



**Environmental
Protection Agency**

Ted Strickland, Governor
Lee Fisher, Lt. Governor
Chris Korleski, Director



1PT0007720110513

CLERMONT CLERMONT NE LOCAL SCHOOLS WWTP

WARE, RONALD

2011/05/13



Environmental
Protection Agency

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

May 12, 2011

Clermont Northeast Local Schools
Attn: Neil Leist, Superintendent
2792 U.S. Route 50
Batavia, Ohio 45103

**Re: Clermont NE Local Schools, 1PT00077*CD/OH0118311
Compliance Evaluation Inspection**

Dear Mr. Leist:

On May 11, 2011, I conducted a Compliance Evaluation Inspection of the wastewater treatment plant that serves the above referenced facility in Stonelick Township, Clermont County. Dennis Feichtner and Dan Wuebbeler with National Wastewater Industries, the contract operators for this facility, were present during the inspection. The purpose of this inspection was to evaluate plant operation and performance. A copy of the inspection report is enclosed.

All components of the treatment plant were operational, and the effluent appeared to be clear and free of solids. However, the following items were noted during my inspection:

- The final effluent sampling procedures do not conform to the sampling methods described in the treatment plant's NPDES permit.

The school district will need to change the effluent sampling procedures for its treatment plant to conform to the sampling methods described in the treatment plant's NPDES permit. The school district will also need to make provisions to ensure that the proper sample preservation and holding time standards are being met during future sampling events. Please notify the Ohio EPA Southwest District Office no later than June 10, 2011 as to how and when these requirements will be met.

If you have any questions regarding this report, please contact me at (937) 285 - 6098.

Sincerely,

Ron Ware
Ohio EPA - Division of Surface Water
Southwest District Office

cc: Hank Henke, National Wastewater Industries, Inc.
Clermont County General Health District
RW/mab



State of Ohio Environmental Protection Agency
Southwest District Office

NPDES Compliance Inspection Report
Semi-Public Sewage Disposal Inspection Form

| Section A: National Data System Coding | | | | | |
|--|-----------|----------------|-----------------|-----------|---------------|
| Permit # | NPDES# | Month/Day/Year | Inspection Type | Inspector | Facility Type |
| 1PT00077*CD | OH0118311 | 03/11/2011 | R | S | 2 |

| Section B: Facility Data | | |
|---|------------------|------------------------|
| Name and Location of Facility Inspected | Entry Time | Permit Effective Date |
| Clermont Northeast Local Schools 2792 U.S. Route 50 Clermont County, Stonelick Township | 9:20 AM | 6/1/2009 |
| | Exit Time | Permit Expiration Date |
| | 9:55 AM | 9/31/2014 |
| Name(s) of On-Site Representatives | Phone Number(s) | |
| Dennis Feichtner Dan Wuebbeler | (513) 367 - 5969 | |
| Name of Operator of Record | Phone Number(s) | |
| Dennis Feichtner | (513) 367 - 5969 | |
| Name, Address and Title of Responsible Official | Phone Number | |
| Clermont Northeast Local Schools Attn: Neil Leist, Superintendent 2792 U.S. Route 50 Batavia, Ohio 45103 | (513) 625 - 5478 | |

| Ohio EPA Inspector | Ohio EPA Reviewer |
|---|-------------------|
| <i>Ron Ware</i> Ron Ware Division of Surface Water Southwest District Office | |
| <i>May 12, 2011</i> Date | |

| | |
|--|---|
| Average Daily Design Flow: | 40,000 Gallons/Day |
| Plant Serves: | Middle School and High School |
| Average Daily Flow: (Period of Review): | 839 Gallons/Day (August 1, 2010 thru March 31, 2011) |
| Method of flow monitoring: | Ultrasonic level sensor & weir |
| Type of alarms for plant: | None |

Pretreatment

Type of Pretreatment: **Trash Trap**
 Does the Trash Trap need pumped: **No**
 Maintenance of pretreatment components is: **Good**

Comments/Status:

