

**Environmental
Protection Agency**

**Governor
Lt. Governor
Director**

October 3, 2012

Darin Wise, WWTP Superintendent
Newark WWTP
1003 East Main Street
Newark, OH 43055

Re: Newark WWTP
NPDES Permit: 4PE00001/ OH0026671
Compliance Evaluation Inspection
Licking County

Dear Mr. Wise:

On September 27, 2012, a Compliance Evaluation Inspection was conducted at the Newark WWTP. Present for the inspection were you and Bryan Curry representing the City of Newark and myself of the Ohio EPA, Central District Office, Division of Surface Water.

The purpose of the inspection was to evaluate compliance with the terms and conditions of your NPDES permit and to evaluate the operation and maintenance of the plant. Please see the attached inspection report for details of the inspection.

If you have any questions or comments concerning the enclosed inspection report, please contact me at (614) 728-3854 or e-mail at paul.vandermeer@epa.ohio.gov.

Sincerely



Paul L. Vandermeer
Environmental Specialist
Compliance and Enforcement Unit
Division of Surface Water
Central District Office

cc: File Copy

ec: Paul L. Vandermeer

PLV:slw Newark_WWTP

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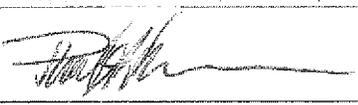
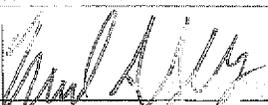
NPDES Compliance Inspection Report

SECTION A: NATIONAL DATA SYSTEM CODING				
Permit #	NPDES #	Inspection Type	Inspector	Facility Type
4PE00001	OH0026671	CEI	S	No
Inspection Date	Entry Time	Exit Time	Notice of Violation	Significant Non-Compliance
9/26/2012	8:40 am	1:00 pm	No	No

SECTION B: FACILITY DATA	
Name and Location of Facility Inspected	Permit Effective Date
Newark WWTP 1000 East Main Street Newark, OH 43055	8/1/2011
	Permit Expiration Date
	7/31/2016
Name(s) and Title(s) of On-Site Representatives	Phone Numbers
Bryan Curry, Assistant WWTP Superintendent Nancy Taylor, Chemist	(740) 349-6769
Name and Title of Responsible Official	Phone Number
Darin Wise, WWTP Superintendent	(740) 349-6769

SECTION C: AREAS EVALUATED DURING INSPECTION		
Key: S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated		
S	NPDES Compliance	Effluent violations due to long term power outage after violent storm. City has taken measures to mitigate the problems discovered during this event.
S	Operations & Maintenance	New blowers and diffusers to be installed that are compatible with the backup generator.
S	Facility Site Review	
S	Collection System	LTCP work ahead of schedule in some areas.
S	Flow Measurement	
S	Receiving Waters	
S	Laboratory	See attached lab criteria form

Comments:

Signatures			
	10/1/12		10/1/12
Paul L. Vandermeer, Inspector Compliance & Enforcement Division of Surface Water Central District Office	Date	Mike Gallaway, Reviewer Section Manager Division of Surface Water Central District Office	Date

Compliance Data for Newark WWTP between 2/1/2012 to 9/1/2012

Summary

Permit Effluent Limit Violations: 7

Permit Effluent Code Violations: 0

Permit Effluent Frequency Violations: 0

Compliance Schedule Violations: 0

Limit Violations						
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
July 2012	001	Total Suspended Solids	30D Conc	15	42.2357	7/1/2012
July 2012	001	Total Suspended Solids	7D Conc	23	114.64	7/1/2012
July 2012	001	Total Suspended Solids	30D Qty	454	1417.37	7/1/2012
July 2012	001	Total Suspended Solids	7D Qty	697	3883.70	7/1/2012
July 2012	001	Dissolved Oxygen	1D Conc	6.0	2.9	7/1/2012
July 2012	001	Dissolved Oxygen	1D Conc	6.0	1.82	7/2/2012
July 2012	001	Dissolved Oxygen	1D Conc	6.0	.1	7/3/2012

Flow Data for Newark WWTP between 2/1/2012 and 9/1/2012

	Date	Flows (MGD)
Ten Highest Flows	3/16/2012	17.243
	3/15/2012	16.629
	5/8/2012	16.130
	5/2/2012	15.428
	5/5/2012	13.070
	3/19/2012	13.031
	2/29/2012	12.968
	3/31/2012	12.585
	3/8/2012	12.220
	3/17/2012	11.710
Average Flow Rate		7.679

