

CHAPTER 14C SLUDGE QUALITY ASSURANCE

SUBCHAPTER 1. SLUDGE MONITORING REQUIREMENTS

7:14C-1.1 Scope

The following shall constitute the rules for sludge quality assurance reporting required of all domestic and industrial treatment works which generate sludge in the State of New Jersey or which 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.

7:14C-1.2 Purpose

(a) The rules in this subchapter are promulgated for the following purposes:

1. To determine the degree of chemical contamination, including organic and inorganic pollutants present in sludge produced by domestic and industrial treatment works;
2. To establish a data system providing information for a program to reduce the discharge of toxic levels of organic and inorganic pollutants from sludge into the waters of the State; and
3. To establish a data system providing information for environmentally sound sludge management.

7:14C-1.3 Definitions

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

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

"COD" (chemical oxygen demand) means a measure of the oxygen required to oxidize all compounds in water, both organic and inorganic (in milligrams per liter, mg/l) in a waste sample under specific conditions of an oxidizing agent, temperature and time as determined by approved analytical procedures set forth in 40 CFR Part 136.

"Domestic pollutant" means a pollutant which results from the discharge of household, commercial or other wastes from bathrooms, toilet facilities, home laundries

and kitchens which are predominantly the result of natural human waste elimination associated with bodily function and food preparation.

“Domestic septage” means either liquid or solid material removed from a septic tank, cesspool, portable toilet, Type III marine sanitation device, or similar treatment works that receives only domestic sewage. Domestic septage does not include liquid or solid material removed from a septic tank, cesspool, or similar treatment works that receives process wastewater and does not include grease removed from a grease trap.

“Domestic sewage” means waste and wastewater from humans or household operations that is discharged to or otherwise enters a treatment works.

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

“Domestic wastewater” means the liquid waste or liquid borne wastes discharged into a domestic treatment works.

“Domestic wastewater sludge” means the solid residue and associated liquids resulting from the physical, chemical or biological treatment of domestic wastewaters by a domestic treatment works.

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

“Industrial wastewater treatment system” means any structure or structures by means of which industrial liquid waste or sludges are subjected to any treatment process.

“Land-based sludge management criteria” means those standards established by the Department in the Statewide Sludge Management Plan adopted pursuant to the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., or established pursuant to the Clean Water Act or the Federal Water Pollution Control Act (33 U.S.C. §1251 et seq.) including all subsequent supplements and amendments, or any regulations adopted pursuant thereto.

“MGD” means million gallons per day.

“Permitted flow” means a treatment work’s maximum allowable flow (usually in million gallons per day, or other appropriate unit of flow such as gallons per day) as stated in the facility’s NJPDES Permit or TWA, whichever is more stringent.

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

“Process wastewater sludge” means the solid residue and associated liquid resulting from the physical, chemical and/or biological treatment of process wastewaters by an industrial treatment works.

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

“Public water treatment system” means any structure or structures delivering water into a public water distribution system as identified by a specific ID number pursuant to the Safe Drinking Water Act regulations, N.J.A.C. 7:10, and which subjects water, prior to use for potable purposes, to the addition or subtraction of a substance or substances in order to enhance the safeness, palatability, public health, purity, or aesthetic qualities; or reduce the corrosive or hazardous properties of the water used.

“Septage” means the liquid and solid material pumped from a septic tank, cesspool, or similar domestic sewage treatment system, or a holding tank when the system is cleaned or maintained.

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

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

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

“Sludge production” means the quantity of sludge removed for use or disposal.

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

“Treatment works” means any treatment works as defined by N.J.A.C. 7:14A-1.2 and N.J.S.A. 58:10A-3.

“Treatment works treating domestic sewage” means a domestic treatment works or any other sewage sludge or wastewater treatment devices or systems, regardless of ownership (including Federal facilities) used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated for the disposal of sewage sludge. This definition does not include septic tanks or similar devices. The Regional Administrator of the U.S. Environmental Protection Agency or the Commissioner of the Department may designate any person subject to the standards for sewage sludge use or disposal in 40 CFR Part 503 or N.J.A.C. 7:14A-20 as a “treatment works treating domestic sewage” through issuance of a permit where it is found that there is a potential for adverse effects on public health and the environment from sludge quality or sludge handling, or sludge use or disposal practices, or where there is a finding that such designation is necessary to ensure that such person is in compliance with 40 CFR Part 503 or N.J.A.C. 7:14A-20.

