deleted, since this information can be found on the Residuals Transfer Report.

The Department is proposing to recodify existing N.J.A.C. 7:14C-1.9(b) as (c). Existing N.J.A.C. 7:14C-1.9(b)2 and 3, which the Department proposes to recodify as N.J.A.C. 7:14C-1.9(c)2 and (c)3, are proposed to be amended to increase the reporting frequency to correspond

to the reporting requirements found in 40 CFR Part 503. Specifically, proposed N.J.A.C. 7:14C-1.9(c)2 increases the frequency of submitting the Discharge Monitoring Report from "any one calendar month in each six-month period" to "any one calendar month in each three-month period" for Category 7 treatment works. Proposed N.J.A.C. 7:14C-1.9(c)3 increases the frequency of submitting a Discharge Monitoring Report from "any one calendar month in each three-month period" to "any one calendar month in each two-month period" for Category 8 treatment works.

In order to be consistent with the reporting frequencies found in 40 CFR Part 503, the Department is proposing modifications to the Discharge Monitoring Report reporting frequencies for Categories 7, 8, 11, and 12 industrial treatment works (N.J.A.C. 7:14C-1.9(c) and (d)). As discussed, this proposed modification would increase the frequency of monitoring for Categories 7 and 11 industrial treatment works to one calendar month in each three-month period instead of one calendar month in each six-month period. Similarly, this proposed modification would increase the frequency of monitoring for Categories 8 and 12 industrial treatment works to one calendar month in each two-month period instead of one calendar month in each three-month period. A total of 29 out of 128 industrial facilities will be impacted by this proposed modification, which results in an additional two monitoring events per year for industrial facilities in Categories 7, 8, 11, and 12. When the Department proposed the SQAR in February 1999, the Department stated that it intended to use the reporting frequencies in 40 CFR Part 503 based on dry metric tons for industrial treatment works. See 31 N.J.R. 222 (February 1, 1999). However, in the rule text as proposed and subsequently adopted, the reporting frequencies for Categories 7, 8, 11 and 12 industrial treatment works were not consistent with 40 CFR Part 503. See 31 N.J.R. 1320(a) (May 17, 1999). This proposed amendment corrects this inconsistency

between the language of the February 1999 proposal summary and the regulations as adopted in May 1999.

Existing N.J.A.C. 7:14C-1.9(b), to be recodified as N.J.A.C. 7:14C-1.9(c), requires industrial treatment works to submit information on parameters listed in the Appendix, Tables I through VII. See the discussion under the Appendix section for more information on proposed changes to the Appendix, Tables II through VI.

Existing N.J.A.C. 7:14C-1.9(c), to be recodified as N.J.A.C. 7:14C-1.9(d), requires industrial treatment works in Categories 10 through 13 to submit information on the parameters listed in the Appendix, Table VIII. See the discussion under the Appendix section for more information on proposed changes to the Appendix, Table VIII.

As noted above, proposed N.J.A.C. 7:14C-1.9(d)2 and (d)3 are being amended to increase the reporting frequency to correspond to the reporting requirements found in 40 CFR Part 503. Specifically, proposed N.J.A.C. 7:14C-1.9(d)2 increases the frequency of submitting a Discharge Monitoring Report from "any one calendar month in each six-month period" to "any one calendar month in each three-month period" for Category 11 treatment works. Proposed N.J.A.C. 7:14C-1.9(d)3 increases the frequency of submitting a Discharge Monitoring Report from "any one calendar month in each three-month period" to "any one calendar month in each two-month period" for Category 12 treatment works. In addition, proposed N.J.A.C. 7:14C-1.9(d) is being amended to require Category 10 through 13 treatment works to monitor for any parameter found in the Appendix, Tables I through VII, that are currently manufactured, processed, formed, repackaged, handled, used, disposed, or stored in or otherwise expected to be present in the process wastewater sludge removed at the facility served by the industrial treatment works, or that are limited under the NJPDES, Air Pollution Control, or Solid Waste

Permit for the ultimate sludge management alternative used by the industrial treatment works. This amendment recognizes that there may be instances where a water treatment system may need to test for a longer list of contaminants due to source water quality or additives used in the treatment process.

The Department is proposing to add a new subsection N.J.A.C. 7:14C-1.9(e) to state expressly that treatment works in Categories 10 through 13 must comply with N.J.A.C. 7:14A-1.9, even though the facility may never have received a NJPDES permit from the Department under N.J.A.C. 7:14A. As stated under the scope of these rules (See N.J.A.C. 7:14C-1.1), all sludge generators are required to comply with SQAR. However, not all industrial treatment works have a discharge that necessitates the issuance of a New Jersey Pollutant Discharge Elimination System Permit by the Department. Therefore, this section is being added to clearly state that such facilities fall under the scope of these rules and are required to comply with SQAR.

The Department is proposing to amend existing N.J.A.C. 7:14C-1.9(d), proposed to be recodified at N.J.A.C. 7:14C-1.9(f), to remove the language “is not required to obtain a permit” and replace it with “has not received a NJPDES Permit issued by the Department." Industrial treatment works may receive a NJPDES permit from a delegated local agency rather than the Department. As stated under the scope of these rules, the Department intends that such facilities must comply with this subchapter. However, it is estimated that the delegated local agencies currently regulate over 1,000 indirect users. Therefore, although these industrial treatment works must comply with SQAR, they are not required to submit the results to the Department, except as provided under proposed N.J.A.C. 7:14C-1.9(g) and (h).

The Department is proposing to recodify existing N.J.A.C. 7:14C-1.9(e) as (g) and to delete the requirement that existing industrial treatment works submit results of analyses by August 15, 1999, because that date has passed. In its place, the Department is proposing the requirement that existing industrial treatment works submit to the Department updated information as required by proposed N.J.A.C. 7:14C-1.9(g)6 when alterations are made that change any of the parameters listed in the Appendix, Tables I through VII, that are manufactured, processed, formed, repackaged, handled, used, disposed, or stored at the facility served by the industrial treatment works or upon a change in residual use or disposal practices. New industrial treatment works are still required to submit the required information within 90 days of the start of operations.

The Department is proposing to recodify existing N.J.A.C. 7:14C-1.9(f) as (h).

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

This section 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 is proposing to amend this section to make it clear that the Department's "designated agent" shall be provided the same access as the Department to the treatment works' premises and related records. The designated agents would include, for example, representatives/agents from a delegated local agency.

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

This section 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 readopt this section without change.

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

This section 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 change.

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

This section establishes exemptions and reductions in reporting requirements for certain domestic and industrial treatment works.

