

Sewage Sludge (Biosolids) Annual Report

EPA Regulations - 503.18, 503.28, 503.48

INSTRUCTIONS

EPA's sewage sludge regulations (40 CFR part 503) require certain POTWs and Class I sewage sludge management facilities to submit to an annual biosolids report. POTWs that must submit an annual report include POTWs with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more. This is the biosolids annual report form for POTWs and Class I sewage sludge management facilities in the 42 states and all tribes and territories where EPA administers the Federal biosolids program.

For the purposes of this form, the term '<u>sewage sludge</u>' also refers to the material that is commonly referred to as 'biosolids.' EPA does not have a regulatory definition for biosolids but this material is commonly referred to as sewage sludge that is placed on, or applied to the land to use the beneficial properties of the material as a soil amendment, conditioner, or fertilizer. EPA's use of the term 'biosolids' in this form is to confirm that information about beneficially used sewage sludge (a.k.a. biosolids) should be reported on this form.

Please note that questions with a (*) are required. Please also note that EPA may contact you after you submit this report for more information regarding your sewage sludge program.

Questions regarding this form should be directed to the NPDES Electronic Reporting Helpdesk at:

NPDESeReporting@epa.gov OR
 1-877-227-8965

What action would you like to take? *

New Biosolids Program Report

1. Program Information

Please select the NPDES ID number below for this Sewage Sludge (Biosolids) Annual Report. *

TNL066958: JONES CREEK WASTEWATER

IMPORTANT - If you do not see the NPDES ID associated with your facility (i.e., you only see a blue bar in the above drop down list), you MUST follow the instructions in the "Biosolids User's Guide." A shorter set of instructions to fix this issue are in the "Important Instructions on Accessing Your NPDES ID" document. Both documents are located at: https://epanet.zendesk.com/hc/en-us/sections/207108787-General-Biosolids.

Facility Name: JONES CREEK WASTEWATER

Street: 1198 ROCK CHURCH ROAD

City: DICKSON

State: TN

Zip Code: 37055

1.1 Please select at least one of the following options pertaining to your obligation to submit a Sewage Sludge (Biosolids) Annual Report in compliance with 40 CFR 503. The facility is: *

🔀 a POTW with a design flow rate equal to or greater than one million gallons per day

a POTW that serves 10,000 people or more

a Class I Sludge Management Facility as defined in 40 CFR 503.9

otherwise required to report (e.g., permit condition, enforcement action)

none of the above

1.2 Reporting Period Start and End Dates

| Start Date of Reporting Period * | End Date of Report |
|----------------------------------|--------------------|
| | |

01-01-2017

| | End Date of Reporting Period * |
|--|--------------------------------|
| | 12-31-2017 |

2. Facility Information

2.1 Biosolids or Sewage Sludge Treatment Processes

Please check the box next to the following biosolids or sewage sludge treatment processes that you used on the sewage sludge or biosolids generated or produced at your facility during the reporting period (check one or more that apply). *

| Pathogen Reduction Operations (see Appendix B to Part 503) | Physical Treatment Operations |
|--|--|
| Processes to Significantly Reduce Pathogens (PSRP) | Preliminary Operations (e.g., sludge grinding, degritting, blending) |
| Aerobic Digestion | Thickening (e.g., gravity and/or flotation thickening, centrifugation, belt filter press, vacuum filter) |
| Air Drying (or "sludge drying beds") | Sludge Lagoon |
| Anaerobic Digestion | Other Processes to Manage Sewage Sludge |
| Lower Temperature Composting | Temporary Sludge Storage (sewage sludge stored on land 2 years or less, not in sewage sludge unit) |
| Lime Stabilization | Long-term Sludge Storage (sewage sludge stored on land 2 years or more, not in sewage sludge unit) |
| Processes to Further Reduce Pathogens (PFRP) | Methane or Biogas Capture and Recovery |
| Higher Temperature Composting | Other Treatment Process: |
| Heat Drying (e.g., flash dryer, spray dryer, rotary dryer) | |

- Heat Treatment (Liquid sewage sludge is heated to temp. of 356°F (or 180°C) or higher for 30 min.)
- Thermophilic Aerobic Digestion
- Beta Ray Irradiation
- Gamma Ray Irradiation
- Pasteurization

2.2 Biosolids or Sewage Sludge Analytical Methods

EPA regulations specify that representative samples of sewage sludge that is applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator must be collected and analyzed. These regulations also specify the analytical methods that must be used to analyze samples of sewage sludge. For example, EPA requires facilities to monitor for the certain parameters, which are listed in Tables 1, 2, 3, and 4 at <u>40 CFR 503.13</u> and Tables 1 and 2 <u>40 CFR 503.23</u>. See also <u>40 CFR 503.8</u>.

Please check the box next to the following analytic methods used on the sewage sludge or biosolids generated or produced by you or your facility during the reporting period (check one or more that apply).*

| Parameter | Method Number or Author | Description Text for Certification Section |
|--------------|---------------------------------------|--|
| Pathogens | | |
| Ascaris ova. | Sludge Monitoring - Ascaris ova. | Sludge Monitoring - Ascaris ova., "Test Method for Detecting, Enumerating, and Determining the Viability Ascaris in Sludge (Appendix I)," Control of Pathogens and Vector Attraction in Sewage Sludge", EPA-625-R-92-013, July 2003 |
| Ascans ova. | Other Ascaris ova. Analytical Method: | (+ F |

