



**Environmental
Protection Agency**

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

April 25, 2012

Re: Gallia County
Tara Estates Subdivision
Gallia County Commissioners
Compliance Evaluation Inspection
NPDES Permit OPG00049*GD
Correspondence (PWW)

Gallia County Board of Commissioners
18 Locust Street
Gallipolis, Ohio 45631

Dear Commissioners:

On December 6, 2011, I conducted a compliance evaluation inspection of the Tara Estates Subdivision wastewater collection and treatment facility, located in Addison Township, Gallia County, Ohio. Jennifer Witte, of this office, assisted me with the inspection. Gary Myers represented the county and accompanied me during the inspection. The purpose of the inspection was to determine the Tara Estates Subdivision facility compliance with NPDES Permit Number OPG00049*GD, and the Ohio Water Pollution Control Act, Revised Code Chapter 6111.

As a result of the inspection and review of our files, I have the following comments:

1. Initially, we met with Gallia County Commissioner Lois Snyder, and Karen Sprague, Gallia County Administrator, and inspected the collection system near the residence of Larry Miles, 66 Carman Drive. Mr. Miles had filed a complaint regarding an inability to utilize his sewer service line during periods of heavy rainfall, due to surcharging of the sanitary sewer line. He also reported that on at least one occasion in the past, there was a backup of wastewater into his basement.

On the day of the inspection, it was raining, and at one point the line was observed to be slightly overflowing at the manhole near the main entrance of Tara Estates Subdivision. This is a sanitary sewer overflow. On the day of the inspection, the county was pumping water from the nearby pump station and transporting it to the treatment facility, in an attempt to prevent the sanitary sewer overflow. This overflow and discharge of pollutants to waters of the state is a violation of the conditions of the NPDES discharge permit. You must eliminate this sanitary sewer overflow from the collection system as soon as possible. In addition, you must report the overflow by phone or email to Ohio EPA within 24 hours of the discharge, and in writing within 5 days of the discharge. For the 24 hour notice, it is best to utilize the email method described on our web site at: <http://www.epa.ohio.gov/dsw/permits/permits.aspx>. See the enclosed form.

Southeast District Office
2195 Front Street
Logan, OH 43138-8637

740 | 385 8501
740 | 385 6490 (fax)
www.epa.ohio.gov

2. The wastewater treatment plant comminutor/bar screen were in disrepair and no longer function.
3. The aeration tank was functioning and looking acceptable. The sludge return line was not working. There was duck weed on the surface of the clarifier. The plant effluent was gray and turbid.
4. Sludge is reportedly wasted to drying beds every 2-3 months. This is not often enough.
5. Plant flows are reportedly excessive during rainfall periods, and flows drop off gradually, indicating that clean water intrusion is possibly due more to groundwater influence. This must be addressed.
6. A review of the Discharge Monitoring Reports (DMR's) for the period January through December 2011 showed the following permit violations:

Station	Reporting Code	Parameter	Limit Type	Limit	Reported Value	Violation Date
January 2011:						
001	00530	Total Suspended Solids	30D Conc	30	44.25	1/1/11
001	00530	Total Suspended Solids	30D Qty	5.7	8.37431	1/1/11
001	00530	Total Suspended Solids	7D Qty	8.5	8.51625	1/1/11
001	00530	Total Suspended Solids	7D Conc	45	46.	1/15/11
001	00530	Total Suspended Solids	7D Qty	8.5	8.7055	1/15/11
February 2011:						
001	00530	Total Suspended Solids	30D Conc	30	51.5	2/1/11
001	00530	Total Suspended Solids	7D Conc	45	46.	2/1/11
001	00530	Total Suspended Solids	30D Qty	5.7	9.74638	2/1/11
001	00530	Total Suspended Solids	7D Qty	8.5	8.7055	2/1/11
001	00530	Total Suspended Solids	7D Conc	45	53.	2/8/11
001	00530	Total Suspended Solids	7D Qty	8.5	10.0302	2/8/11
001	00530	Total Suspended Solids	7D Conc	45	66.	2/22/11
001	00530	Total Suspended Solids	7D Qty	8.5	12.4905	2/22/11
March 2011:						
001	00530	Total Suspended Solids	30D Conc	30	46.5	3/1/11
001	00530	Total Suspended Solids	30D Qty	5.7	8.80013	3/1/11
001	00530	Total Suspended Solids	7D Conc	45	83.	3/8/11
001	00530	Total Suspended Solids	7D Qty	8.5	15.7077	3/8/11
May 2011:						
001	00530	Total Suspended Solids	30D Conc	30	35.75	5/1/11
001	00530	Total Suspended Solids	7D Conc	45	61.	5/1/11
001	00530	Total Suspended Solids	30D Qty	5.7	6.76569	5/1/11
001	00530	Total Suspended Solids	7D Qty	8.5	11.5442	5/1/11
001	00530	Total Suspended Solids	7D Conc	45	53.	5/15/11
001	00530	Total Suspended Solids	7D Qty	8.5	10.0302	5/15/11

It was noted that flow rate (50050) is being reported as the same amount each day. Flow measurement must be a more accurate measurement than this estimate, such as an estimate derived from pump run-time meters.