The Department is proposing to amend N.J.A.C. 7:14C-1.13(a)1 by adding language that exempts Category 1 domestic treatment works that generate only domestic septage from submitting a Waste Characterization Report as required by N.J.A.C. 7:14C-1.8(a). The Waste Characterization Report is used for reporting sludge use and disposal information on a dry weight basis. Under the existing rules, the Department has exempted these facilities from performing analyses for parameters found in the Appendix, Table I. Because total solids is a parameter found in the Appendix, Table I, the facilities have not been required to perform an analysis of total solids. Accordingly, the facilities do not have the data necessary to convert to a

dry weight basis. The Department has determined that this type of information for septage only facilities is not necessary, since they generate less than one percent of the State's entire sewage sludge production. The Department is proposing to divide N.J.A.C. 7:14C-1.13(a)1 into two subparagraphs, N.J.A.C. 7:14C-1.13(a)1i and (a)1ii. Category 1 domestic treatment works that generate only domestic septage are not exempt from the requirement under N.J.A.C. 7:14C-1.8(b) and must submit an annual Residuals Transfer Report to the Department.

The Department is proposing new N.J.A.C. 7:14C-1.13(a)2 to state that domestic treatment works in Categories 1 through 4 are not required to perform analyses in accordance with N.J.A.C. 7:14C-1.8(c) during monitoring periods when sludge is not removed from the treatment works for management. Existing N.J.A.C. 7:14C-1.8(c) requires analyses on the sludge removed for use or disposal. If no sludge is removed during the monitoring period, no sample can be obtained to meet this requirement. However, this reduction in reporting will not affect the Category 1 through 4 domestic treatment works' obligation to perform analyses as required by 40 CFR Part 503.16, 503.26, and 503.46, which require a minimum number of analyses based on a facility's annual sludge generation.

The Department is proposing to add new N.J.A.C. 7:14C-1.13(b)2 to clarify that treatment works in Categories 6 through 13 are not required to perform analyses in accordance with N.J.A.C. 7:14C-1.9(c) and 1.9(d) during monitoring periods when sludge is not removed from the treatment works for management. Existing N.J.A.C. 7:14C-1.9(c) and 1.9(d) require analyses to be performed on sludge removed for use or disposal. If no sludge is removed, no sample can be obtained to fulfill this requirement.

The Department is proposing to recodify existing N.J.A.C. 7:14C-1.13(a)2, (a)3, (b)2 and (b)3 as (a)3, (a)4, (b)3 and (b)4, respectively.

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

This section establishes severability among provisions of this chapter.

The Department proposes to readopt this section without change.

Appendix

As explained further, below, the Department proposes the following amendments to N.J.A.C. 7:14C, Appendix, Tables I through VIII:

Table I: addition of radionuclides (pCi/g) and dioxins and PCBs, and notes 1 and 2.

Table II: deletion of 2,3,7,8-tetrachloro-dibenzo-p-dioxin (TCDD).

Table III: correction of the CAS number for acrolein from 107-02-08 to 107-02-8.

Table V: correction of the CAS number for benzidine from 93-87-5 to 92-87-5.

Table VII: deletion of uranium, total along with proposed addition of acrylamide, atrazine, benzaldehyde, 1,1, biphenyl, caprolactam, carbazole, methyl acetate, methylcyclohexane, methyl-tert-butyl ether (MTBE), tertiary butyl alcohol (TBA), and 1,1,2-trichloro-1,2,2-trifluoroethane.

Table VIII: addition of radionuclides (pCi/g) and note 3, and reformatting of references to notes 1 and 2 to conform to the style of the other tables in the Appendix.

Existing N.J.A.C. 7:14C-1.8(c) requires each domestic treatment works to analyze domestic wastewater sludge removed for the parameters listed in the Appendix, Table I. The Department is proposing to amend the parameter list in the Appendix, Table I, to add a requirement to test for radionuclides, dioxins and PCBs on a case-by-case basis. Testing for radionuclides, dioxin-like compounds, including dibenzofurans, and PCBs may be required if the

domestic treatment works receives source water, uses additives or is otherwise expected to have contributions of these compounds into the sewer system, or fits within the circumstances discussed below. The Department will set forth the requirement to analyze for these compounds on a case-by-case basis in a NJPDES permit issued pursuant to N.J.A.C. 7:14A.

Public drinking water supplies depend upon ground water as their source of water in the Coastal Plain. The Coastal Plain is the New Jersey's largest land area, which covers the southern three-fifths of the State, characterized by gently rolling hills and an elevation less than 100 feet above sea level. The naturally occurring radionuclides in these drinking water supplies ultimately find their way to wastewater treatment facilities either via the sewer in those areas that are sewered or by the haulage of domestic septage from non-sewered areas. Some of these drinking water supplies have radium levels that exceed the drinking water standard for radionuclides. In treating the drinking water to remove the radium, a wastewater is created, which contains the radium that is removed. If this wastewater is discharged to the sanitary sewer, the radium will become reconcentrated in the sewage sludge produced by the treatment plant. Considering the potential uncontrollable contribution of radionuclides to some wastewater treatment facilities, in order to protect sludge quality the Department will have to focus much greater attention to reduce those discharges of radionuclides that can be considered controllable. For example, rather than treating the radium in groundwater, it might be possible to find an alternative water supply that is low in radium. If an alternative water supply is unavailable, other treatment options could be investigated that either do not have a discharge, or that have a less concentrated discharge. Although radionuclides in domestic septage in those areas of the State with high groundwater radionuclide concentrations are largely uncontrollable, the

Department would need to evaluate whether it could control which wastewater treatment facilities receive the domestic septage.

The Department has collected some data, and through a grant from the USEPA has collected additional data on naturally occurring radionuclides in sewage sludge. In selecting which sewage sludge generators to sample, the Department used a positive biased approach in selecting those generators most likely to have higher concentrations of radionuclides. In addition, radionuclides have been evaluated on a national level by the Interagency Steering Committee on Radiation Standards (ISCORS), Sewage Sludge Subcommittee, composed of representatives from the USEPA, Nuclear Regulatory Commission, Department of Energy, Department of Defense, State of New Jersey, the City of Cleveland and the County of Middlesex, New Jersey. The final ISCORS reports on Assessment of Radioactivity in Sewage Sludge are available at http://www.iscors.org/library.html. The three reports include the results of the national survey, modeling, and recommendations. The Department will use this information to determine which domestic or industrial treatment works will require additional monitoring for radionuclides.

In December 1999, the USEPA proposed to amend the Federal Standards for the Use or Disposal of Sewage Sludge by adding a numeric concentration limit for dioxins and dioxin-like compounds, which includes PCBs, in land-applied sewage sludge. Based on the initial risk assessment, the proposed limit would prohibit land application of sewage sludge that contains more than 300 parts per trillion (ppt) toxic equivalents (TEQ) of dioxins and dioxin-like compounds. USEPA proposed this limit to protect the public health and the environment from unreasonable risks of exposure to dioxins and dioxin-like compounds. On October 24, 2003 the USEPA announced its decision not to regulate dioxin and dioxin-like compounds in land-applied

sewage sludge. After five years of study, the USEPA concluded that dioxin and dioxin-like compounds from biosolids do not pose a significant risk to human health or the environment.