| Parameter | Method Number or Author | Description Text for Certification Section |
|--------------------------|--|---|
| Fataria.invasa | ASTM Method D4994 - Enteric Viruses | ASTM Method D4994 - Enteric Viruses, "Standard Practice for Recovery of Viruses From Wastewater Sludges," ASTM International |
| Enteric viruses | Other Enteric Viruses Analytical Method: | |
| | Standard Method 9222 - Fecal Coliform | Standard Method 9222 - Fecal Coliform, "Standard Methods for the Examination of Water and Wastewater," American Public Health Association [Note: This method is only allowable for Class B sewage sludge] |
| | Standard Method 9221 - Fecal Coliform | Standard Method 9221 - Fecal Coliform, "Standard Methods for the Examination of Water and Wastewater," American Public |
| Fecal coliform | EPA Method 1680 - Fecal Coliform | Health Association EPA Method 1680 - Fecal Coliform, "Fecal Coliforms in Sewage Sludge by Multiple-Tube Fermentation using Lauryl Tryptose Broth |
| | EPA Method 1681 - Fecal Coliform | and EC Medium," EPA-821-R-10-003, April 2010 |
| | Other Fecal Coliform Analytical Method: | EPA Method 1681 - Fecal Coliform, Fecal Coliforms in Sewage Sludge (Biosolids) by MultipleTube Fermentation using A-1 medium, EPA-821-R-04-027, June 2005 |
| | W.A. Yanko Method - Helminth ova. | W.A. Yanko Method - Helminth Ova., "Occurrence of Pathogens in Distribution and Marketing Municipal Sludges," |
| Helminth ova. | Other Helminth ova. Analytical Method: | EPA-600-1-87-014, 1987 |
| | Standard Method 9260 - Salmonella | Standard Method 9260 - Salmonella, "Standard Methods for the Examination of Water and Wastewater," American Public Health Association |
| Columnation Destantia | EPA Method 1682 - Salmonella | EPA Method 1682, "Salmonella in Sewage Sludge (Biosolids) by Modified Semisolid Rappaport-Vassiliadis (MSRV) Medium," |
| Salmonella sp. Bacteria | Kenner and Clark Method - Salmonella | EPA-821-R-06-014, July 2006 Kenner and Clark Method - Salmonella, "Detection and Enumeration of Salmonella and Pseudomonas aeruginosa," J. Water |
| | Other Salmonella sp. Bacteria Analytical Method: | Pollution Control Federation, 46(9):2163-2171, 1974 |
| | Class A Sludge Monitoring - Total Culturable Viruses | EPA Class A Sludge Monitoring - Total Culturable Viruses, "Method for the Recovery and Assay of Total Culturable Viruses from Sludge (Appendix H)," Control of Pathogens and Vector Attraction in Sewage Sludge, EPA-625-R-92-013, July 2003 |
| Total Culturable Viruses | Other Total Culturable Viruses Analytical Method: | Sludge (Appendix H), Control of Fathogens and Vector Attraction in Sewage Sludge, Er A-025-K-72-013, July 2003 |
| Metals | | |
| | EPA Method 6010 - Arsenic (ICP-OES) | EPA Method 6010 - Arsenic (Inductively Coupled Plasma - Optical Emission Spectrometry), "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. SW-846 |
| | EPA Method 6020 - Arsenic (ICP-MS) | EPA Method 6020 - Arsenic (Inductively Coupled Plasma - Mass Spectrometry), "Test Methods for Evaluating Solid Waste, Physi |
| Arsenic | EPA Method 7010 - Arsenic (GF-AAS) | Chemical Methods," EPA Pub. SW-846 EPA Method 7010 - Arsenic (Graphite Furnace Atomic Absorption Spectrophotometry), "Test Methods for Evaluating Solid Waste, |
| | EPA Method 7061 - Arsenic (AA-GH) | Physical/Chemical Methods," EPA Pub. SW-846 EPA Method 7061 - Arsenic (Atomic Absorption - Gaseous Hydride), "Test Methods for Evaluating Solid Waste, Physical/Chemical |
| | Other Arsenic Analytical Method: | Methods," EPA Pub. SW-846 |
| | EPA Method 6010 - Beryllium (ICP-OES) | EPA Method 6010 - Beryllium (Inductively Coupled Plasma - Optical Emission Spectrometry), "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. SW-846 |
| Beryllium | EPA Method 6020 - Beryllium (ICP-MS) | EPA Method 6020 - Beryllium (Inductively Coupled Plasma - Mass Spectrometry), "Test Methods for Evaluating Solid Waste, |
| | EPA Method 7000 - Beryllium (FAAS) | Physical/Chemical Methods," EPA Pub. SW-846 EPA Method 7000 - Beryllium (Flame Atomic Absorption Spectrophotometry), "Test Methods for Evaluating Solid Waste, Phys |
| | EPA Method 7010 - Beryllium (GF-AAS) | Chemical Methods," EPA Pub. SW-846 EPA Method 7010 - Beryllium (Graphite Furnace Atomic Absorption Spectrophotometry), "Test Methods for Evaluating Solid |
| | Other Beryllium Analytical Method | Waste, Physical/Chemical Methods," EPA Pub. SW-846 |