“Ultimate sludge management alternative” means the final management of sludge at a facility or operation such that no additional permit or approval actions are required for further processing or movement.

7:14C-1.4 Analytical procedures

(a) Analyses shall be performed on the total sludge sample and shall be expressed on a bulk dry weight basis (mg/kg) except as otherwise specifically provided in the chapter Appendix, Tables I through VIII, incorporated herein by reference.

(b) The permittee shall perform all sludge analyses in accordance with the analytical test procedures specified in 40 CFR 503.8, incorporated herein by reference.

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

(d) Analyses conducted for the purpose of determining the formal waste classification of the sludge shall be performed in accordance with the requirements specified in N.J.A.C. 7:26G.

(e) All laboratories performing analyses under these rules shall perform and maintain all quality control data and records as required by N.J.A.C. 7:18. Laboratories shall follow the entire test procedure for sludge analyses specified in (b) and (c) above to completion without any modification. All quality control procedures as cited in the reference analytical techniques shall be performed and documented.

(f) All domestic and industrial treatment works shall retain records of the monitoring information, and quality assurance and quality control documentation specified below for a period of at least five years, or longer if required under N.J.A.C. 7:14A-20, from the date of the sludge sample. The Department may, for cause, extend the period that the records must be maintained by written notice to the treatment works. Causes for extending the records maintenance period include, for example, enforcement action or litigation. All domestic and industrial treatment works shall maintain records of the following:

1. The date, exact place, and time of sampling or measurement;
2. The individual(s) who performed the sampling or measurement;
3. The weather conditions at the time of sampling and other observations which could potentially impact the laboratory analytical results;
4. The date(s) laboratory analyses were performed;
5. The individual(s) who performed the laboratory analyses;
6. The laboratory analytical techniques or methods used;
7. The results of such laboratory analyses; and
8. The following quality control and quality assurance information:
 - i. Method blank results;
 - ii. Serial dilution results for metal analyses;
 - iii. Precision and accuracy statement determined by laboratory matrix spikes and matrix spike duplicates on the sludge sample and the quality control sample;
 - iv. Chain-of-custody; and
 - v. Method detection limits (aqueous matrix and calculated for the sample based on dry weight).

(g) The Department may require domestic or industrial treatment works to submit the information in (f) above if the Department, in reviewing SQAR reports or other relevant information, determines that the data reflect unusually high or low reported pollutant concentrations.

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

7:14C-1.5 Reporting Categories

(a) For the purposes of determining the frequency of sampling and analysis for submission of all required sludge reports and for determining proper sampling procedures, domestic treatment works shall be divided into categories on the basis of permitted flow as follows:

1. Category 1: Domestic treatment works with a permitted flow less than 0.1 MGD.
2. Category 2: Domestic treatment works with a permitted flow of 0.1 to 0.999 MGD.
3. Category 3: Domestic treatment works with a permitted flow from 1.0 to 4.999 MGD.
4. Category 4: Domestic treatment works with a permitted flow equal to or greater than 5.0 MGD.
5. If both an annual average flow and a monthly average flow are set in the NJPDES permit, the SQAR category under (a)1 through 4 above shall be determined by the annual average flow. If the permit sets staged flows, the SQAR category shall be determined according to each currently approved staged flow in the permit.

(b) For the purposes of determining the frequency of sampling and analysis for submission of all required sludge reports and for determining proper sampling procedures, industrial treatment works shall be divided into categories on the basis of annual sludge production, as follows:

1. Category 6: Any industrial wastewater treatment system with a sludge production greater than zero, but less than 290 dry metric tons per 365 day period.
2. Category 7: Any industrial wastewater treatment system with a sludge production equal to or greater than 290, but less than 1,500 dry metric tons per 365 day period.
3. Category 8: Any industrial wastewater treatment system with a sludge production equal to or greater than 1,500, but less than 15,000 dry metric tons per 365 day period.
4. Category 9: Any industrial wastewater treatment system with a sludge production equal to or greater than 15,000 dry metric tons per 365 day period.

5. Category 10: Any public water treatment system with a sludge production greater than zero, but less than 290 dry metric tons per 365 day period.

6. Category 11: Any public water treatment system with a sludge production equal to or greater than 290, but less than 1,500 dry metric tons per 365 day period.

7. Category 12: Any public water treatment system with a sludge production equal to or greater than 1,500, but less than 15,000 dry metric tons per 365 day period.