SECTION D: PERMIT VERIFICATION

- (a) Correct name and mailing address of permittee Y
- (b) Correct name and location of receiving waters Y
- (c) Products and production rates conform with permit application Y
- (d) Flows and loadings conform with NPDES permit Y
- (e) Treatment processes are as described in permit application Y
- (f) New treatment process added since last inspection N
- (g) Notification given to State of new, different or increased discharges NA
- (h) All discharges are permitted Y
- (i) Number and location of discharge points are as described in permit Y

Comments:

SECTION E: COMPLIANCE

- (a) Any significant violations since the last inspection Y
- (b) Permittee is taking actions to resolve violations Y*
- (c) Permittee has a compliance schedule Y
- (d) Permittee is meeting compliance schedule Y^

Comments: **Effluent limit violations were due to a long term power outage caused by a violent storm that knocked out power to much of the surrounding area for many days. Generator power was used to keep the plant partially functional however the blowers were not compatible with the generator. Presently, this issue is being rectified as new (compatible) blowers will be installed in the near future.*

^The City is attentive to the milestones in the compliance schedule. Many have been completed early. The revisions to the local industrial limits in the pretreatment compliance schedule have not been met due to Ohio EPA's untimely review of the technical justification dutifully submitted by the City on December 1, 2011 (in time to meet the compliance milestone for this item). The technical review and opinion provided by Ohio EPA was not issued until July 18, 2012. The City was unable to act on the technical justification and revise their limits without this opinion, hence the failure to meet the compliance schedule deadline of April 1, 2012. The Newark City Council is currently reviewing revisions to the local limits presented in the justification and should have a decision soon. Please notify Paul Vandermeer of the action taken by City Council as soon as the decision is rendered.

SECTION F: OPERATION AND MAINTENANCE

- (a) Standby power available Y
If yes, what type? *Diesel generator*
- (b) Adequate alarm system available for power or equipment failures Y
- (c) All treatment units in service other than backup units Y
- (d) Wastewater Treatment Works classification IV

- (e) Operator of Record holds unexpired license of class required by Permit.. Y
Class held: IV
- (f) Copy of certificate of Operator of Record displayed on-site..... Y
- (g) Minimum operator staffing requirements fulfilled..... Y
- (h) Routine and preventative maintenance scheduled and performed..... Y
- (i) Any major equipment breakdown since last inspection..... N
- (j) Operation and maintenance manual provided and maintained..... Y
- (k) Any plant bypasses since last inspection..... N
- (l) Regulatory agency notified of bypasses NA
by MOR and/or Spill Hotline (1-800-282-9378)
- (m) Any hydraulic or organic overloads since last inspection..... N

Comments:

SECTION G: RECORD KEEPING

- a) Log book provided Y
- b) Format of log book..... Computer
- c) Log book(s) kept onsite in an area protected from weather..... Y
- d) Log book contains the following:
 - i) Identification of treatment works Y
 - ii) Date/times of arrival/departure for Operator of Record and any other operator required by OAC 3745-7 Y
 - iii) Daily record of operation and maintenance activities (including preventative maintenance, repairs and request for repairs)..... Y
 - iv) Laboratory results (unless documented on bench sheets)..... NA
 - v) Identification of person making log entries..... Y
- e) Has the Operator of Record submitted written notification to the permittee, Ohio EPA and any applicable local environmental agencies when a collection system overflow, treatment plant bypass or effluent limit violation has occurred? ... Y*

Comments: **The City notified Ohio EPA in a timely way, about the problems caused by the power outage.*

SECTION H: COLLECTION SYSTEM

- a) Percent combined system:..... 33%
- b) Any collection system overflows since last inspection Y
CSO SSO
- c) Regulatory agency notified of overflows Y
- d) CSO O&M plan provided and implemented..... Y
- e) CSOs monitored and reported in accordance with permit..... Y
- f) Portable pumps are used to relieve system N
- g) Lift station alarms provided and maintained..... Y
- h) Lift stations equipped with permanent standby power or equivalent..... Y*

- i) Is there an inflow/infiltration problem (separate sewer system), or were there any major repairs to collection system since last inspection. Y^
- j) Any complaints received since last inspection of basement flooding Y
- k) Are any portions of the sewer system at or near capacity..... N
- l) Are operations changed during high-flow events? Y**

Comments: *Portable generators are used for power outages. ^Repairs are ongoing. CSO 030 work is nearly completed. The PFI for the Raccoon Creek interceptor has been approved and work is scheduled to begin in December, 2012. **The high rate treatment system is brought into operation.