| Parameter | Method Number or Author | Description Text for Certification Section |
|-----------|--|---|
| | EPA Method 6010 - Cadmium (ICP-OES) | EPA Method 6010 - Cadmium (Inductively Coupled Plasma - Optical Emission Spectrometry), "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. SW-846 |
| | EPA Method 6020 - Cadmium (ICP-MS) | EPA Method 6020 - Cadmium (Inductively Coupled Plasma - Mass Spectrometry), "Test Methods for Evaluating Solid Waste, |
| Cadmium | EPA Method 7000 - Cadmium (FAAS) | Physical/Chemical Methods," EPA Pub. SW-846 EPA Method 7000 - Cadmium (Flame Atomic Absorption Spectrophotometry), "Test Methods for Evaluating Solid Waste, Physical/ |
| Caumium | EPA Method 7010 - Cadmium (GF-AAS) | Chemical Methods," EPA Pub. SW-846 |
| | EPA Method 7131 - Cadmium (GF-AAS) | EPA Method 7010 - Cadmium (Graphite Furnace Atomic Absorption Spectrophotometry), "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. SW-846 |
| | Other Cadmium Analytical Method: | EPA Method 7131 - Cadmium (Graphite Furnace Atomic Absorption Spectrophotometry), "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. SW-846 |
| | EPA Method 6010 - Chromium (ICP-OES) | EPA Method 6010 - Chromium (Inductively Coupled Plasma - Optical Emission Spectrometry), "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. SW-846 |
| | EPA Method 6020 - Chromium (ICP-MS) | EPA Method 6020 - Chromium (Inductively Coupled Plasma - Mass Spectrometry), "Test Methods for Evaluating Solid Waste, |
| | EPA Method 7000 - Chromium (FAAS) | Physical/Chemical Methods," EPA Pub. SW-846 EPA Method 7000 - Chromium (Flame Atomic Absorption Spectrophotometry), "Test Methods for Evaluating Solid Waste, |
| Chromium | EPA Method 7010 - Chromium (GF-AAS) | Physical/Chemical Methods," EPA Pub. SW-846 EPA Method 7010 - Chemium (Craphita Europea Atomic Absorption Spectrophotometry) "Test Methods for Evaluating Solid |
| | EPA Method 7191 - Chromium (AA-FT) | EPA Method 7010 - Chromium (Graphite Furnace Atomic Absorption Spectrophotometry), "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. SW-846 |
| | Other Chromium Analytical Method: | EPA Method 7191 - Chromium (Atomic Absorption - Furnace Technique), "Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods," EPA Pub. SW-846 |
| | — EPA Method 6010 - Copper (ICP-OES) | EPA Method 6010 - Copper (Inductively Coupled Plasma - Optical Emission Spectrometry), "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. SW-846 |
| | EPA Method 6020 - Copper (ICP-MS) | EPA Method 6020 - Copper (Inductively Coupled Plasma - Mass Spectrometry), "Test Methods for Evaluating Solid Waste, Physical/ |
| Copper | EPA Method 7000 - Copper (FAAS) | Chemical Methods," EPA Pub. SW-846 EPA Method 7000 - Copper (Flame Atomic Absorption Spectrophotometry), "Test Methods for Evaluating Solid Waste, Physical/ |
| | EPA Method 7010 - Copper (GF- | Chemical Methods," EPA Pub. SW-846 EPA Method 7010 - Copport (Craphite Europso Atomic Absorption Spectrophotometry) "Test Methods for Evaluating Solid Waste |
| | AAS) Other Copper Analytical Method: | EPA Method 7010 - Copper (Graphite Furnace Atomic Absorption Spectrophotometry), "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. SW-846 |
| | EPA Method 6010 - Lead (ICP-OES) | EPA Method 6010 - Lead (Inductively Coupled Plasma - Optical Emission Spectrometry), "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. SW-846 |
| | EPA Method 6020 - Lead (ICP-MS) | EPA Method 6020 - Lead (Inductively Coupled Plasma - Mass Spectrometry), "Test Methods for Evaluating Solid Waste, Physical/ |
| Lead | EPA Method 7000 - Lead (FAAS) | Chemical Methods," EPA Pub. SW-846 EPA Method 7000 - Lead (Flame Atomic Absorption Spectrophotometry), "Test Methods for Evaluating Solid Waste, Physical/ |
| Leau | EPA Method 7010 - Lead (GF-AAS) | Chemical Methods," EPA Pub. SW-846 EPA Method 7010 - Lead (Graphite Furnace Atomic Absorption Spectrophotometry), "Test Methods for Evaluating Solid Waste, |
| | EPA Method 7421 - Lead (AA-FT) | Physical/Chemical Methods," EPA Pub. SW-846 |
| | Other Lead Analytical Method: | EPA Method 7421 - Lead (Atomic Absorption - Furnace Technique), "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. SW-846 |
| | EPA Method 7471 - Mercury (CVAA) | EPA Method 7471 - Mercury in Solid or Semi-Solid Waste (Cold Vapor Atomic Absoprtion), "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. SW-846 |
| | Other Mercury Analytical Method: | SW7470 & SW245.5 |
| Mercury | | |
| - | | |