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.

If you have not already done so, please inform this office, in writing, within ten days of receipt of this notification as to the reasons for the above referenced violations, as well as a description of the actions taken or proposed to prevent any further violations. Your response should include the dates, either actual or proposed, for completion of the actions.

Attached is a copy of the inspection report which indicates marginal and/or unsatisfactory evaluations of the following areas: Operations and Maintenance, Collection System, Flow Measurement, Sludge Storage/Disposal. I gave these ratings because of the deficiencies mentioned in the above comments. The Gallia County Commissioners should take the appropriate actions to return the facility to compliance with all terms and conditions of the NPDES permit.

It is planned that this treatment facility will be taken off-line and the collection system connected to the new collection system which will serve the Addison/Kanauga areas. Because of this, the most important task for the commissioners is to continue the efforts to remove clean water sources from the collection system. Please provide quarterly reports to this office, stating what efforts have been taken to remove clean water sources from the collection system and what impact the efforts have made.

Please respond to this letter within 14 days.

Sincerely,



Dan Messerly
District Staff Engineer
Division of Surface Water

DM/dh

Enclosure

c: Gary Myers, Supt., Gallia County
c: Glenn K. Soles, Jr.
c: Randall Finney, City Manager, City of Gallipolis

NPDES Compliance Inspection Report

A. NATIONAL DATA SYSTEM CODING

Permit No.	NPDES No.	Date	Inspection Type	Inspector	Facility Type
OPG00049*GD	OH0050610	December 6, 2011	C	S	1

B. FACILITY DATA

Name & Location of Facility Inspected	Entry Time	Permit Effective Date
Tara Estates Subdivision WWTP Carmen Drive Addison Township, Gallia County	10:30 a.m.	June 1, 2003
	Exit Time	Permit Expiration Date
	12:30 p.m.	May 31, 2008

Name(s) & Title(s) of On-Site Representative(s)	Phone Number(s)
Gary Myers, Gallia County Operator Donald Cochran, Assistant Operator Glenn Soles, Jr., Operator of Record	(740) 446-6658 (lab)
Name, Address, & Title of Responsible Official	Phone Number
Karen Sprague, Administrator Gallia County Board of Commissioners Courthouse, 18 Locust Street Gallipolis, Ohio 45631	(740) 446-4374

C. AREAS EVALUATED DURING INSPECTION

<u>S</u> Permit	<u>U</u> Flow Measurement	<u>N/A</u> Pretreatment
<u>N</u> Records/Reports *	<u>N</u> Laboratory *	<u>N/A</u> Compliance Schedules
<u>M</u> Operations & Maintenance	<u>S</u> Effluent/Receiving Waters	<u>S</u> Self-Monitoring Program
<u>S</u> Facility Site Review	<u>U</u> Sludge Storage/Disposal	<u> </u> Other
<u>U</u> Collection System		

(S = Satisfactory; M = Marginal; U = Unsatisfactory; N = Not Evaluated; N/A = Not Applicable)

*Operator performs pH, D.O., Temp., Chlorine; all other parameters performed by Analytical Associates, Inc., Athalia, Ohio. Analytical Associates pulls those samples and transports to lab.

D. SUMMARY OF FINDINGS/COMMENTS (attach additional sheets if necessary)

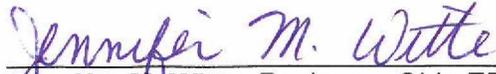
See attached letter and General Lab Criteria Report



 Dan Messerly, Inspector, Ohio EPA, Southeast District Office

4-24-12

 Date



 Jennifer M. Witte, Reviewer, Ohio EPA, Southeast District Office

4/25/12

 Date



Division of Surface Water
Non-compliance Notification for
Bypasses and Upsets

Use this form to report non-compliance that is the result of any **unanticipated bypass** or **upset** resulting in an exceedance of any **effluent limit** in your NPDES permit (see Part III, Section 12 of your NPDES permit for details). The form should be completed and emailed to the appropriate Ohio EPA inspector, or Ohio EPA office using one of the following addresses:

Southeast District Office: sedo24hournpdes@epa.state.oh.us
 Southwest District Office: swdo24hournpdes@epa.state.oh.us
 Northwest District Office: nwdo24hournpdes@epa.state.oh.us
 Northeast District Office: nedo24hournpdes@epa.state.oh.us
 Central District Office: cdo24hournpdes@epa.state.oh.us
 Central Office: co24hournpdes@epa.state.oh.us

On a case-by-case basis it may be determined an environmental emergency exists. Report environmental emergencies within thirty (30) minutes of discovery to Ohio EPA 24-hours a day, 365 days a year at 800-282-9378!