Since the 1999 proposal, both the USEPA and the Association of Metropolitan Sewage Agencies (AMSA) have conducted surveys to update information on the concentrations of dioxins and dioxin-like compounds in sewage sludge. Samples from these surveys indicate biosolids from most domestic treatment works are below 100 ppt TEQ. However, these surveys also had "outliers" with the highest concentrations of each survey at 718 and 3,590 ppt TEQ, respectively.

The Department determined it would be prudent to conduct tests for dioxin and PCBs in sewage sludge that is land applied in New Jersey. Therefore, the Department applied for and received a grant from the USEPA to collect data on the presence of dioxin and PCB compounds in New Jersey sewage sludges. The Department sampled the sludge from all New Jersey sewage sludge generators that have a permit for the land application of sewage sludge. In addition, the Department selected additional sewage sludge generators for sampling using a positively biased approached. In other words, the Department chose for sampling those sewage sludge generators most likely to have higher dioxin and PCB concentrations. No New Jersey sewage sludge that was analyzed tested over 300 ppt TEQ. Based on the results of these analyses, the Department does not believe it is necessary at this time to require all domestic treatment works to monitor for dioxin and PCB compounds; however, there may be cases where the Department may establish in a permit monitoring based on known source contributions.

Existing N.J.A.C. 7:14C-1.8(d) requires domestic treatment works in Category 3 or 4 to analyze domestic wastewater sludge removed for parameters listed in the Appendix, Tables II through VI. The Department is proposing to amend Table II by deleting the parameter 2,3,7,8-

tetrachloro-dibenzo-p-dioxin (TCDD). In order to obtain reliable results for TCDD, the Department would need more sensitive analysis to be performed using Method 1613A. However, the cost to perform this analysis is not justified by the levels found to be present, as discussed regarding dioxin above. If the Department expects that TCDD is present at levels that exceed USEPA's proposed 300 ppt TEQ standard, the Department would require dioxin and dioxin-like compound testing in a permit issued pursuant to N.J.A.C. 7:14A using the more sensitive 1613A test method.

Existing N.J.A.C. 7:14C-1.9(b) requires industrial treatment works to submit information on parameters listed in the Appendix, Tables I through VII. As previously noted, the Department is proposing changes to the parameters listed in the Appendix, Tables I and II.

The Department is proposing to amend the Appendix, Table VII to delete the parameter "uranium, total." As described above under the discussion of Table I, analyses for radionuclides are proposed to be added to the Appendix, Table I. Uranium isotopes are required to be tested when analyzing for radionuclides, including, but not limited to, the isotopes U-238, U-234, and U-235.

The Department proposes to add the following parameters to the Appendix, Table VII: acrylamide, atrazine, benzaldehyde, 1,1 biphenyl, caprolactam, carbazole, methyl acetate, methylcyclohexane, methyl-tert-butyl ether (MTBE), tertiary butyl alcohol (TBA), and 1,1,2-trichloro-1,2,2-trifluoroethane. The Department proposes to add these parameters, except for acrylamide, to be sure that facilities monitor for substances that are subject to remediation. The Department proposes to add acrylamide as a result of an increased level of interest over the use of flocculents, which are used in various water and wastewater applications.

Existing N.J.A.C. 7:14C-1.9(c) requires industrial treatment works in Categories 10 through 13 to submit information on the parameters listed in the Appendix, Table VIII. The Department has amended the parameters listed in Table VIII to add radionuclides, as set forth in the discussion of Table I above.

Social Impact

The SQAR, as 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. In addition, sludge quality data obtained under these rules will help the Department to accurately inform the public about the quality of sludge in New Jersey. The proposed amendments, which update parameters required to be reported based on current research and knowledge of parameters of concern, will enhance the usefulness and accuracy of the sludge quality information collected under the program.

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 at N.J.A.C. 7:14C 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 SQAR proposed to be readopted with amendments will continue to require domestic treatment works to report at a level that is proportional to the amount of wastewater treated, and will require industrial treatment works to report using a similar approach. Thus, larger treatment works are required to report more frequently than smaller treatment works.

Proposed amendments reduce reporting of a production Waste Characterization Report for all domestic treatment works in Categories 2 through 4 and industrial treatment works in Categories 6 through 13 from monthly to annually. In addition, proposed amendments eliminate reporting of a production Waste Characterization Report for Category 1 domestic treatment works that generate domestic septage only.

There are 215 domestic treatment works in Categories 1 (domestic septage only facilities) through 4. The proposed reductions in the Waste Characterization Report for domestic treatment works will result in the elimination of approximately 1,905 reports a year. Thus, this change will

have a positive economic impact for domestic treatment works, without sacrificing protection of public health or the environment.

There are 128 industrial treatment works in Categories 6 through 13 submitting monthly Waste Characterization Reports. The proposed Waste Characterization Report reduction will result in the elimination of approximately 1,408 reports a year; however, with regard to industrial treatment works, the reduction in reporting frequency for the monthly production Waste Characterization Report is offset by the more significant increase of two Discharge Monitoring Reports a year for industrial treatment works in Categories 7, 8, 11 and 12. It is difficult to estimate the potential cost increases for these industrial treatment works, since the reporting parameters vary among treatment works. Because parameters vary, the costs also vary. The typical sludge analytical cost for most industrial treatment works is less than $1,000 per sample. Therefore, these industrial treatment works are not anticipated to realize an increased cost of more than $2,000 per year. Nevertheless, out of 128 industrial treatment works submitting sludge data to the Department, there are 29 industrial treatment works in these categories. These are the 29 largest industrial sludge generators submitting results under the SQAR program; therefore, the Department believes that the increased 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 work with these sludge generators upon renewal of their NJPDES permits to minimize cost impacts where reductions or exemptions can be justified.

For those facilities that may be required to analyze for dioxins or PCBs using more sensitive methods, there will be an increased cost associated with the analysis. The current cost to perform an analysis for dioxins and PCBs using methods 1613B and 1668A is approximately $1,400 per sample. If a sludge generator is required to perform these analyses, the Department will adjust the frequency of analysis based on the levels of these compounds found, such as the USEPA proposed for sewage sludge in December 1999.

There will also be an increased cost to any facility that may be required to monitor for radionuclides. Ultimately, any domestic or industrial treatment works in an area with known levels of radium in groundwater above the drinking water standard could be subject to this requirement. Geographically, this area may include domestic or industrial treatment works in and south of Mercer County, although other areas cannot be ruled out entirely. The anticipated cost for radium testing is not expected to exceed $200 per sample. The associated cost for isotopic uranium and thorium testing is on the order of $300.00 to $400.00 per sample. If gamma spectroscopy and alpha spectroscopy for uranium and thorium are all required, the cost could approach $1,000 per sample.