| Parameter | Method Number or Author | Description Text for Certification Section |
|------------------|---|---|
| Molybdenum | EPA Method 6010 - Molybdenum (ICP-OES) | EPA Method 6010 - Molybdenum (Inductively Coupled Plasma - Optical Emission Spectrometry), "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. SW-846 |
| | EPA Method 6020 - Molybdenum (ICP-MS) | EPA Method 6020 - Molybdenum (Inductively Coupled Plasma - Mass Spectrometry), "Test Methods for Evaluating Solid Waste, |
| | EPA Method 7000 - Molybdenum (FAAS) | Physical/Chemical Methods," EPA Pub. SW-846 EPA Method 7000 - Molybdenum (Flame Atomic Absorption Spectrophotometry), "Test Methods for Evaluating Solid Waste, |
| | EPA Method 7010 - Molybdenum (GF-AAS) | Physical/Chemical Methods," EPA Pub. SW-846 EPA Method 7010 - Molybdenum (Graphite Furnace Atomic Absorption Spectrophotometry), "Test Methods for Evaluating Solid |
| | EPA Method 7481 - Molybdenum | Waste, Physical/Chemical Methods," EPA Pub. SW-846 |
| | (AA-FT) Other Molybdenum Analytical Method: | EPA Method 7481 - Molybdenum (Atomic Absorption - Furnace Technique), "Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods," EPA Pub. SW-846 |
| | EPA Method 6010 - Nickel (ICP-OES) | EPA Method 6010 - Nickel (Inductively Coupled Plasma - Optical Emission Spectrometry), "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. SW-846 |
| | EPA Method 6020 - Nickel (ICP-MS) | EPA Method 6020 - Nickel (Inductively Coupled Plasma - Mass Spectrometry), "Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods," EPA Pub. SW-846 |
| Nickel | EPA Method 7000 - Nickel (FAAS) | EPA Method 7000 - Nickel (Flame Atomic Absorption Spectrophotometry), "Test Methods for Evaluating Solid Waste, Physical/ |
| | EPA Method 7010 - Nickel (GF- AAS) | Chemical Methods," EPA Pub. SW-846 EPA Method 7010 - Nickel (Graphite Furnace Atomic Absorption Spectrophotometry), "Test Methods for Evaluating Solid Waste, |
| | Other Nickel Analytical Method: | Physical/Chemical Methods," EPA Pub. SW-846 |
| | EPA Method 6010 - Selenium (ICP-OES) | EPA Method 6010 - Selenium (Inductively Coupled Plasma - Optical Emission Spectrometry), "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. SW-846 |
| | EPA Method 6020 - Selenium (ICP-MS) | EPA Method 6020 - Selenium (Inductively Coupled Plasma - Mass Spectrometry), "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. SW-846 |
| | EPA Method 7010 - Selenium (GF-AAS) | EPA Method 7010 - Selenium (Graphite Furnace Atomic Absorption Spectrophotometry), "Test Methods for Evaluating Solid |
| Selenium | EPA Method 7740 - Selenium (AA-FT) | Waste, Physical/Chemical Methods," EPA Pub. SW-846 EPA Method 7741A - Selenium (Atomic Absorption - Furnace Technique), "Test Methods for Evaluating Solid Waste, Physical/ |
| | EPA Method 7741 - Selenium | Chemical Methods," EPA Pub. SW-846 |
| | (AA-GH) | EPA Method 7741 - Selenium (Atomic Absorption - Gaseous Hydride), "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. SW-846 |
| | | EPA Method 6010 - Zinc (Inductively Coupled Plasma - Optical Emission Spectrometry), "Test Methods for Evaluating Solid Waste, |
| | EPA Method 6010 - Zinc (ICP-OES) | Physical/Chemical Methods," EPA Pub. SW-846 |
| | EPA Method 6020 - Zinc (ICP-MS) | EPA Method 6020 - Zinc (Inductively Coupled Plasma - Mass Spectrometry), "Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods," EPA Pub. SW-846 |
| Zinc | EPA Method 7000 - Zinc (FAAS) | EPA Method 7000 - Zinc (Flame Atomic Absorption Spectrophotometry), "Test Methods for Evaluating Solid Waste, Physical/ |
| | EPA Method 7010 - Zinc (GF-AAS) | Chemical Methods," EPA Pub. SW-846 EPA Method 7010 - Zinc (Graphite Furnace Atomic Absorption Spectrophotometry), "Test Methods for Evaluating Solid Waste, |
| | Other Zinc Analytical Method: | Physical/Chemical Methods," EPA Pub. SW-846 |
| Nitrogon Compour | nda | |

Nitrogen Compounds

| | EPA Method 350.1 - Ammonia Nitrogen | EPA Method 350.1 - Ammonia Nitrogen, "Determination of Ammonia Nitrogen by Semi-Automated Colorimetry," August 1993 |
|------------------|---|--|
| Ammonia Nitrogen | 🔀 Standard Method 4500-NH3 - Ammonia Nitrogen | Standard Method 4500-NH3 - Ammonia Nitrogen, "Standard Methods for the Examination of Water and Wastewater," American Public Health Association |
| | Other Ammonia Nitrogen Analytical Method | |

| Parameter | Method Number or Author | Description Text for Certification Section |
|--------------------------------|--|---|
| | EPA Method 9056 - Nitrate Nitrogen (IC) EPA Method 9210 - Nitrate Nitrogen (ISE) Other Nitrate Nitrogen Analytical Method: | EPA Method 9056 - Nitrate Nitrogen (Ion Chromatography), "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. SW-846 EPA Method 9210 - Nitrate Nitrogen (Ion-Selective Electrode), "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. SW-846 E353.2 |
| Nitrate Nitrogen | | |
| Nitrogen | Standard Method 4500-N - Nitrogen Other Nitrogen Analytical Method: | Standard Method 4500-N - Nitrogen, "Standard Methods for the Examination of Water and Wastewater," American Public Health Association |
| Organic Nitrogen | Standard Method 4500-Norg - Organic Nitrogen Other Organic Nitrogen Analytical Method: | Standard Method 4500-Norg - Organic Nitrogen, "Standard Methods for the Examination of Water and Wastewater," American Public Health Association |
| Total Kjeldahl Nitrogen | EPA Method 351.2 - Total Kjeldahl Nitrogen Other Total Kjeldahl Nitrogen Analytical Method: | EPA Method 351.2 - Total Kjeldahl Nitrogen, "Determination of Total Kjeldahl Nitrogen by Semi-Automated Colorimetry," August 1993 |
| Other Analytes | | |
| Fixed Solids | Standard Method 2540 - Fixed Solids Other Fixed Solids Analytical Method: | Standard Method 2540 - Total, fixed, and volatile solids, "Standard Methods for the Examination of Water and Wastewater," American Public Health Association |
| Paint Filter Test | EPA Method 9095 - Paint Filter Liquids Test Other Paint Filter Test Analytical Method: | EPA Method 9095 - Paint Filter Liquids Test, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. SW-846 |
| рН | EPA Method 9040 - pH (≤ 7% solids) EPA Method 9045 - pH (> 7% solids) Other pH Analytical Method: | EPA Method 9040 - pH (\leq 7% solids), "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. SW-846 EPA Method 9045 - pH (> 7% solids), "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. SW-846 |
| Specific Oxygen Uptake Rate | Standard Mothed 2710 SOUD | Standard Method 2710 - Specific Oxygen Uptake Rate, "Standard Methods for the Examination of Water and Wastewater," American Public Health Association |
| TCLP | EPA Method 1311 - Toxicity Characteristic Leaching Procedure Other TCLP Analytical Method: | EPA Method 1311 - Toxicity Characteristic Leaching Procedure, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Pub. SW-846 |
| Temperature | Standard Method 2550 - Temperature Other Temperature Analytical Method: | Standard Method 2550 - Temperature, "Standard Methods for the Examination of Water and Wastewater," American Public Health Association |
| Total Solids | Standard Method 2540 - Total Solids Other Total Solids Analytical Method: | Standard Method 2540 - Total, fixed, and volatile solids, "Standard Methods for the Examination of Water and Wastewater," American Public Health Association |