**Secondary Treatment
(Aeration)**

Color of sludge: **Dark Brown**
 Quality of Sludge: **Medium to Heavy**
 Foam: **Heavy (dark)**
 Odor: **No objectionable odor present**

| | Yes | No | | Yes | No |
|----------------------------|-------------------------------------|--------------------------|------------------------|-------------------------------------|-------------------------------------|
| Aeration is taking place | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Plant is septic | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Blowers are operating | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Blowers are on a timer | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Skimmers are operating | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Plant is flooded | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Diffusers are operating | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Grating is present | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Sludge return is operating | <input checked="" type="checkbox"/> | <input type="checkbox"/> | | | |

Maintenance of aerating equipment is...**Good**

Comments/Status:

**Secondary Treatment
(Settling)**

Clarity: **Cloudy**
 Condition of Weir: **Moderate algae build up**
 Weir is level: **Yes**
 Effluent in weir: **Clear**
 Clarifier walls need to be scraped: **Yes**

Overall maintenance of settling components is: **Good**

Comments/Status:

Tertiary Treatment

| | Yes | No | | Yes | No |
|-----------------------------------|-------------------------------------|-------------------------------------|------------------------|-------------------------------------|-------------------------------------|
| Surface sand Filters: Slow | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Subsurface | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| | <input type="checkbox"/> | <input type="checkbox"/> | Beds alternated | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Are filters ponding/flooding | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Beds raked | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Sand filters overgrown | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Chlorination present | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| UV present | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Dechlorination present | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Overall maintenance of components is: **Fair**

Comments/Status:

Sludge Handling/Storage Disposal

Hauler name: **NWI**
 Sludge wasted from: **Sludge holding tank**
 Sludge drying beds: **Yes** Sludge holding tank: **Yes**

Overall maintenance of components is: **Good**

Comments/Status:

Plant Discharge

Discharge point is a: **Road ditch along U.S. Rte 50**
Name of discharge point: **Patterson Run**
Discharge is visible: **Yes** Quality of Effluent: **Clear**

Comments/Status:

Inspection Findings
(Items for Correction in Bold Type)

EFFLUENT LIMIT VIOLATIONS
(Period of Review: November 2009 - February 2011)

| Reporting Period | Parameter | Limit Type | Limit | Reported Value | Violation Date |
|------------------|-------------------------|------------|-------|----------------|----------------|
| June 2010 | Dissolved Oxygen | 1D Conc | 6.0 | 4.6 | 6/2/2010 |
| June 2010 | Dissolved Oxygen | 1D Conc | 6.0 | 4. | 6/9/2010 |
| Aug. 2010 | Nitrogen, Ammonia (NH3) | 30D Conc | 1.0 | 1.05 | 8/1/2010 |
| Sept. 2010 | Nitrogen, Ammonia (NH3) | 30D Conc | 1.0 | 1.05 | 9/1/2010 |
| March 2011 | Nitrogen, Ammonia (NH3) | 30D Conc | 1.0 | 1.2 | 3/1/2011 |

Please be advised that failure to comply with the effluent limitations or to satisfy the monitoring or reporting requirements of your NPDES Permit may be cause for enforcement action pursuant to the Ohio Revised Code Chapter 6111.

Effluent Sampling

During the inspection, it was noted that the method used for sampling the final effluent from the treatment plant consisted of the following procedure: a representative for the school leaves an insulated tote bag filled with ice at the sampling location for the treatment plant (i.e., the edge of the sand filter dosing/chlorine contact tank) on the morning of the day that Mr. Feichtner is scheduled to make a visit to the plant (every Wednesday); Mr. Feichtner then dumps out the ice out of the insulated tote bag, takes a grab sample, pours the collected sample into a labeled sample bottle, and places the sample bottle in the insulated tote bag. This sample is then taken to National Wastewater Industries' laboratory to be analyzed for parameters identified in the treatment plant's NPDES permit (such as CBOD₅, Total Suspended Solids, and Ammonia - Nitrogen).

Please be advised that the required sampling method for these three parameters (CBOD₅, Total Suspended Solids, and Ammonia - Nitrogen) is composite sampling, and that the type of composite sampling to be used for these parameters is described in Paragraph E on page 4 of the treatment plant's NPDES permit. This description reads as follows:

"Composite samples shall be comprised of at least three grab samples proportionate in volume to the sewage flow rate at the time of sampling and collected at intervals of at least 30 minutes, but not more than 2 hours, during the period that the plant is staffed on each day for sampling. Such samples shall be collected at such times and locations, and in such fashion, as to be representative of the facility's overall performance."