Any facility that is subject to increased monitoring, or increased costs due to an expansion of the parameters required to be analyzed, will have the opportunity to comment upon issuance of a NJPDES permit containing any increased monitoring. In addition, proposed amended N.J.A.C. 7:14C-1.13 provides broad reduction and exemption opportunities for domestic and industrial treatment works for, among other things, frequency of removal or parameters that may not be consistently detected. Nevertheless, some domestic or industrial treatment works will see their costs for sludge analyses rise under the within proposed rules.

Environmental Impact

The Department expects that the SQAR proposed to be readopted with amendments will continue to have positive environmental impacts. Under the rules, the Department sets forth the sampling, analytical and reporting requirements for all domestic and industrial sludge generators.

The sludge quality information obtained through these 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 N.J.A.C. 7:14A-20. Submitting information for sludge removed on a total quantity per sludge management alternative basis facilitates cross-checking with the ultimate management alternative's records of receipt.

As discussed in the Social Impact statement above, the rules proposed for readoption with amendments include some reporting reductions for most domestic treatment works and industrial treatment works. The proposed exemption for treatment works that generate only domestic septage for submission of a production Waste Characterization Report is not expected to have any impact upon public health or the environment since these facilities generate less than one percent of all the sewage sludge produced in the State. In addition, when the sludge is removed from these small facilities it is transported to larger domestic treatment works and becomes a part of the sludge produced by the larger facility, which is separately sampled and tested under SQAR. Similarly the reduction in reporting for the production Waste Characterization Report for most other treatment works from monthly to annually will not have a negative impact on public health or the environment since this report is used for statistical

purposes only. Most treatment works will still be required to submit monthly Residuals Transfer Reports identifying to where the sludge is removed.

With regard to changing the reporting frequency for some categories of industrial treatment works, the Department believes that there will be positive environmental benefits as a result of this change, since the proposed rules increase reporting for some of the largest sludge generating industrial treatment works. This will ensure the availability of necessary information on the use or disposal of sludge generated by these industrial treatment works.

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 industrial or domestic 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 under the SQAR 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 is 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 potential 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. Under N.J.A.C. 7:14C, the Department is retaining the existing approach of establishing the monitoring frequency for domestic treatment works based on the design flow. 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 reviewed the possibility of changing the reporting method for domestic treatment works from wastewater flow to dry metric tons of sludge produced but rejected the idea at this time. Approximately 34.5 percent of domestic treatment works, including many of the largest domestic treatment works, would be 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. New Jersey is the most densely populated State in the nation; therefore, the Department believes that the current more conservative reporting structure is warranted for the environmental and social conditions that exist in the State.

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 management of the sludge on land will not have adverse effects on surface water and ground

water, or human health. The Department initially intended in 1999 to establish reporting for industrial treatment works based on 40 CFR Part 503 requirements. See 31 N.J.R. 222 (February 1, 1999). The proposed amendments to N.J.A.C 7:14C-1.9(c) and 1.9(d) accomplish this intent.

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 industrial or domestic treatment works is tested for various pollutants. Consequently, the employment opportunities that these requirements may have created will continue as well.

Neither the reduction in reporting the production Waste Characterization Report for domestic and industrial treatment works nor the addition of new parameters is anticipated to have an impact upon the employment opportunities at these treatment works.

The increased reporting for the 29 industrial treatment works is not anticipated to cost any jobs or require creation of new jobs.

The resulting job impact to contract laboratories from the proposed requirements is not anticipated to be significant, since sampling and analytical requirements still remain a part of the rule. There will be no significant change in the level of analyses required. In addition, the Department does not believe that sludge sampling or analyses make up a significant portion of the actual business 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.

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 500 domestic and industrial treatment works currently submitting sludge quality data to the Department, approximately 200 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.

The Department has endeavored to design the SQAR to minimize adverse effect 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 are in the lowest reporting category for their respective treatment works requiring only annual analyses. Additional reductions 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 that produce only domestic septage. 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 the domestic septage 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 rule adopted pursuant to Section 4(a) of the Administrative Procedures Act (N.J.S.A. 52:14B-4(a)), to describe the impact of the proposed rule on the achievement of Smart Growth and implementation of New Jersey State Development and Redevelopment Plan (State Plan). The proposed 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 Governor’s Order on Smart Growth calls for conservation of New Jersey’s natural resources, revitalization of its urban centers, and protection of the quality of the State’s environment, while promoting beneficial economic growth, development and renewal. 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 and the policies expressed in the Governor's Order.

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 and underline **thus**; deletions indicated in brackets [thus]):

CHAPTER 14C. SLUDGE QUALITY ASSURANCE

SUBCHAPTER 1. SLUDGE MONITORING REQUIREMENTS

7:14C-1.3 Definitions

...

"Domestic treatment works" or "DTW" means all publicly owned treatment works as well as any [privately owned] **other** treatment works processing primarily domestic [wastewater] **sewage** and pollutants together with any ground water, surface water, [storm water] **stormwater** or process wastewater that may be present.

...

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 [300-B-94-014, September 1994]**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, PO Box 424, Trenton, New Jersey 08625-0424.

(d)-(h) (No change.)

7:14C-1.6 Sampling procedures

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

(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 [not]require the sampling plan to be submitted [unless]**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.-3. (No change.)

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

1.-2. (No change.)

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) for domestic treatment works, and N.J.A.C. 7:14C-1.9[(b) or](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[reporting] **monitoring** period. **Sample holding times begin upon combination of the last aliquot.**

(e) (No change.)

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.

(b)-(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**[February 19] of the year following the [reporting]**monitoring** year a [DMR]**WCR** form containing the **following** information [at (a)1 below and an RTR form containing the information listed at (a)2 below]:

1. [On a DMR form, the domestic treatment works shall enter:

i]The total quantity of domestic wastewater sludge removed for use or disposal on a wet basis in gallons per year, cubic yards per year, and/or metric tons per year;

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

[iii]**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

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

(b) Each domestic treatment works in Category 1 through 4 (see N.J.A.C. 7:14C-1.5) shall submit to the Department a RTR form containing the information required pursuant to either 1 or 2 below.

[2]**1**. [On an RTR form,]**Each domestic treatment works in Category 1 (see N.J.A.C. 7:14C-1.5) shall, for each calendar year, submit an RTR to the Department by March 1 of the year following the monitoring year.** [the]**The Category 1** domestic treatment works shall enter the quantity of domestic wastewater sludge removed to each ultimate sludge management alternative on a wet basis in gallons per year, cubic yards per year, and/or metric tons per year. The domestic treatment works shall include on the RTR form the New Jersey facility identification number under the Department's New Jersey Environmental Management System (NJEMS) for each ultimate sludge management alternative. If an ultimate sludge management alternative is located in New Jersey but has not been assigned an NJEMS facility identification number, the domestic treatment works shall include on the RTR form the name of the ultimate sludge management alternative and the applicable New Jersey Pollutant Discharge Elimination System (NJPDES), Air Pollution Control, or Solid Waste permit number. If an ultimate sludge management alternative is not located in New Jersey and has not been assigned an NJEMS facility identification number, the domestic treatment works shall include on the RTR form the name and location of the out-of-State sludge management alternative, and the full address and telephone number of the appropriate permitting authority.