Parameter

Method Number or Author

Standard Method 2540 - Volatile Solids

Description Text for Certification Section

Volatile Solids Other Volatile Solids Analytical Method:

No Analytical Methods

Standard Method 2540 - Total, fixed, and volatile solids, "Standard Methods for the Examination of Water and Wastewater," American Public Health Association

2.3 What is the estimated total volume of biosolids or sewage sludge produced at your facility for the reporting period (in dry metric tons)?*

1508

3. Biosolids or Sewage Sludge Management

EPA NPDES regulations at <u>40 CFR 503</u> only require reporting for land application, surface disposal, or incineration. You have the option to select "Other Management Practice" if you wish to provide more information on how you manage your sewage sludge or biosolids.

Please use the selections below to identify how sewage sludge or biosolids generated or produced at your facility was managed, used, or disposed by you or your facility for the reporting period. You can use the button below to add as many Sewage Sludge Unique Identifier (SSUID) sections as needed to describe how you manage your sewage sludge.

SSUID Section

Sewage Sludge Unique Identifier (SSUID): 001

| Management Practice Type * | Handler, Preparer, or Applier Type * | Management Practice Detail * |
|----------------------------|--------------------------------------|------------------------------|
| Land Application | On-Site Owner or Operator | Agricultural Land Applicaton |

Please Note: Land Application includes the distribution and marketing (sale or give away) of Class A EQ. "Off-Site Third-Party Handler or Applier" refers to third parties which do not change the quality of the Biosolids. "Off-Site Third-Party Preparer" refers to a third party which changes the quality of the Biosolids.

| Bulk or Bag/Container * | Pathogen Class * | Volume Amount (dry metric tons) * |
|-------------------------|-----------------------------|-----------------------------------|
| Bulk | Class A EQ (sale/give away) | 1701 |

Pollutant Concentrations:

Did the facility land apply bulk sewage sludge when one or more pollutant concentrations in the sewage sludge exceeded a monthly average pollutant concentration in Table 3 of 40 CFR 503.13?*

○ Yes ● No

Biosolids or Sewage Sludge Pathogen Reduction Options

Please use the selections below to identify the pathogen reduction options used by your facility for this sewage sludge unique identifier for the reporting period (check one or more that apply).*

| Cod | e | Pathogen Reduction Option Class A (must also demonstrate that meet fecal coliform or salmonella limits) |
|-------------|-----|--|
| | A1 | Class A-Alternative 1: Time/Temperature |
| \boxtimes | A2 | Class A-Alternative 2: pH/Temperature/Percent Solids |
| | A3 | Class A-Alternative 3: Test Enteric Viruses and Helminth ova; Operating Parameters |
| | A4 | Class A-Alternative 4: Test Enteric Viruses and Helminth ova; No New Solids |
| | A51 | Class A-Alternative 5 PFRP 1: Composting |
| | A52 | Class A-Alternative 5 PFRP 2: Heat Drying |
| | A53 | Class A-Alternative 5 PFRP 3: Liquid Heat Treatment |
| | A54 | Class A-Alternative 5 PFRP 4: Thermophilic Aerobic Digestion (ATAD) |
| | A55 | Class A-Alternative 5 PFPR 5: Beta Ray Irradiation |
| | A56 | Class A-Alternative 5 PFPR 6: Gamma Ray Irradiation |
| | A57 | Class A-Alternative 5 PFRP 7: Pasteurization |
| | A6 | Class A-Alternative 6: PFRP Equivalency |
| | рН | pH Adjustment (Domestic Septage) |

Biosolids or Sewage Sludge Vector Attraction Reduction Options

Please use the selections below to identify the vector attraction reduction options used by your facility or another person/facility for this sewage sludge unique identifier for the reporting period (check one or more that apply). *

Vector Attraction Reduction Options

| | VR1 | Option 1-Volatile Solids Reduction |
|-----------|-----|--|
| | VR2 | Option 2-Bench-Scale Volatile Solids Reduction (Anaerobic Bench Test) |
| | VR3 | Option 3-Bench-Scale Volatile Solids Reduction (Aerobic Bench Test with Percent Solids of Two Percent or Less) |
| | VR4 | Option 4-Specific Oxygen Uptake Rate |
| | VR5 | Option 5-Aerobic Processing (Thermophilic Aerobic Digestion/Composting) |
| \square | VR6 | Option 6-Alkaline Treatment |
| | VR7 | Option 7-Drying (Equal to or Greater than 75 Percent) |
| | VR8 | Option 8-Drying (Equal to or Greater than 90 Percent) |

Noncompliance Reporting

Please use the check boxes below to indicate any noncompliance with EPA's Federal sewage sludge program requirements (see <u>40 CFR 503</u>) for this facility during the reporting period. EPA notes that any person who prepares sewage sludge (i.e., person who generates sewage sludge or a person who derives a material from sewage sludge) shall ensure that the applicable requirements in EPA's biosolids regulations (<u>40 CFR 503</u>) are met when the sewage sludge is applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator (see <u>40 CFR 503.7</u>).