The effluent sampling procedure currently being used for the school district's treatment plant does not conform to the sampling method described in the plant's NPDES permit and is therefore unacceptable. In addition, the collected effluent samples need to be refrigerated to 4° C +/- 2° in order to preserve them prior to lab analysis. Enclosed is a copy of general lab criteria that Ohio EPA has developed to define minimum standards for lab analytical equipment. The last two pages of this guidance document list sample preservation and holding time standards. These sample preservation and holding time standards need to be followed to assure that the analytical results generated from these samples are accurate.

The school district will need to change the effluent sampling procedures for its treatment plant to conform to the sampling methods described in the treatment plant's NPDES permit. The school district will also need to make provisions to ensure that the proper sample preservation and holding time standards are being met during future sampling events. Please notify the Ohio EPA Southwest District Office no later than June 10, 2011 as to how and when these requirements will be met.

General Lab Criteria

| Criteria | Standard Methods Requirement | Acceptable? | | Rating |
|---|--|------------------------------|-----------------------------|--------|
| Balance | | | | |
| • Standard Weights | • Either NIST Class s or ASTM/ANSI Class 1 weights ^{1,2} | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| • Calibration Frequency / Documentation | • Calibration verification required at least once each day the balance is used. ³ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| • Cleanliness, air movement, vibration | • Cleanliness of balance is a must and air movement and vibration needs to be kept to a minimum ¹ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| • Other | • Service and recalibrate annually (manufacturer representative or comparable) ¹ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • Must be able to measure to 0.1 grams ⁴ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • Instrument manual available | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • Log book maintained ² | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |

Comments: :

| Criteria | Standard Methods Requirement | Acceptable? | | Rating |
|---|---|------------------------------|-----------------------------|--------|
| Drying Oven (Suspended Solids) | | | | |
| • Temperature Recordkeeping | • Temperature recorded with each use ⁴ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • Log book maintained ² | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| • Calibration Frequency / Documentation | • Thermometer calibrated annually with NIST traceable thermometer ^{1,2} . Correction factor posted on thermometer / equipment ¹ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| • Other | • Thermometer temperature accurate to 0.5° Celsius ⁵ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • Acceptable temperature range is 103° - 105° C ⁴ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • Instrument manual available | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |

Comments: :

General Lab Criteria

| Criteria | Standard Methods Requirement | Acceptable? | | Rating |
|---|---|------------------------------|-----------------------------|--------|
| pH Meter | | | | |
| • Calibration Frequency / Documentation | • Calibration verification required for testing over long period of time (e.g. 12 hrs.), or after a large number of samples (every 10 samples) ³ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • Logbook maintained ² | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| • Minimum of 2 point calibration | • Calibration per manufacturer specification and calibration buffers must bracket anticipated result ⁷ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| • Slope Documentation / Acceptability | • Slope acceptable range indicated on benchsheet ² | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| • Buffer Expiration Date | • Buffers must not be expired | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| • Other | • Instrument manual available | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • Teflon covered magnetic stirrer or equivalent for mixing ⁸ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| Comments: : | | | | |
| | | | | |
| Criteria | Standard Methods Requirement | Acceptable? | | Rating |
| Dissolved Oxygen Meter | | | | |
| • Calibration Method | • Air or known DO calibration method ¹⁰ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • Calibration per manufacturer specification ¹⁰ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| • Calibration Frequency / Documentation | • Logbook maintained ² | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • Calibration verification required at least once each day the meter is used. ³ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| • Other | • Small to no bubble present under membrane (must be smaller than the lead in number 2 pencil) ¹¹ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • Instrument manual available | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| Comments: | | | | |
| | | | | |