[(b) Each domestic treatment works in Category 2, 3 or 4 (see N.J.A.C. 7:14C-1.5) shall, for each calendar month (beginning on the first day of the calendar month and ending on the last day of the calendar month), submit to the Department on or before the first day of the third month following the last day of the reporting month a DMR form containing the information listed at (b)1 below and an RTR form containing the information listed at (b)2 below:

1. On a DMR form, the domestic treatment works shall enter:

i. The total quantity of sludge and/or septage received from off-site sources on a wet basis in gallons per month, cubic yards per month, and/or metric tons per month;

ii. The total quantity of domestic wastewater sludge removed for use or disposal on a wet basis in gallons per month, cubic yards per month, and/or metric tons per month;

iii. The total quantity of domestic wastewater sludge removed for use or disposal on a dry weight basis in metric tons per month;

iv. 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 month; and

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

2. [On an RTR form,]**Each domestic treatment works in Category 2, 3 and 4 (see N.J.A.C. 7:14C-1.5) shall, for each calendar month (beginning the first day of the calendar month and ending on the last day of the calendar month), submit an RTR form to the Department on or before the first day of the third month following the last day of the monitoring month.** [the]**The Category 2, 3 and 4** domestic treatment works shall enter the quantity of domestic wastewater sludge removed to each ultimate sludge management alternative on a wet basis in gallons per month, cubic yards per month, and/or metric tons per month. The domestic treatment works shall include on the RTR form the New Jersey facility identification number under the Department's New

Jersey Environmental Management System (NJEMS) for each ultimate sludge management alternative. If an ultimate sludge management alternative is located in New Jersey but has not been assigned an NJEMS facility identification number, the domestic treatment works shall include on the RTR form the name of the ultimate sludge management alternative and the applicable New Jersey Pollutant Discharge Elimination System (NJPDES), Air Pollution Control, or Solid Waste permit number. If an ultimate sludge management alternative is not located in New Jersey and has not been assigned an NJEMS facility identification number, the domestic treatment works shall include on the RTR form the name and location of the out-of-State sludge management alternative, and the full address and telephone number of the appropriate permitting authority.

(c) In accordance with the schedule in (c)1 through 4 below, each domestic treatment works in the specified categories shall analyze the domestic wastewater sludge removed for use or disposal for the metals and other selected chemical parameters listed in the Appendix, Table I. The domestic treatment works shall submit the results of the analyses to the Department on DMR forms on or before the first day of the third month following the last day of the [reporting]**monitoring** month. For purposes of this subsection, a [reporting]**monitoring** month begins on the first day of the calendar month and ends on the last day of the calendar month.

1. For domestic treatment works in Category 1, the [reporting]**monitoring** month is any one calendar month of the year;

2. For domestic treatment works in Category 2, the [reporting]**monitoring** month is any one calendar month in each six-month period;

3. For domestic treatment works in Category 3, the [reporting]**monitoring** month is any one calendar month in each three-month period; and

4. For domestic treatment works in Category 4, the [reporting]**monitoring** month is each calendar month of the year.

(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. The domestic treatment works shall submit the results of the analyses to the Department on a [DMR]**WCR** form by **March 1**[February 19] of the year following the year in which the [reporting]**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 [month (beginning on the first day of the calendar month and ending on the last day of the calendar month)]**year (January 1 through December 31)**, submit to the Department [on or before the first day of the third month following the last day of the reporting month a DMR]**by March 1 of the year following the monitoring year a WCR** form containing the **following** information [listed at (a)1 below and an RTR form containing the information listed at (a) 2 below;]**:**

1. [On a DMR form, the industrial treatment works shall enter:

i. The total quantity of sludge and/or septage received from off-site sources on a wet basis in gallons per month, cubic yards per month and/or metric tons per month;

ii]The total quantity of process wastewater sludge removed for use or disposal on a wet basis in gallons per [month]**year**, cubic yards per [month]**year** and/or metric tons per [month]**year**;

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

[iv]**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 [month]**year**; and

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

[2]**(b)**. [On an RTR form,]**Each industrial treatment works in Category 6 through 13 (see N.J.A.C. 7:14C-1.5) shall, for each calendar month (beginning the first day of the calendar month and ending on the last day of the calendar month) submit an RTR form to the Department on or before the first day of the third month following the last day of the monitoring month.** [the]**The Category 6 through 13** industrial treatment works shall enter the quantity of sludge removed to each individual ultimate sludge management alternative on a wet basis in gallons per month, cubic yards per month, and/or metric tons per month. The industrial treatment works shall include on the RTR form the New Jersey facility identification number under the Department's New Jersey Environmental Management System (NJEMS) for each

ultimate sludge management alternative. If an ultimate sludge management alternative is located in New Jersey but has not been assigned an NJEMS facility identification number, the industrial treatment works shall include on the RTR form the name of the sludge management alternative and the applicable New Jersey Pollutant Discharge Elimination System (NJPDES), Air Pollution Control, or Solid Waste permit number. If an ultimate sludge management alternative is not located in New Jersey, and has not been assigned an NJEMS facility identification number, the industrial treatment works shall include on the RTR form the name and location of the out-of-State sludge management alternative, and the full address and telephone number of the appropriate permitting authority.

[(b)]**(c)** In accordance with the schedule in [(b)]**(c)**1 through 4 below, each industrial treatment works in the specified categories (see N.J.A.C. 7:14C-1.5) shall analyze the process wastewater sludge removed for use or disposal for any of the parameters listed in the Appendix, Tables I through VII, that are currently manufactured, processed, formed, repackaged, handled, used, disposed, or stored in or otherwise expected to be present in the process wastewater sludge removed at the facility served by the industrial treatment works, or that are limited under the NJPDES, Air Pollution Control, or Solid Waste Permit for the ultimate sludge management alternative used by the industrial treatment works. The industrial treatment works shall submit the results of the analyses to the Department on DMR forms on or before the first day of the third month following the last day of the [reporting]**monitoring** month. For the purposes of this subsection, a [reporting]**monitoring** month begins on the first day of the calendar month and ends on the last day of the calendar month.