Land Application

| | Facility land applied bulk sewage sludge or sold or gave away sewage sludge in a bag or other container when one or more pollutant concentrations in the sewage sludge exceeded a land application ceiling pollutant limit (see Table 1 of <u>40 CFR 503.13</u>). |
|-------------|--|
| | Facility failed to properly collect and analyze its sewage sludge in accordance with the required monitoring frequency and approved analytical methods in order to obtain an accurate and representative sample (including appropriate method holding times) (see permit requirements and <u>40 CFR 503.8</u>). |
| | Facility had deficiencies with pathogen reduction (see <u>40 CFR 503.32</u>). |
| | Facility had deficiencies with vector attraction reduction (see 40 CFR 503.33). |
| | Land application of bulk sewage sludge likely to adversely affected a threatened or endangered species listed under Section 4 of the Endangered Species Act or its designated critical habitat (see 40 CFR 503.14(a)). |
| | Bulk sewage sludge was applied to agricultural land, forest, a public contact site, or a reclamation site that was flooded, frozen, or snow-covered such that the bulk sewage sludge entered a wetland or other waters of the United States, as defined in <u>40 CFR 122.2</u> , except as provided in a permit issued pursuant to Section 402 or 404 of the CWA (see <u>40 CFR 503.14(b)</u>). |
| | Bulk sewage sludge was applied to agricultural land, forest, or a reclamation site was 10 meters or less from waters of the United States, as defined in <u>40 CFR 122.2</u> , unless otherwise specified by the permitting authority (see <u>40 CFR 503.14(c)</u>). |
| | Bulk sewage sludge was applied to agricultural land, forest, a public contact site, or a reclamation site at a whole sludge application rate that was greater than the agronomic rate for the bulk sewage sludge, unless, in the case of a reclamation site, otherwise specified by the permitting authority (see <u>40 CFR 503.14(d)</u>). |
| | One or more label or information sheet requirements were not met for sewage sludge that was sold or given away for land application (see 40 CFR 503.14(e)). |
| | Bulk sewage sludge was applied to land where the cumulative pollutant loading rates in §503.13(b)(2) have been reached. |
| | The required notice and information was not provided to the land application applier (see 40 CFR 503.12(f) and (g)). |
| | The required notice and information was not provided to the owner or lease holder of the land on which bulk sewage sludge was applied (see 40 CFR 503.12(h)). |
| | The required notice was not provided to the permitting authority for the State in which bulk sewage sludge was applied if the bulk sewage sludge was applied to land in a State other than the State in which the bulk sewage sludge was prepared (see <u>40 CFR 503.12(i)</u> and (j)). |
| | The facility failed to keep the necessary records for preparers and appliers during the reporting period (see 40 CFR 503.27). |
| \boxtimes | Please select this checkbox to continue completing the form. If you wish to change the SSUID section(s) above, uncheck this box. * |

Biosolids Monitoring Data

INSTRUCTIONS: These monitoring data should be representative of the sewage sludge that was applied to land or placed on a surface disposal site during the reporting year see <u>40 CFR 503.8(a)</u>. This section uses the frequency of monitoring requirements in <u>40 CFR 503.16</u> and <u>503.26</u>. The following codes can be used as data qualifiers: T = Too Numerous to Count, E = Estimated, N = No Data.

| | Land Application Monthly Sample Table | | | | | | | | | | |
|----------------------|---------------------------------------|------------------------|--|--|--|--|--|--|--|--|--|
| Sample | Sample Period Start Date | Sample Period End Date | | | | | | | | | |
| Sample 1 Time Period | 01-01-2017 | 03-31-2017 | | | | | | | | | |
| Sample 2 Time Period | 04-01-2017 | 06-30-2017 | | | | | | | | | |
| Sample 3 Time Period | 07-01-2017 | 09-30-2017 | | | | | | | | | |
| Sample 4 Time Period | 10-01-2017 | 12-31-2017 | | | | | | | | | |
| Sample 5 Time Period | 09-01-2017 | 10-31-2017 | | | | | | | | | |
| Sample 6 Time Period | 11-01-2017 | 12-31-2017 | | | | | | | | | |

Maximum Pollutant Concentration Data for All Sewage Sludge Applied to Land *

This section summarizes the maximum pollutant concentrations in sewage sludge that was applied to land during the reporting year. In accordance with <u>40 CFR 503.13(a)</u>, EPA's sewage sludge regulations prohibit land application of bulk sewage sludge or sewage sludge sold or gave away sewage sludge in a bag or other container when one or more sewage sludge pollutant concentrations in the sewage sludge exceed a land application ceiling pollutant limit (see Table 1 of 40 CFR 503.13). In order to identify noncompliance, EPA will compare the pollutant concentrations in this section against the ceiling concentration limits in Table 1 of <u>40 CFR 503.13</u>.

| Biosolids or Sewage Sludge Mo | Meas | Measurement Type | | | Unit of Measure (Dry Weight) | | | Sample Type | | | | | |
|-------------------------------|--|------------------|------|------------------|------------------------------|----------|----------|-----------------|--------|-------------|----------|---|----------|
| Arsenic | | | Max | imum | | mg/ | ′kg | | COMF | OS | | | |
| Sample 1 | _ | Sample 2 | | Sample 3 | | | Sample 4 | | | Sample 5 | | | Sample 6 |
| < 0.961 | < 0.961 < 0.99 | | | = 10.4 | | | = 11.1 | | | = 0 | | | 0 |
| Biosolids or Sewage Sludge Mo | osolids or Sewage Sludge Monitored Parameter | | | Measurement Type | | | of Measu | re (Dry Weight) | Sample | Sample Type | | | |
| Cadmium | admium | | | Maximum | | | ′kg | | COMF | COMPOS | | | |
| Sample 1 | | Sample 3 | | | | Sample 4 | | Sample 5 | | | Sample 6 | | |
| = 2.33 | = | 2.84 | | = | 0.332 | | = | 0.144 | = | 0 | | = | 0 |
| Biosolids or Sewage Sludge Mo | nitored Par | ameter | Meas | urement | Туре | Unit | of Measu | re (Dry Weight) | Sample | еТуре | | | |
| Copper | | | Max | Maximum | | | mg/kg | | | COMPOS | | | |
| Sample 1 | | Sample 2 | | | Sample 3 | | Sample 4 | | | Sample 5 | | | Sample 6 |
| = 24 | = | 27.9 | | = | 36.2 | | = | 30.8 | = | 0 | | = | 0 |
| Biosolids or Sewage Sludge Mo | nitored Par | ameter | Meas | surement | Туре | Unit | of Measu | re (Dry Weight) | Sample | еТуре | | | |
| Lead | ead | | | Maximum | | | mg/kg | | | COMPOS | | | |
| Sample 1 | | Sample 2 | | | Sample 3 | | | Sample 4 | | Sample 5 | | | Sample 6 |
| < 0.288 | < | 0.297 | | = | 4.74 | | = | 4.79 | = | 0 | | = | 0 |