General Lab Criteria

| Criteria | Standard Methods Requirement | | Rating |
|---|--|--|--------|
| Incubator (CBOD/ E-Coli) | Acceptable? | | |
| • Temperature Recordkeeping | • Temperature checked / recorded twice daily for each shelf in use ¹ (E-Coli) | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| | • Temperature checked / recorded daily ² (CBOD) | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| | • Acceptable temperature range (CBOD) is 20° C ±1.0 ^{o12} | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| | • Acceptable temperature range (E-Coli) is 35° C ±0.5 ^{o22} | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| | • Logbook maintained ² | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| • Temperature Calibration / Documentation | • Thermometer calibrated annually with NIST traceable thermometer ^{1, 2} | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| | • Temperature correction information posted on incubator ¹ | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| • E-Coli can use multiple tubes (five 20 ml or ten 10 ml), or mfg's multi-well tray | • E-coli Ultraviolet lamp (365 nm wave length, 6 W bulb) ²³ | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| • Other | • Instrument manual available | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| | • Temperature Log (thermometer accurate to 0.5 Celsius). ¹ | <input type="checkbox"/> Yes <input type="checkbox"/> No | |

Comments: :

| Criteria | Standard Methods Requirement | | Rating |
|---|---|--|--------|
| Refrigerator | Acceptable? | | |
| • Temperature Recordkeeping | • Temperature Log (thermometer accurate to 0.5 Celsius). ⁵ | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| • Temperature Calibration / Documentation | • Thermometer calibrated annually with NIST traceable thermometer ^{1, 2} | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| • Other | • Thermometer held in water bath. ¹ | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| | • Refrigerator temperature ≤6° Celsius. ¹³ | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| | • Do not store volatile solvents, food, or beverages. ¹⁴ | <input type="checkbox"/> Yes <input type="checkbox"/> No | |

Comments:

General Lab Criteria

| Criteria | Standard Methods Requirement | Acceptable? | | Rating |
|---|---|------------------------------|-----------------------------|--------|
| Chlorine Meter | | | | |
| • Calibration Frequency / Documentation | • pH / millivolt meter read to 0.1 mV ¹⁵ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • Calibration verification required for testing over long period of time (e.g. 12 hrs.), or after a large number of samples (every 10 samples) ³ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| • Calibration Method | • Calibration using three iodate solutions 0.2, 1.0, 5.0 milliliters or calibration per manufacturer specification ¹⁶ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • Standards used for calibration not expired | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| • Slope Documentation / Acceptability | • Calibration curve (acceptable slope) | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| • Other | • Electrode free of deposits and foreign material | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • Log book being maintained. ² | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • Instrument manual available | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| Comments : | | | | |

| Criteria | Standard Methods Requirement | Acceptable? | | Rating |
|---|---|------------------------------|-----------------------------|--------|
| Ammonia Meter | | | | |
| • Calibration Frequency / Documentation | • Calibration verification required for testing over long period of time (e.g. 12 hrs.), or after a large number of samples (every 10 samples) ³ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • Log book being maintained ² | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| • Slope acceptability | • Verify calibration slope is acceptable (per mfg. spec.). | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| • Calibration Method | • Standards used for calibration (3 ammonia solutions of 10 mg/l, 1 mg/l, and 0.1 mg/l) or per mfg. spec. ¹⁷ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • Standards used for calibration not expired | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| • Other | • Electrode free of deposits and foreign material | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • Teflon covered magnetic stirrer or equivalent for mixing ¹⁸ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • Instrument manual available | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| Comments : | | | | |

General Lab Criteria

| Criteria | Standard Methods Requirement | | Rating |
|-----------------------------------|---|------------------------------|-----------------------------|
| Sample Collection/Handling | | Acceptable? | |
| • Sample Labeling | • Samples container labeled (description, date, time, preservative added, initialed). ¹⁹ | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| • Chain of Custody | • Chain of custody (description, date, time, signature). ¹⁹ | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| • Other | • Composite samples refrigerated during sample collection ¹⁴ | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| | • Equipment blanks utilized ¹⁴ | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| | • SOP for cleaning of sampling equipment | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| | • Logbook being maintained ² | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

Comments:

| Criteria | Standard Methods Requirement | | Rating |
|--------------------|--|------------------------------|-----------------------------|
| Desiccator | | Acceptable? | |
| • General criteria | • Properly working seals. | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| | • Desiccant fresh (blue color) | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| • Documentation | • Log book being maintained ² | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

Comments:

| Criteria | Standard Methods Requirement | | Rating |
|---------------------|--|------------------------------|-----------------------------|
| Bench sheets | | Acceptable? | |
| • General criteria | • Date(s) ² | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| | • Analyst initials ² | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| | • Blue or black ink pen ² | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| | • Calibration information ² | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| | • Equations, calculations, units for all measurements, notations, and results present ² | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| | • Corrections, single line through, initialed and dated ² | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