1. For industrial treatment works in Category 6, the [reporting]**monitoring** month is any one calendar month of the year;

2. For industrial treatment works in Category 7, the [reporting]**monitoring** month is any one calendar month in each [six]**three**-month period;

3. For industrial treatment works in Category 8, the [reporting]**monitoring** month is any one calendar month in each [three]**two**-month period; and

4. For industrial treatment works in Category 9, the [reporting]**monitoring** month is each calendar month of the year.

[(c)]**(d)** In accordance with the schedule in [(c)]**(d)**1 through 4 below, each industrial treatment works in the specified categories (see N.J.A.C. 7:14C-1.5) shall analyze the process wastewater sludge removed for use or disposal for all of the parameters listed in the Appendix, Table VIII. **In addition, each industrial treatment works shall analyze the process wastewater sludge removed for use or disposal for any of the parameters listed in the Appendix, Tables I through VII, that are manufactured, processed, formed, repackaged, handled, used, disposed, or stored in or otherwise expected to be present in the process wastewater sludge removed at the facility served by the industrial treatment works, or that are limited under the NJPDES, Air Pollution Control, or Solid Waste Permit for the ultimate sludge management alternative used by the industrial treatment works.** The industrial treatment works shall submit the results of the analyses to the Department on DMR forms on or before the first day of the third month following the last day of the [reporting]**monitoring** month. For the purposes of this subsection, a [reporting]**monitoring** month begins on the first day of the calendar month and ends on the last day of the calendar month.

1. For industrial treatment works in Category 10, the [reporting]**monitoring** month is any one calendar month of the year;

2. For industrial treatment works in Category 11, the [reporting]**monitoring** month is any one calendar month in each [six]**three**-month period;

3. For industrial treatment works in Category 12, the [reporting]**monitoring** month is any one calendar month in each [three]**two**-month period; and

4. For industrial treatment works in Category 13, the [reporting]**monitoring** month is each calendar month of the year.

(e) An industrial treatment works in Category 10 through 13 (see N.J.A.C. 7:14C-1.5) that has not received a NJPDES permit issued by the Department under N.J.A.C. 7:14A shall sample and analyze its process wastewater sludge and submit the results of the analyses to the Department in accordance with this section.

[(d)]**(f)** An industrial treatment works in Categories 6 through 9 (see N.J.A.C. 7:14C-1.5) [which is not required to obtain a permit] **that has not received a NJPDES permit issued by the Department** under N.J.A.C. 7:14A shall sample and analyze its process wastewater sludge in accordance with this section and shall maintain records of the results of the analyses on file on-site, but is not required to submit reports to the Department except as provided under [(e) and (f)]**(g) and (h)** below.

[(e)]**(g)** Each industrial treatment works subject to [(d)]**(f)** above shall submit [the] **representative** results of the analyses required under [(d)]**(f)** above and the [following]

information **below** to the Department **within 90 days after a new industrial treatment works starts operation.** [by August 15, 1999 or, for new industrial treatment works, within 90 days after the industrial treatment works starts operation:]

1.-5. (No change.)

6. Updates to this information shall be required to be submitted to the Department when physical alterations or additions to the industrial treatment works are made and alterations or additions are expected by the industrial treatment works to result in a change in any of the parameters listed in the Appendix, Tables I through VII, that are manufactured, processed, formed, repackaged, handled, used, disposed, or stored at the facility served by the industrial treatment works or upon any change in residual use or disposal practices.

[(f)]**(h)** Under N.J.A.C. 7:14A-20.5(d), and based on the information submitted under [(e)]**(g)** above, the Department may designate any person as a "treatment works treating domestic sewage" or "sludge-only facility" where it determines that a permit is necessary to protect public health and the environment from the adverse effects of a sludge or to ensure compliance with the technical standards for sludge use or disposal. Any person so designated shall submit an application for a permit under N.J.A.C. 7:14A within 180 days of being notified by the Department that a permit is required, and the Department may require any industrial treatment works so designated to submit the reports pursuant to (a), (b)**,** [and/or] (c) **and/or (d)** above.

7:14C-1.10 Access

The owner or operator of a domestic or industrial treatment works shall provide access to the treatment works' premises and related records to representatives of the Department **or its designated agent** upon presentation of identification or credentials during normal working hours. The Department **or its designated agent** may take samples of sludge to verify the reported analytical data and to determine if the treatment works is in compliance with the reporting requirements of this chapter.

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

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

1. A Category 1 domestic treatment works (see N.J.A.C. 7:14C-1.5) [which] **that** generates only domestic septage is exempt from the **following:** [requirement under N.J.A.C. 7:14C-1.8(c) to perform analyses for the parameters listed in the Appendix, Table I.]

i. The requirement under N.J.A.C. 7:14C-1.8(a) to submit a WCR; and

ii. The requirement under N.J.A.C. 7:14C-1.8(c) to perform analyses for the parameters listed in the Appendix, Table I and submit the results on a DMR.

2. A domestic treatment works in Category 1 through 4 is exempt from performing analyses in accordance with N.J.A.C. 7:14C-1.8(c) during monitoring periods when sludge is not removed from the treatment works for use or disposal; however, the domestic treatment works must perform the minimum number of analyses required to be submitted under 40 CFR Parts 503.16, 503.26 and 503.46 based on the annual amount of sludge removed for use or disposal.

[2]**3**. A domestic treatment works may request an exemption from or reduction in information required to be submitted under these rules at any time after the domestic treatment works submits its first sludge analysis report under N.J.A.C. 7:14C-1.8. The Department may grant a reduction or exemption based on sludge quality, present or anticipated sludge management practices, or type of industrial discharges into the domestic treatment works. The request for a reduction or exemption shall be in writing and be accompanied by a flow diagram [which] **that** documents the wastewater and sludge treatment processes;

[3]**4**. If the nature of the sludge produced by a domestic treatment works on a modified reporting schedule should change at any time due to an increase or change in process wastewater contributions or a change in treatment processes at the domestic treatment works (including a change in the ultimate sludge management alternative), the owner or operator shall, within 30 days, notify the Department of the nature of the change. Based upon this information, the Department may require additional analyses to be performed and require that the domestic treatment works return to the reporting schedule required under N.J.A.C. 7:14C-1.8.

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

1. (No change.)

2. An industrial treatment works in Category 6 through 13 is exempt from performing analyses in accordance with N.J.A.C. 7:14C-1.9(c) and N.J.A.C. 7:14C-

1.9(d) during monitoring periods when sludge is not removed from the treatment works for use or disposal.

[2]**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.-iii. (No change.)

[3]**4**. The Department's determination of reductions or exemptions in reporting requirements for industrial treatment works will be based on the following criteria:

i.-iv. (No change.)

(c) (No change.)

APPENDIX

MONITORING PARAMETER TABLES

Table I

Primary Metals and Selected Chemical Parameters

Total Solids, (percent by weight)

Arsenic, total

Beryllium, total

Cadmium, total

Calcium, total

Chromium, total

Copper, total

Lead, total

Mercury, total

Molybdenum, total

Nickel, total

Nitrogen, Total Kjeldahl (TKN)

Nitrogen, Ammonia (NH_3-N)

Nitrogen, Nitrate (NO_3-N)

Phosphorous, total

Potassium, total

Selenium, total

Zinc, total

Radionuclides (pCi/g)[1]

Dioxins and PCBs[2]

Notes:

[1] Radionuclides are be required to be tested in the sludge if the industrial or domestic treatment works receives source water or uses additives known to or suspected of having elevated radionuclide concentrations. The radionuclides required to be tested for include, but are not limited to, radium-226, radium-228, uranium-238, uranium-234, uranium-235, and thorium-232.