| Biosolids or Sewage Sludge Monito | pred Parameter | Measurement Type | Unit of Measure (Dry Weight) | Sample Type | |
|-----------------------------------|----------------|------------------|------------------------------|-------------|----------|
| Mercury | | Maximum | mg/kg | COMPOS | |
| Sample 1 | Sample 2 | Sample 3 | Sample 4 | Sample 5 | Sample 6 |
| < 0.00186 | < 0.002 | = 0.116 | = 0.0969 | = 0 | = 0 |
| Biosolids or Sewage Sludge Monito | ored Parameter | Measurement Type | Unit of Measure (Dry Weight) | Sample Type | |
| Molybdenum | | Maximum | mg/kg | COMPOS | |
| Sample 1 | Sample 2 | Sample 3 | Sample 4 | Sample 5 | Sample 6 |
| = 4.38 | = 6.05 | = 3.68 | = 4.26 | = 0 | = 0 |
| Biosolids or Sewage Sludge Monito | pred Parameter | Measurement Type | Unit of Measure (Dry Weight) | Sample Type | |
| Nickel | | Maximum | mg/kg | COMPOS | |
| Sample 1 | Sample 2 | Sample 3 | Sample 4 | Sample 5 | Sample 6 |
| = 12.7 | = 23.2 | = 20.6 | = 21.2 | = 0 | = 0 |
| Biosolids or Sewage Sludge Monito | ored Parameter | Measurement Type | Unit of Measure (Dry Weight) | Sample Type | |
| Selenium | | Maximum | mg/kg | COMPOS | |
| Sample 1 | Sample 2 | Sample 3 | Sample 4 | Sample 5 | Sample 6 |
| = 12.7 | = 17.9 | = 1.88 | = 2.45 | = 0 | = 0 |
| Biosolids or Sewage Sludge Monito | pred Parameter | Measurement Type | Unit of Measure (Dry Weight) | Sample Type | |
| Zinc | | Maximum | mg/kg | COMPOS | |
| Sample 1 | Sample 2 | Sample 3 | Sample 4 | Sample 5 | Sample 6 |
| = 36.4 | = 22.4 | = 90.4 | = 83.3 | = 0 | = 0 |

| Biosolids or Sewage Sludge | Measurement T | Гуре U | Jnit of Measure | (Dry Weight) | Sample | Туре | | | |
|-----------------------------|----------------|--------|-----------------|--------------|---------|------|----------|---|----------|
| Total Nitrogen (TKN plus Ni | Average | r | mg/kg | | | OS | | | |
| Sample 1 | ple 1 Sample 2 | | Sample 3 | Sample 4 | | | Sample 5 | | Sample 6 |
| = 1554.15 | = 1914 | = | 2884 | = | 5082.14 | = | 0 | = | 0 |

Monthly Average Pollutant Concentration Data for All Sewage Sludge Applied to Land *

This section summarizes the monitoring-period average pollutant concentrations in sewage sludge that was applied to land during the reporting year.

| Biosolids or Sewage Sludge Monitored Parameter | | | | | Measurement Type | | | of Measure | e (Dry Weight) | Sa | ample 1 | Гуре | | |
|--|---------|---|----------|---------|------------------|----------|-------|------------|----------------|--------|---------|----------|---|----------|
| Arsenic | | | | Average | | | mg/kg | | | COMPOS | | S | | |
| S | ample 1 | | Sample 2 | | | Sample 3 | | | Sample 4 | | | Sample 5 | | Sample 6 |
| < (| 0.961 | < | 0.99 | | = | 10.4 | | = | 11.1 | = | | 0 | = | 0 |