8. Category 13: Any public water treatment system with a sludge production equal to or greater than 15,000 dry metric tons per 365 day period.

7:14C-1.6 Sampling procedures

(a) All sludge samples shall be collected at locations representative of the chemical and physical characteristics of the sludge removed from the last treatment process before leaving the treatment plant for use or disposal. For example, if a treatment works discharges dewatered filter cake for land application, then the sampling activity must focus on the output sludge stream from the dewatering device (that is, vacuum filter, belt filter press, etc.).

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

(c) Each domestic treatment works and industrial treatment works shall develop and maintain on file on-site a sludge sampling plan that details its sampling and analytical procedures. The Department will require the sampling plan to be submitted 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. Identify sludge sampling points that are established at a location(s) which ensure sample homogeneity and best represent the physical and chemical quality of all sludge which is removed from the treatment works for use or disposal;

2. Identify the equipment to be utilized for sampling. The equipment shall be constructed of materials which will not contaminate or react with the sludge (for example, galvanized or zinc coated items shall not be used); and

3. Demonstrate how quality assurance and quality control requirements and procedures for sampling and analysis, including decontamination procedures, consistent with the Department's Field Sampling Procedures Manual, May 1992, as amended or supplemented, will be met. Copies of the Manual may be obtained by contacting the

Maps and Publications Sales Office, Bureau of Revenue, P.O. Box 417, Trenton, New Jersey 08625-0417.

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

1. Samples requiring preservation shall be preserved upon receipt in the laboratory which will be conducting the analytical testing.

2. All samples shall be chilled at four degrees Celsius during compositing, holding, and transporting.

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(c) or (d) for industrial treatment works, by using a minimum of five grab samples of equal volumes collected at the time sludge is removed for use or disposal during the monitoring period. Sample holding times begin upon combination of the last aliquot.

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

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) All report forms shall be submitted to the Bureau of Permits Management, Division of Water Quality, P.O. Box 029, Trenton, New Jersey 08625-0029.

(c) If a domestic or industrial treatment works monitors any pollutant more frequently than is required under this chapter, the domestic or industrial treatment works shall report the increased frequency of sampling on the applicable report form and shall include the results of all samples in the applicable calculations and data submitted on the report form.

(d) Each domestic or industrial treatment works shall comply with the land-based sludge management criteria applicable to the ultimate sludge management alternative utilized by the domestic or industrial treatment works.

(e) Each domestic or industrial treatment works shall report any noncompliance with the land-based sludge management criteria to the Department. The noncompliance with the land-based sludge management criteria shall be orally reported within 24 hours of the domestic or industrial treatment works becoming aware of the noncompliance to the

Bureau of Pretreatment and Residuals at (609) 633-3823 and to the ultimate sludge management alternative. A written submission shall be made within five days thereafter to: Chief, Bureau of Pretreatment and Residuals, Division of Water Quality, P.O. Box 029, Trenton, New Jersey 08625-0029, with a copy to the ultimate sludge management alternative, and shall include the following information:

1. Dates of occurrence;
2. A description of the noncompliance with the land-based sludge management criteria;
3. The cause of the noncompliance; and
4. Steps being taken to reduce, eliminate and prevent reoccurrence of the noncompliance.

(f) Based on information submitted pursuant to (e) above, or pursuant to N.J.A.C. 7:14A-20.5, the Department shall require any domestic or industrial treatment works to perform and submit the results of additional sludge analyses, obtain under N.J.A.C. 7:26G a formal waste classification of the sludge removed for use or disposal, and/or require other actions when necessary to protect public health or the environment from any adverse effect of a pollutant in the sludge.

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

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

1. 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;
2. The total quantity of domestic wastewater sludge removed for use or disposal on a dry weight basis in metric tons per year;
3. By individual sludge management method, the respective quantities of domestic wastewater sludge removed for use or disposal on a dry weight basis in metric tons per year; and
4. 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 (b) 1 or 2 below.

1. 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 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.

2. 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 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 monitoring month. For purposes of this subsection, a 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 monitoring month is any one calendar month of the year;

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

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

4. For domestic treatment works in Category 4, the 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 WCR form by March 1 of the year following the year in which the monitoring month occurs.

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

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

1. The total quantity of process 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;

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

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

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

(b) 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 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.