[2] Dioxin and dioxin-like compounds, including dibenzofurans, and individual PCB congeners are required to be tested in the sludge on a case by case basis as established in a NJPDES permit issued pursuant to N.J.A.C. 7:14A.

Table II

Additional Miscellaneous Compounds

Parameter	CAS RN [1]
Antimony, total	
Silver, total	
Thallium, total	
Cyanide, total	57-12-5
[2,3,7,8-Tetrachloro-dibenzo-p-dioxin; (TCDD)	174-60-16]

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Notes:

[1] Chemical Abstracts Service registry number

Table III

Volatile Organic Compounds

Parameter	CAS RN [1]
Acrolein; (2-Propenal)	107-02-[0]8
Acrylonitrile; (2-Propenenitrile)	107-13-1

Benzene	71-43-2
Bromoform; (Tribromomethane)	75-25-2
Carbon Tetrachloride; (Tetrachloromethane)	56-23-5
Chlorobenzene	108-90-7
Chlorodibromomethane; (Dibromochloromethane)	124-48-1
Chloroethane; (Ethyl chloride)	75-00-3
2-Chloroethylvinyl Ether	110-75-8
Choroform; (Trichloromethane)	67-66-3
Dichlorobromomethane; (Bromodichloromethane)	75-27-4
1,1-Dichloroethane; (Ethylidene chloride)	75-34-3
1,2-Dichloroethane; (Ethylene dichloride)	107-06-2
1,1-Dichloroethylene; (1,1-Dichloroethene); (Vinylidene chloride)	75-35-4
1,2-Dichloropropane; (Propylene dichloride)	78-87-5
trans-1,3-Dichloropropene	10061-02-6
Ethylbenzene	100-41-4
Methyl bromide; (Bromomethane)	74-83-9
Methyl chloride; (Chloromethane)	74-87-3
Methylene chloride; (Dichloromethane)	75-09-2
1,1,2,2-Tetrachloroethane	79-34-5
Tetrachloroethylene; (Tetrachloroethene); (Perchloroethylene)	127-18-4
Toluene; (Methylbenzene)	108-88-3

1,2-trans-Dichloroethylene; (trans-1,2-Dichloroethene)	156-60-5
1,1,1-Trichloroethane; (Methylchloroform)	71-55-6
1,1,2-Trichloroethane	79-00-5
Trichloroethylene; (Trichloroethene)	79-01-6
Vinyl Chloride; (Chloroethene)	75-01-4

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Notes:

[1]Chemical Abstracts Service registry number

Table IV

(No change.)

Table V

Base-Neutral Compounds

Parameter	CAS RN [1]
Acenaphthene; (1,2-dihydro-Acenaphthylene)	83-32-9
Acenaphthylene	208-96-8
Anthracene	120-12-7
Benzidine	9**2**[3]-87-5
Benzo(a)anthracene	56-55-3
Benzo(a)pyrene	50-32-8
3,4-Benzofluoranthene; (Benzo(b)fluoranthene)	205-99-2
Benzo(g,h,i)perylene	191-24-2

Benzo(k)Fluoranthene	207-08-9
bis(2-Chloroethoxy)methane	111-91-1
bis(2-Chloroethyl)ether	111-44-4
bis(2-Chloroisopropyl)ether;	
(Bis(2-chloro-1-methylethyl)ether)	108-60-1
bis(2-Ethylhexyl)phthalate	117-81-7
4-Bromophenyl phenyl ether;	
(1-bromo-4-phenoxy Benzene)	101-55-3
Butyl benzyl phthalate; (Benzyl butyl phthalate)	85-68-7
2-Chloronaphthalene	91-58-7
4-Chlorophenyl phenyl ether;	7005-72-3
Chrysene	218-01-9
Dibenzo(a,h)anthracene	53-70-3
1,2-Dichlorobenzene; (o-Dichlorobenzene)	95-50-1
1,3-Dichlorobenzene; (m-Dichlorobenzene)	541-73-1
1,4-Dichlorobenzene; (p-Dichlorobenzene)	106-46-7
3,3-Dichlorobenzidine	91-94-1
Diethyl phthalate	84-66-2
Dimethyl phthalate	131-11-3
Di-n-butyl phthalate	84-74-2
2,4-Dinitrotoluene; (1-methyl-2,4-dinitrobenzene)	121-14-2
2,6-Dinitrotoluene; (2-methyl-1,3-dinitrobenzene)	606-20-2
Di-n-octyl phthalate	117-84-0

1,2-Diphenylhydrazine	122-66-7
Fluoranthene	206-44-0
Fluorene	86-73-7
Hexachlorobenzene	118-74-1
Hexachlorobutadiene	87-68-3
Hexachlorocyclopentadiene	77-47-4
Hexachloroethane	67-72-1
Indeno(1,2,3-c,d)pyrene	193-39-5
Isophorone	78-59-1
Naphthalene	91-20-3
Nitrobenzene	98-95-3
N-Nitrosodimethylamine	62-75-9
N-Nitrosodi-n-propylamine; (N-Nitrosodipropylamine) (Di-n-propylnitrosamine)	621-64-7
N-Nitrosodiphenylamine	86-30-6
Phenanthrene	85-01-8
Pyrene	129-00-0
1,2,4-Trichlorobenzene	120-82-1

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Notes:

[1]Chemical Abstracts Service registry number

Table VI

(No change.)

Table VII

Conventional and Nonconventional Pollutants

Parameter
Aluminum, Total
Barium, Total
Boron, Total
Cobalt, Total
Iron, Total
Magnesium, Total
Manganese, Total
Strontium, Total
Tin, Total
Titanium, Total
[Uranium, Total]
Vanadium, Total
Zirconium, Total

Hazardous Substances

Parameter	CAS RN [1]
Acetone; (2-Propanone)	67-64-1
Acetonitrile; (Methyl cyanide)	75-05-8

Acetophenone	98-86-2
2-Acetylaminofluorene; (2-AFF)	53-96-3
Acrylamide	**79-06-1**
Allyl chloride	107-05-1
4-Aminobiphenyl	92-67-1
Atrazine	**1912-24-9**
Benzaldehyde	**100-52-7**
Benzyl alcohol	100-51-6
1,1 Biphenyl	**92-52-4**
Bromochloromethane; (Chlorobromomethane)	74-97-5
Caprolactam	**105-60-2**
Carbazole	**86-74-8**
Carbon disulfide	75-15-0
p-Chloroaniline; (4-chlorobenzenamine)	106-47-8
Chlorobenzilate	510-15-6
Chloroprene; (2-chloro-1,3-butadiene)	126-99-8
m-Cresol; (3-methylphenol)	108-39-4
o-Cresol; (2-methylphenol)	95-48-7
p-Cresol; (4-methylphenol)	106-44-5
2,4-D; (2, 4-Dichlorophenoxyacetic acid)	94-75-7
Diallate	2303-16-4
Dibenzofuran	132-64-9
1,2-Dibromo-3-chloropropane; (DBCP)	96-12-8