| Biosolids | Biosolids or Sewage Sludge Monitored Parameter | | | | | Measurement Type | | | l | Unit of Measure (Dry Weight) | | | (Dry Weight) | Samp | Sample Type | | | |
|-------------------|--|-----|-----------|----------|------------------|------------------|---------|----------|------------------------------|------------------------------|--------------|--------------|--------------|-------------|-------------|--|---|----------|
| Cadmiu | m | | | | A | ver | rage | | | mg/k | g | | | CON | IPOS | | | |
| | Sample 1 | | | Sample 2 | | | | Sample 3 | | | | | Sample 4 | | Sample 5 | | | Sample 6 |
| = | 2.33 | | = | 2.84 | | | = | 0.332 | | | = | | 0.144 | = | 0 | | = | 0 |
| Biosolids | or Sewage Sludge Mon | ito | ored Para | meter | Me | eas | urement | Туре | ι | Unit of Measure (Dry Weight) | | Samp | Sample Type | | | | | |
| Copper | | | | | A | ver | rage | | | mg/kg | | | | CON | COMPOS | | | |
| | Sample 1 | | | Sample 2 | | | | Sample 3 | | Sample 4 | | | Sample 4 | | Sample 5 | | | Sample 6 |
| = | 24 | | = | 27.9 | | | = | 36.2 | | = 30.8 | | | 30.8 | = | 0 | | = | 0 |
| Biosolids | or Sewage Sludge Mon | ito | ored Para | meter | Me | Measurement Type | | | I | Unit o | f Me | asure | (Dry Weight) | Samp | le Туре | | | |
| Lead | | | | | A | Average | | mg/k | g | | | CON | IPOS | | | | | |
| | Sample 1 | | | Sample 2 | | | | Sample 3 | | | | | Sample 4 | | Sample 5 | | | Sample 6 |
| < | < 0.288 < 0.297 | | | | | | = | 4.74 | | | = | | 4.79 | = | 0 | | = | 0 |
| Biosolids | Biosolids or Sewage Sludge Monitored Parameter | | | Me | Measurement Type | | | I | Unit of Measure (Dry Weight) | | | (Dry Weight) | Samp | le Туре | | | | |
| Mercury | Mercury | | | A | Average | | | | mg/kg | | | | CON | IPOS | | | | |
| | Sample 1 | | | Sample 2 | | Sample 3 | | | | Sample 4 | | | Sample 4 | | Sample 5 | | | Sample 6 |
| < | 0.00186 | | < | 0.002 | | | = | 0.116 | | | = | | 0.0969 | = | 0 | | = | 0 |
| Biosolids | or Sewage Sludge Mon | ito | ored Para | meter | Me | Measurement Type | | | I | Unit of Measure (Dry Weight) | | | (Dry Weight) | Sample Type | | | | |
| Nickel | | | | | | | rage | | | mg/kg | | | | COMPOS | | | | |
| | Sample 1 | | | Sample 2 | | | | Sample 3 | | | | Sample 4 | | Sample 5 | | | | Sample 6 |
| = | 12.7 | | = | 23.2 | | | = | 20.6 | | | = | | 21.2 | = | 0 | | = | 0 |
| Biosolids | or Sewage Sludge Mon | ito | ored Para | meter | Me | eas | urement | Туре | I | Unit o | f Me | asure | (Dry Weight) | Samp | le Туре | | | |
| Seleniu | m | | | | | | rage | | | mg/k | | | | CON | IPOS | | | |
| | Sample 1 | | | Sample 2 | | | | Sample 3 | | | | | Sample 4 | | Sample 5 | | | Sample 6 |
| = | 12.7 | | = | 17.9 | | | = | 1.88 | | | = | | 2.45 | = | 0 | | = | 0 |
| Biosolids | iosolids or Sewage Sludge Monitored Parameter | | Me | eas | urement | Туре | I | Unit o | f Me | easure | (Dry Weight) | Samp | le Type | | | | | |
| Zinc | <u> </u> | | | | | | rage | 51 | | mg/k | | | | | 51 | | | |
| Sample 1 Sample 2 | | | Sample 3 | | | Sample 4 | | | Sample 4 | Sample 5 | | | | Sample 6 | | | | |
| = 36.4 = 22.4 | | | = 90.4 | | | = 83.3 | | | 83.3 | = | 0 | | = | 0 | | | | |

Pathogens: Class A, Fecal Coliform *

| Biosolids or Sewage Sludge Mo | Mea | Measurement Type | | | Unit of Measure (Dry Weight) | | | | Sample | Туре | | | | | |
|-------------------------------|-----|------------------|--|----------|------------------------------|--|----------|---|--------|----------|---|---|---|----------|--|
| Fecal Coliform | | | | Maximum | | | MPN/gram | | | COMPOS | | | | | |
| Sample 1 Sample 2 | | | | Sample 3 | | | Sample 4 | | | Sample 5 | | | | Sample 6 | |
| < 1.1 | < | 1.1 | | < | 1.1 | | | < | 1.0 | | = | 0 | = | 0 | |

Pathogens: Class A, Salmonella *

| Biosolids or Sewage Sludge Monitored Parameter | | | | | Measurement Type | | | f Measure | (Dry Weight) | Samp | ые Туре | | | |
|--|-------------------|---|---|--|------------------|----------|----------|-----------|--------------|----------|---------|--|---|----------|
| Salmone | Salmonella | | | | | Maximum | | | าร | CON | 1POS | | | |
| | Sample 1 Sample 2 | | | | | Sample 3 | Sample 4 | | | Sample 5 | | | | Sample 6 |
| = | 0 | = | 0 | | = | 0 | | = | 0 | = | 0 | | = | 0 |

Additional Information

Please enter any additional information in the comment box below (limit to 3,900 characters) that you would like to provide.

3. Biosolids or Sewage Sludge Management - Sample Periods

In accordance to the Frequency of Monitoring table found at CFR 503.16, and based on the sludge quantities generated in the previous four years of "Equal to or greater than 290 and less than 1,500," the decision was made to utilize the corresponding "Once Per Quarter" frequency. Unfortunately, the quantity slightly exceeded coming in at 1,508 and as a result the additional samples were not available. The "Once per 60 days frequency will be reinstated for 2018.

3. Biosolids or Sewage Sludge Management - Biosolids Monitoring Data -Pathogens: Class A, Salmonella:

Analysis for Salmonella have not been performed. Without any data entered into this section when attempting to submit--the form would generate an error message stating that monitoring for Salmonella is required for Class A. The understanding from CFR 503.32(a)(4) is that either fecal coliform, or Salmonella, can be utilized. Analysis for fecal coliform have been performed and those results provided. The Pathogen Reduction Option Table in Part 3. "Biosolids or OSewage Sludge Management" of this form also indicates for Class A the "either/or" option.

Additional Attachments (maximum size 25 MB)

Certification Information

I certify, under penalty of law, that the information in this report was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

| Certifier E-Mail * | Form Action * | |
|--------------------|---------------|--|
| madams@wadc.us | Approve | |