(c) In accordance with the schedule in (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 monitoring month. For the purposes of this subsection, a 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 monitoring month is any one calendar month of the year;

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

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

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

(d) In accordance with the schedule in (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 monitoring month. For the purposes of this subsection, a 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 monitoring month is any one calendar month of the year;

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

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

4. For industrial treatment works in Category 13, the 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.

(f) An industrial treatment works in categories 6 through 9 (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 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 (g) and (h) below.

(g) Each industrial treatment works subject to (f) above shall submit representative results of the analyses required under (f) above and the information in (g)1 through 5 below to the Department within 90 days after a new industrial treatment works starts operation. Updates to the information in (f) above and (g)1 through 5 below 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 chapter 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.

1. Name, location, and mailing address of the industrial treatment works;

2. The percentage of total influent to the industrial treatment works that is domestic wastewater;

3. The operator's name, address, and telephone number;

4. A description of the process wastewater sludge use or disposal practices (including, where applicable, the location of any sites where sludge is transferred for

treatment, use, or disposal, as well as the name of any applicator or other contractor who applies the sludge to land); and

5. The annual amount of process wastewater sludge generated at the industrial treatment works, the annual amount of process wastewater sludge received from off-site sources and, by each use or disposal method, the annual amount (in dry metric tons) of sludge removed for the 365-day period immediately preceding submittal of the information required under this subsection.

(h) Under N.J.A.C. 7:14A-20.5(d), and based on the information submitted under (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), (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-1.11 Non-compliance

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

7:14C-1.12 Implementation

(a) All new domestic and industrial treatment works shall submit their first report within 90 days after their start of operations. Thereafter, they shall follow the reporting schedule prescribed by N.J.A.C. 7:14C-1.8 or 1.9.

(b) Any out-of-State domestic or industrial treatment works which transports sludge into the State of New Jersey for use or disposal shall notify the Department in writing prior to the shipment of sludge into the State. The notification shall include the anticipated date that sludge shipments will begin as well as one complete set of analyses for all parameters as required to be reported under this chapter for the domestic or industrial treatment works, as applicable. Thereafter, the out-of-State domestic or industrial treatment works

shall commence reporting to the Department in accordance with N.J.A.C. 7:14C-1.8 or 1.9.

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) that generates only domestic septage is exempt from the following:

- 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.

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 that documents the wastewater and sludge treatment processes;

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. The following industrial treatment works shall be exempt from all reporting requirements under this chapter:

- i. Noncontact cooling water treatment works;

ii. Treatment works for the discharge of untreated storm water; and

iii. Treatment works which manage sludge determined to be hazardous in accordance with N.J.A.C. 7:26G and/or 40 CFR Part 261.

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

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. If an industrial treatment works has a process wastewater permitted flow of 10,000 gallons per day or less, the Department may reduce the frequency of reporting after submission of the first report;

ii. If an industrial treatment works produces a process wastewater sludge which is recycled, the industrial treatment works may apply for an exemption or change in the frequency of reporting after submission of the first required report; and

iii. Where an industrial treatment works can demonstrate to the Department's satisfaction, based on the criteria in (b)3 below, that removal schedules or historical sludge quality justify a reduction or exemption, the Department may grant a reduction in or an exemption from any of the reporting requirements at any time after submission of the first required report.

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

i. All requests for a reduction or exemption in the reporting frequency shall be accompanied by a complete analysis for those substances required to be reported under these rules. The request for a reduction shall also be accompanied by a flow diagram which documents each and every manufacturing or production campaign, a detailed description of the individual treatment processes and a list of those substances for which the reduction is requested;

ii. In considering requests for an exemption or reduced reporting, the Department will consider the quantity and quality of the sludge produced, removal frequency, storage provisions, ultimate management mode, the quantities and toxicities of the substances for which the reduction is requested and the likelihood for soil, water or air pollution associated with management of the sludge;

iii. The Department will review all requests and may grant a reduction, an exemption, or may require additional analytical testing for any or all of the pollutants required to be reported in N.J.A.C. 7:14C-1.9. The Department may also require that the

applicant for a reduction demonstrate that the use of best management practices justifies the request; and

iv. If the nature of the process wastewater or sludge produced by an industrial treatment works on a modified reporting schedule should change at any time due to an increase or change in process wastewater contributions, a change in treatment processes at the industrial treatment works or a change in its process, handling, manufacturing, packaging, storage or disposal practices (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 analyses to be performed and require that the industrial treatment works return to the reporting schedule required by N.J.A.C. 7:14C-1.9.