Comments:

General Lab Criteria

| Criteria | Standard Methods Requirement | Acceptable? | | Rating |
|--|---|------------------------------|-----------------------------|--------|
| Hot Water Bath (Fecal Coliform/E. Coli) | | | | |
| • Temperature Recordkeeping | • Temperature Log (thermometer accurate to 0.2° C) ²¹ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • Incubator temperature 44.5° C ± 0.2° ^{21/24} | | | |
| • Temperature Calibration / Documentation | • Thermometer calibrated annually with NIST traceable thermometer ^{1,2} | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • Log book being maintained ² | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| • Water Level | • Thermometer total immersion or partial (line on thermometer to ID immersion depth) ^{1,5} | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |

Comments:

| Criteria | Standard Methods Requirement | Acceptable? | | Rating |
|--|--|------------------------------|-----------------------------|--------|
| Autoclaves/Steam Sterilizers | | | | |
| • All apparatus utilized is adequately sterilized before use | • Sterilizing temperature 121° C ²⁵ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • 10 to 30 minutes time based on material being sterilized ²⁶ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| • Documentation | • Verify the autoclave temperature weekly by using a maximum registering thermometer (MRT) to confirm that 121°C has been reached as measured in the exhaust. ¹ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • Date, contents, sterilization time and temperature, total time in autoclave, and analyst's initials should be recorded each time the autoclave is used ¹ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| • Temperature Calibration / Documentation | • Thermometer calibrated annually with NIST traceable thermometer ^{1,2} | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| | • Log book being maintained ² | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| • Performance Checks | • Test monthly for efficacy using a biological such as commercially available <i>Geobacillus stearothermophilus</i> in spore strips, suspensions, or capsules ¹ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |

Comments:

General Lab Criteria

| Criteria | Standard Methods Requirement | Acceptable? | Rating |
|---|--|---|--------|
| Final Effluent Temperature Monitoring | | | |
| • General Criteria | • Thermometer calibrated annually with NIST traceable thermometer ^{1,2} | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| | • Thermometer accurate to 0.1° Celsius ⁵ | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| | • Log book being maintained ² | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Comments: | | | |
| Number of Criteria Rated: | | Acceptable | |
| | | Marginal | |
| | | Unacceptable | |
| | | Total Number of Areas Rated: | |
| <p>Acceptable Ratings – No action required (recommend SOP's written or updated, perform DMRQA's for all onsite analysis, recommend voluntary lab analyst certification, written response not required).</p> | | | |
| <p>Marginal Ratings – Improvements required, written response required (recommend SOP's be written or updated, recommend they perform DMRQA's for all onsite analysis, recommend voluntary lab analyst certification, require deficiencies to be addressed in written response).</p> | | | |
| <p>Unsatisfactory Rating - Improvements required, written response required, NOV issued (recommend SOP's be written or updated, recommend they perform DMRQA's for all onsite analysis, recommend voluntary lab analyst certification, require deficiencies to be addressed in written response to NOV).</p> | | | |
| Consider recommending PAI Audit from DES when: | | >60% of ratings are Marginal >45% of ratings are a combination of Marginal or Unacceptable >30% of ratings are Unacceptable | |

Notation of Referenced Method

- | | |
|----------------------------|------------------------------|
| 1 Method 9020-B, Item 3 | 14 Method 1060A, Item 1 |
| 2 Method 1020-A, Item 1 | 15 Method 4500-CI I, Item 2 |
| 3 Method 1020-B, Item 10 | 16 Method 4500-CI I, Item 4 |
| 4 Method 2540-B, Item 2 | 17 Method 4500-NH3 D, Item 4 |
| 5 Method 2550-B, Item 1 | 18 Method 4500-NH3 D, Item 2 |
| 6 Method 1020-A, Item 1 | 19 Method 1060-B, Item 2 |
| 7 Method 4500-H B, Item 4 | 20 Method 1060-B, Item 1 |
| 8 Method 4500-H B, Item 2 | 21 Method 9222D, Item 1 |
| 9 Method 1020-B, Item 2 | 22 Method 9223 B, Item 2 |
| 10 Method 4500-O B, Item 3 | 23 Method 9223 B, Item 3 |
| 11 Method 4500-O G, Item 3 | 24 Method 1603, Item 2 |
| 12 Method 5210-B, Item 5 | 25 Method 9030-B, Item 3 |
| 13 CFR 136.3, Table II | 26 Method 9020 B, Table IV |

Equipment Logbook Content - all maintenance performed on a piece of equipment should be documented in the logbook. This should include parts replacement and routine maintenance activities. Entries should include date, maintenance performed and initials of person making entry.