1,2-Dibromoethane; (Ethylene dibromide); (EDB)	106-93-4
trans-1,4-Dichloro-2-butene	110-57-6
Dichlorodifluoromethane; (CFC 12)	75-71-8
cis-1,2-Dichloroethylene; (cis-1,2-Dichloroethene)	156-59-2
2,6-Dichlorophenol	87-65-0
1,3-Dichloropropane; (Trimethylene dichloride)	142-28-9
2,2-Dichloropropane; (Isopropylidene chloride)	594-20-7
1,1-Dichloropropene	563-58-6
cis-1,3-Dichloropropene	10061-01-5
0,0-Diethyl 0-2-pyrazinyl phosphorothioate; (Thionazin)	297-97-2
Dimethoate	60-51-5
p-(Dimethylamino)azobenzene	60-11-7
7,12-Dimethylbenz[a]anthracene	57-97-6
3,3-Dimethylbenzidine	119-93-7
m-Dinitrobenzene; (1,3-dinitrobenzene)	99-65-0
Dinoseb; (DNBP)	88-85-7
Diphenylamine; (N-phenylbenzenamine)	122-39-4
Disulfoton	298-04-4
Ethylbenzene	100-41-4
Ethyl methacrylate	97-63-2
Ethyl methanesulfonate	62-50-0
Famphur	52-85-7

Hexachloropropene	1888-71-7
2-Hexanone; (Methyl butyl ketone)	591-78-6
Isobutyl alcohol	78-83-1
Isodrin	465-73-6
Isosafrole	120-58-1
Kepone	143-50-0
Methacrylonitrile	126-98-7
Methapyrilene	91-80-5
Methoxychlor	72-43-5
Methyl acetate	**79-20-9**
3-Methylcholanthrene	56-49-5
Methylcyclohexane	**108-87-2**
Methylene bromide; (Dibromomethane)	74-95-3
Methyl ethyl ketone; (MEK); (2-Butanone)	78-93-3
Methyl iodide; (Iodomethane)	74-88-4
Methyl methacrylate	80-62-6
Methyl methanesulfonate	66-27-3
2-Methylnaphthalene	91-57-6
Methyl parathion; (Parathion methyl)	298-00-0
4-Methyl-2-pentanone; (Methyl isobutyl ketone)	108-10-1
Methyl-tert-butyl ether (MTBE)	**1634-04-4**
1,4-Naphthoquinone; (1,4-Naphthalenedione)	130-15-4
1-Naphthylamine; (1-Naphthalenamine)	134-31-7

2-Naphthylamine; (2-Naphthalenamine)	91-59-8
o-Nitroaniline; (2-Nitroaniline); (2-nitrobenzenamine)	88-74-4
m-Nitroaniline; (3-Nitroaniline); (3-nitrobenzenemine)	99-09-2
p-Nitroaniline; (4-Nitroaniline); (4-nitrobenzenamine)	100-01-6
N-Nitrosodi-n-butylamine	924-16-3
N-Nitrosodiethylamine	55-18-5
N-Nitrosomethylethalamine	10595-95-6
N-Nitrosopiperidine	100-75-4
N-Nitrosopyrrolidine	930-55-2
5-Nitro-o-toluidine	99-55-8
Parathion	56-38-2
Pentachlorobenzene	606-93-5
Pentachloronitrobenzene	82-68-8
Phenacetin	62-44-2
p-Phenylenediamine; (1,4-Benzenediamine)	106-50-3
Phorate	298-02-2
Pronamide	23950-58-5
Propionitrile; (Ethyl cyanide); (Propanenitrile)	107-12-0
Safrole	94-59-7
Silvex; (2,4,5-TP);	93-72-1
Styrene	100-42-5
Sulfide	18496-25-8
2,4,5-T; (2,4,5-Trichlorophenoxyacetic acid)	93-76-5

Tertiary butyl alcohol (TBA)	**75-65-0**
1,2,4,5-Tetrachlorobenzene	95-94-3
1,1,1,2-Tetrachloroethane	630-20-6
2,3,4,6-Tetrachlorophenol	58-90-2
o-Toluidine	95-53-4
Trichlorofluoromethane; (CFC-11)	75-69-4
2,4,5-Trichlorophenol	95-95-4
1,2,3,-Trichloropropane	96-18-4
1,1,2-Trichloro-1,2,2-trifluoroethane	**76-13-1**
0,0,0-Triethyl phosphorothioate	126-68-1
sym-Trinitrobenzene; (1,3,5-trinitrobenzene)	99-35-4
Vinyl accetate	108-05-4
Xylene (total)[2]	[(See note 2)]

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Notes:

[1]Chemical Abstracts Service registry number

[2]Xylene (total): This entry includes o-xylene (CAS RN 96-47-6), m-xylene (CAS RN 108-38-3), p-xylene (CAS RN 106-42-3), and unspecified xylenes (dimethylbenzenes) (CAS RN 1330-20-7).

TABLE VIII

Pollutants required to be monitored for industrial treatment works in Categories 10 through 13

Parameter	
Total Solids, (percent by weight)	
Arsenic, total	
Cadmium, total	
Copper, total	
Lead, total	
Mercury, total	
Molybdenum, total	
Nickel, total	
Nitrogen, Total Kjeldahl (TKN)	
Nitrogen, Ammonia (NH3-N)	
Nitrogen, Nitrate (NO3-N)	
Phosphorous, total	
Potassium, total	
Selenium, total	
Zinc, total	
Aluminum, total[1]	[(See note 1)]
Iron, total[1]	[(See note 1)]
Trihalomethanes[2]	[(See note 2)]
Radionuclides (pCi/g)[3]	

Notes:

[1]Aluminum or iron, as applicable, are required to be tested in the sludge if an aluminum or iron containing coagulant (such as aluminum sulfate or ferric chloride) is used in the treatment process.

[2]Trihalomethanes are required to be tested in the sludge if the PWTS receives all or a portion of the water treated from a surface water source and chlorinates the water prior to distribution. The compounds required to be tested are: chloroform, bromoform, chlorodibromomethane, and Dichlorobromomethane.

[3] Radionuclides are required to be tested in the sludge if the potable water treatment system receives source water or uses additives known to or suspected of having elevated radionuclide concentrations. The radionuclides to be tested for include, but are not limited to, radium-226, radium-228, uranium-238, uranium-234, uranium-235, and thorium-232.

Based on consultation with staff, I hereby certify that the above statements, including the Federal Standards Analysis addressing the requirements of Executive Order No. 27 (1994), permits the public to understand accurately and plainly the purposes and expected consequences of this proposal. I hereby authorize this proposal.

Date:_____

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Bradley M. Campbell, Commissioner
Department of Environmental Protection