(c) All treatment works shall continue to submit reports as required in N.J.A.C. 7:14C-1.8 or 1.9 until written Department approval has been provided which exempts or reduces reporting requirements.

7:14C-1.14 Severability

If any provision of this chapter or the application thereof to any person or circumstances is held invalid, such invalidity shall not affect other provisions or applications, and to this end, the provisions of the chapter are declared to be severable.

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 (NH₃-N)
Nitrogen, Nitrate (NO₃-N)
Phosphorous, total
Potassium, total
Selenium, total
Zinc, total
Radionuclides (pCi/g)¹
Dioxins and PCBs²

Notes:

¹ Radionuclides are 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.

NOTE: This is a courtesy copy of this rule. All of the Department's rules are compiled in Title 7 of the New Jersey Administrative Code.

Table II
Additional Miscellaneous Compounds

<u>Parameter</u>	<u>CAS RN</u>¹
Antimony, total	
Silver, total	
Thallium, total	
Cyanide, total	57-12-5

Notes:

¹ Chemical Abstracts Service registry number

Table III
Volatile Organic Compounds

<u>Parameter - Name(s)</u>	<u>CAS RN¹</u>
Acrolein; (2-Propenal)	107-02-8
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
Chloroform; (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

Notes:

¹ Chemical Abstracts Service registry number

NOTE: This is a courtesy copy of this rule. All of the Department's rules are compiled in Title 7 of the New Jersey Administrative Code.

Table IV
Acid-extractable compounds

<u>Parameter</u>	<u>CAS RN¹</u>
2-Chlorophenol	95-57-8
2,4-Dichlorophenol	120-83-2
2,4-Dimethylphenol; (m-Xylenol)	105-67-9
4,6-Dinitro-o-cresol; (4,6-Dinitro-2-methylphenol)	534-52-1
2,4-Dinitrophenol	51-28-5
2-Nitrophenol; (o-Nitrophenol)	88-75-5
4-Nitrophenol; (p-Nitrophenol)	100-02-7
p-Chloro-m-cresol; (4-Chloro-3-methylphenol)	59-50-7
Pentachlorophenol	87-86-5
Phenol	108-95-2
2,4,6-Trichlorophenol	88-06-2

Notes:

¹ Chemical Abstracts Service registry number

Table V
Base-Neutral Compounds

<u>Parameter</u>	<u>CAS RN</u> ¹
Acenaphthene; (1,2-dihydro-Acenaphthylene)	83-32-9
Acenaphthylene	208-96-8
Anthracene	120-12-7
Benzidine	92-87-5
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

NOTE: This is a courtesy copy of this rule. All of the Department's rules are compiled in Title 7 of the New Jersey Administrative Code.

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

Notes:

¹ Chemical Abstracts Service registry number

Table VI
Pesticides and PCB

<u>Parameter</u>	<u>CAS RN</u> ¹
Aldrin	309-00-2
alpha-BHC	319-84-6
beta-BHC	319-85-7
gamma-BHC; (Lindane)	58-89-9
delta-BHC	319-86-8
Chlordane	(see note 2)
4,4'-DDT	50-29-3
4,4'-DDE	72-55-9
4,4'-DDD	72-54-8
Dieldrin	60-57-1
alpha-Endosulfan	959-98-8
beta-Endosulfan	33213-65-9
Endosulfan sulfate	1031-07-8
Endrin	72-20-8
Endrin aldehyde	7421-93-4
Heptachlor	76-44-8
Heptachlor epoxide	1024-57-3
PCB-1242	53469-21-9
PCB-1254	11097-69-1
PCB-1221	11104-28-2
PCB-1232	11141-16-5
PCB-1248	12672-29-6
PCB-1260	11096-82-5
PCB-1016	12674-11-2
Toxaphene	8001-35-2

Notes:

¹ Chemical Abstracts Service registry number

² Chlordane: This entry includes alpha-chlordane (CAS RN 5103-71-9), beta-chlordane (CAS RN 5103-74-2), gamma-chlordane (CAS RN 5566-34-7), and constituents of chlordane (CAS RN 57-74-9 and CAS RN 12789-03-6).

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
Vanadium, Total
Zirconium, Total

Hazardous Substances

Parameter

CAS RN¹

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-nitrobenzenamine)	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); [2-(2,4,5-Trichlorophenoxy)propanoic acid]	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 acetate	108-05-4
Xylene (total)²	

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, total¹
Iron, total¹
Trihalomethanes²
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.