SECTION H - SLUDGE MANAGEMENT

- a) Sludge adequately disposed..... Y
Method: *Land application*
- b) If sludge is incinerated, where is ash disposed of..... N
- c) Is sludge disposal contracted..... Y
Name: *Burch Hydro*
- d) Has amount of sludge generated changed significantly..... N
- e) Adequate sludge storage provided at plant..... Y
- f) Records kept in accordance with State and Federal law Y
- g) Any complaints received last year regarding sludge N
- h) Is sludge adequately processed (digestion, pathogen control) Y

Comments:

SECTION J - SELF-MONITORING PROGRAM

- a) Primary flow measuring device operated and maintained..... Y
Type of device: *Radar* Device location: *Final effluent flume*
- b) Calibration frequency adequate Y
Date of last calibration: *4/28/12*
- c) Secondary instruments operated and maintained..... Y
- d) Flow measurements equipment adequate to handle full range of flows.... Y
- e) Actual flow discharged is measured..... Y
- f) Flow measuring equipment inspection frequency *Daily*
- g) Sampling location(s) are as specified by permit..... Y
- h) Parameters and sampling frequency agree with permit..... Y
- i) Monitoring records (i.e., flow, pH, DO) maintained for a minimum of three years including all original strip chart recordings (i.e. continuous monitoring instrumentation, calibration and maintenance records)..... Y

Comments:

SECTION K: LABORATORY

- a) EPA applicable analytical testing procedures used (40 CFR 136.3) Y
- b) If alternate procedures are used, are they properly approved? NA
- c) Analysis performed more frequently N
 if yes, are results recorded in permittee's report? NA
- d) Commercial laboratory used:
 Name: Alloway* Great Lakes Environmental^
 Parameters analyzed: *(metals, organics, nitrate-nitrite, cyanide); ^(toxicity)
- e) Quality assurance manual provided and maintained Y
- f) Calibration and maintenance of instruments is satisfactory? Y*

Comments: New method update rule and information for MDL study given to chemist for information. *See attached report.

SECTION L: EFFLUENT/RECEIVING WATER OBSERVATIONS								
Outfall Number	Outfall sign in place	Oil Sheen	Grease	Turbidity	Foam	Solids	Color	Other
001	#	None	None	None	None	None	Clear	
008	Yes	None	None	None	None	None	#	No flow
013	Yes	None	None	None	None	None	#	No flow
021	Yes	None	None	None	None	None	#	No flow

Comments: #Not evaluated

SECTION M: MULTIMEDIA OBSERVATIONS

- a) Are there indications of sloppy housekeeping or poor maintenance in work and storage areas or laboratories N
- b) Do you notice staining or discoloration of soils, pavement or floors N
- c) Do you notice distressed (unhealthy, discolored, dead) vegetation N
- d) Do you see unidentified dark smoke or dust clouds coming from sources other than smokestacks N
- e) Do you notice any unusual odors or strong chemical smells N
- f) Do you see any open or unmarked drums, unsecured liquids, or damaged containment facilities N

If any of the above are observed, ask the following questions:

- 1) What is the cause of the condition?
- 2) Is the observed condition or source a waste product?
- 3) Where is the suspected contaminant normally disposed?
- 4) Is this disposal permitted?
- 5) How long has the condition existed and when did it begin?

Comments:

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
<ul style="list-style-type: none"> • Calibration Frequency / Documentation 	<ul style="list-style-type: none"> • 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 <i>USES 12 hr. CALIBRATION STD.</i> 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Logbook maintained² 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> • Minimum of 2 point calibration 	<ul style="list-style-type: none"> • Calibration per manufacturer specification and calibration buffers must bracket anticipated result⁷ 	<input checked="" type="checkbox"/> Yes <i>*</i>	<input type="checkbox"/> No	
<ul style="list-style-type: none"> • Slope Documentation / Acceptability 	<ul style="list-style-type: none"> • Slope acceptable range indicated on benchsheet² 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> • Buffer Expiration Date 	<ul style="list-style-type: none"> • Buffers must not be expired 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> • Other 	<ul style="list-style-type: none"> • Instrument manual available 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Teflon covered magnetic stirrer or equivalent for mixing⁸ 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments: :

** pH 4 AND 7 STANDARDS TYPICAL 2 POINT CALIBRATION. pH 10 STANDARDS WILL BE ADDED FOR OCCASIONAL INSTANCES WHERE 3 POINT OR HIGHER 2 POINT CALIBRATION IS NECESSARY.*

Criteria	Standard Methods Requirement	Acceptable?		Rating
<ul style="list-style-type: none"> • Calibration Method 	<ul style="list-style-type: none"> • Air or known DO calibration method¹⁰ 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Calibration per manufacturer specification¹⁰ 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> • Calibration Frequency / Documentation 	<ul style="list-style-type: none"> • Logbook maintained² 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Calibration verification required at least once each day the meter is used.³ 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> • Other 	<ul style="list-style-type: none"> • Small to no bubble present under membrane (must be smaller than the lead in number 2 pencil)¹¹ 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Instrument manual available 	<input checked="" 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) 2-20°C	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	• Temperature checked / recorded daily (CBOD)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	• Acceptable temperature range (CBOD) is 20° C ±1.0 ^{1,2}	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	• Acceptable temperature range (E-Coli) is 35° C ±0.5 ^{3,22}	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	• Logbook maintained ²	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ¹	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	• Temperature recorded on each shelf number on incubator ³	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
• E-Coli can use multiple tubes (five 20 ml or ten 10 ml) or 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	• Temperature Log (thermometer accurate to 0.5 Celsius). ¹	<input checked="" 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	• Thermometer held in water bath. ¹	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
• Other	• Refrigerator temperature ≤6° Celsius. ¹³	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	• Do not store volatile solvents, food, or beverages. ¹⁴ REAGENT	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Comments:

REAGENT AND SAMPLE HOLDING REFRIGERATORS AVAILABLE

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
Ammonia Meter		Acceptable?		
• Calibration Frequency / Documentation	• pH / millivolt meter read to 0.1 mV¹⁵	<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 specification¹⁶	<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: : NOT APPLICABLE. UV DISINFECTION USED FOR WASTEWATER				

Criteria	Standard Methods Requirement	Acceptable?		Rating
Ammonia Meter		Acceptable?		
• 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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book being maintained ²	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Slope acceptability	• Verify calibration slope is acceptable (per mfg. spec.).	<input checked="" 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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Standards used for calibration not expired	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Electrode free of deposits and foreign material	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Teflon covered magnetic stirrer or equivalent for mixing ¹⁸	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments: :				

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
Sample Collection/Handling		Acceptable?		
• Sample Labeling	• Samples container labeled (description, date, time, preservative added, initialed). ¹⁹	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Chain of Custody	• Chain of custody (description, date, time, signature). ¹⁹	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Composite samples refrigerated during sample collection ¹⁴	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Equipment blanks utilized ¹⁴	<input checked="" type="checkbox"/> Yes ⁴	<input type="checkbox"/> No	
	• SOP for cleaning of sampling equipment	<input checked="" type="checkbox"/> Yes ⁴	<input type="checkbox"/> No	
	• Logbook being maintained ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

→ SAMPLES ARE STORED IN A COOLING ICE CHAIN AND ARE KEPT AT PROPERLY COOLED TEMPERATURES. CHAIN OF CUSTODY IS NOT NECESSARY FOR THIS CASE. COMPOSITE AND EQUIPMENT BLANKS ARE USED. TUBING AND FILTRATION IS PERFORMED BY INDIVIDUAL OPERATOR.

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

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
Desk sheets		Acceptable?		
• General criteria	• Date(s) ⁴	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Analyst initials ²	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Blue or black ink pen ²	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Calibration information ²	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Equations, calculations, units for all measurements, notations, and results present ²	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Corrections, single line through, initialed and dated ²	<input checked="" 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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Incubator temperature 44.5° C ± 0.2° ^{21/24}	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book being maintained ²	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Water Level	• Thermometer total immersion or partial (line on thermometer to ID immersion depth) ^{1,5}	<input checked="" 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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• 10 to 30 minutes time based on material being sterilized ²⁶	<input checked="" 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 checked="" 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 checked="" 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:

* TOTAL TIME IN AUTOCLAVE IS NOT RECORDED. INSTRUMENTS ARE STERILIZED IN A SEALED AUTOCLAVE BAG. THE SEAL IS OPENED WHEN INSTRUMENTS ARE NEEDED AND NOT BEFORE.

General Lab Criteria

Criteria	Standard Methods Requirement		Rating
Final Effluent Temperature Monitoring	Acceptable?		
• General Criteria	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	• Thermometer scaled to 0.1° F and accurate to 0.5° C ³	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
	• Log book being maintained ⁴	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<p>Comments:</p> <p>← REVISIT TO PERFORM TESTS (IN ORDER TO REPLACE CURRENT LIMIT</p>			
Number of Criteria Rated:			Acceptable
Number of Criteria Rated:			Marginal
Number of Criteria Rated:			Unacceptable
Total Number of Areas Rated:			Total Number of Areas Rated
<p>Acceptable Ratings – No action required (recommend SOP's written or updated, perform DMROA'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 DMROA'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 DMROA's for all onsite analysis, recommend voluntary lab analyst certification, require deficiencies to be addressed in written response to NOV).</p>			
<p>Consider recommending PAI Audit from DES when:</p>		<p>>60% of ratings are Marginal >45% of ratings are a combination of Marginal or Unacceptable >30% of ratings are Unacceptable</p>	

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 |

General Lab Criteria

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.

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
NH ₃ -N	P, G	500	G, C	Analyze as soon as possible or add H ₂ SO 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 ₂ SO 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-NH ₃ 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

NEW METHOD UPDATE ROL
 2/10/2012
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April 10, 2012