General Lab Criteria

| Preservation and Holding Times | | | | | | |
|---------------------------------------|--------------------------------|-----------------------|-------------|---|--|---|
| Parameter | Container | Min. Sample Size (mL) | Sample Type | Preservation | Maximum Storage Time | |
| | | | | | Recommended | Regulatory |
| BOD / CBOD | P, G | 1000 | G, C | Refrigerate $\leq 6^{\circ}\text{C}$ | 6h | 48h |
| TSS | P, G | 200 | G, C | Refrigerate $\leq 6^{\circ}\text{C}$ | 7 d | 7 d |
| pH | P, G | 50 | G | Analyze immediately | 0.25h | 0.25 h |
| NH3-N | P, G | 500 | G, C | Analyze as soon as possible or add H_2SO_4 to pH <2, Refrigerate $\leq 6^{\circ}\text{C}$ | 7 d | 28 d |
| TRC | P, G | 500 | G | Analyze immediately | 0.25h | 0.25 h |
| DO (electrode) | G, BOD Bottle | 300 | G | Analyze immediately | 0.25h | 0.25 h |
| Temperature | P, G | -- | G | Analyze immediately | 0.25h | 0.25 h |
| Metals, general | P, G | 1000 | G, C | For dissolved filter immediately and add HNO_3 to pH <2 | 6 months | 6 months |
| Purgeables by purge and trap | G (PTFE lined lid) | 40 (X2) | G | HCl to pH <2, Refrigerate $\leq 6^{\circ}\text{C}$ | 7 d | 14 d |
| Base/Neutrals and acids | G (solvent rinsed or baked) | 1000 | C, G | Refrigerate $\leq 6^{\circ}\text{C}$ | 7 d | 7 days until extraction 40 days after extraction |
| Pesticides | G (PTFE lined lid) | 1000 | C | Refrigerate $\leq 6^{\circ}\text{C}$ | 7 d | 7 days until extraction 40 days after extraction |
| Fecal Coliform / E-Coli | G, P (Sterilized) | 100 | G | Refrigerate $\leq 10^{\circ}\text{C}$ If chlorine present, add sodium thiosulfate tablet | 6 hrs transport Start analysis within 2 hrs of receipt in lab. | |
| Oil and Grease | G | 1000 | G | HCl or H_2SO_4 to pH <2, Refrigerate $\leq 6^{\circ}\text{C}$ | 28 d | 28 d |

| Approved Standard Methods | |
|--|---|
| CBOD / BOD 5 Day | Std Methods 5210-B |
| Ammonia, Selective Electrode Method | Std Methods 4500-NH3 D |
| Total Residual Chlorine, DPD Colorimetric Method | Std Methods 4500-Cl G |
| Total Suspended Solids, Dried at 103-105 °C | Std Methods 2540-D |
| Dissolved Oxygen, Membrane Electrode Method | Std Method 4500-O G |
| pH, Electrometric Method | Std Methods 4500-H+ B |
| Fecal Coliform, Membrane Filter Procedure | Std Methods 9222D |
| Escherichia Coli, Enzyme Substrate Test | Std Method 9223B |
| Escherichia Coli Membrane Filtration Procedure | EPA Method 1603 |
| Oil and Grease | USEPA 1664A or Std Methods 5520B |
| Metals, general | USEPA 200, Std Methods 3111B or C, or 3120B |
| Volatiles (Purgeables by purge and trap) | USEPA 6210, Std Methods 624 |
| Semi-Volatiles (Base/Neutrals and acids) | USEPA 6410, Std Methods 625 |
| Pesticides | USEPA 6410 and 6630, Std Methods 608 |