Permittee Information	
Name of permittee:	
NPDES Permit number:	
Contact name for permittee:	
Contact telephone number:	
Date and time of discharge	
Date and time(s) of discharge:	
Date and time discharge discovered:	
Description of discharge	
Approximate amount of discharge:	
Characteristics of discharge:	
Stream(s) affected by discharge	
Provide the name of all streams affected by the discharge:	
Circumstances that created the discharge	
Describe the circumstances that created the discharge:	
Contact person with knowledge of discharge (if different than above)	
Name:	
Telephone number:	
Remedial steps	
Describe all remedial steps which are or will be taken to address the discharge:	
Person responsible for implementing remedial steps	
Name:	
Telephone number:	

General Lab Criteria

Facility: Tara Estates Subdivision, 0PG00049*GD, 12/6/11

Criteria	Standard Methods Requirement	Acceptable?		Rating
Balance				N/A
• 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 ⁶	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments:				

Criteria	Standard Methods Requirement	Acceptable?		Rating
Drying Oven (Suspended Solids)				N/A
• Temperature Recordkeeping	• Temperature recorded with each use ⁴	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book maintained ⁶	<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 in 0.1°C increments ⁵	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Acceptable temperature range is 103° – 105°F ⁴	<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
pH Meter				M
• 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 checked="" type="checkbox"/> No	
	• Log book maintained ⁹	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
• Minimum of 2 point calibration	• Calibration per manufacturer specification and calibration buffers must bracket anticipated result ⁷	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Slope Documentation/ Acceptability	• Slope acceptable range indicated on benchsheet ² (N/A)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Buffer Expiration Date	• Buffers must not be expired (N/E)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Instrument manual available	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Teflon covered magnetic stirrer or equivalent for mixing ⁸ (None)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments: Minilab - Model IQ125 handheld unit used in field at time of inspection. Obtained new Minilab model in mid December 2011. Meter calibrated 1/month typically, should be calibrated prior to each day of use (used weekly).				

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
Dissolved Oxygen Meter				
• Calibration Method	• Air or known DO calibration method ¹⁰ (air)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	M
	• Calibration per manufacturer specification ¹⁰	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Calibration Frequency/ Documentation	• Logbook maintained ⁹	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
	• Calibration verification required at least once each day the meter is used. ³	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
• Other	• Small to no bubble present under membrane (must be smaller than the lead in number 2 pencil) ¹¹ (N.E.)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments: YSI portable meter used; calibrated periodically (about 1/month), should be prior to each day of use (weekly).				

Criteria	Standard Methods Requirement	Acceptable?		Rating
Incubator (CBOD/E-Coli)				
• Temperature Recordkeeping	• Temperature checked/recorded twice daily for each shelf in use ¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
	• Temperature checked/recorded daily ² (CBOD)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Acceptable temperature range (CBOD) is 20°C ±1.0° ¹²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Acceptable temperature range (E-Coli) is 35°C ±0.5° ²²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Logbook maintained ⁹	<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 mg), 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 reads to 0.1 Celsius) ⁵	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments:				

Criteria	Standard Methods Requirement	Acceptable?		Rating
Refrigerator				
• Temperature Recordkeeping	• Temperature Log (thermometer reads to 0.1 Celsius) ⁵	<input type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
• 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: Plant operator does immediate analysis of field parameters. Lab contractor puts samples on ice immediately.				

Criteria	Standard Methods Requirement	Acceptable?		Rating
Chlorine Meter				
• Calibration Frequency/ Documentation	• pH/millivolt meter read to 0.1 mV ¹⁵	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	M
	• 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 checked="" type="checkbox"/> No	
• Calibration Method	• Calibration using three iodate solutions 0.2, 1.0, 5.0 milliliters	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

General Lab Criteria

	or calibration per manufacturer specification ¹⁶			
	• Standards used for calibration not expired (N.E.)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Slope Documentation/ Acceptability	• Calibration curve (acceptable slope) (N.A.)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Electrode free of deposits and foreign material (N.A.)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book being maintained ⁹	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
	• Instrument manual available	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments: Calibration performed about 1/month, and should be prior to each use (daily).				

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	N/A
		• Log book being maintained ⁹	<input type="checkbox"/> Yes	
• 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:				

Criteria	Standard Methods Requirement	Acceptable?		Rating
Sample Collection/Handling				
• Sample Labeling	• Samples container labeled (description, date, time, preservative added, initialed) ¹⁹	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	A
• 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	<input type="checkbox"/> No	
	• SOP for cleaning of sampling equipment	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book being maintained ⁹	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments: Analytical Associates - Athalia does collection/analysis for tss, cbod, ammonia, f.c., since October 2011				

Criteria	Standard Methods Requirement	Acceptable?		Rating
Desiccator				
• General Criteria	• Properly working seals	<input type="checkbox"/> Yes	<input type="checkbox"/> No	N/A
		• Desiccant fresh (blue color)	<input type="checkbox"/> Yes	
• Documentation	• Log book being maintained ⁹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments:				

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?	Rating
Bench Sheets			
<ul style="list-style-type: none"> • General Criteria 	<ul style="list-style-type: none"> • Date(s)² 	<input type="checkbox"/> Yes <input type="checkbox"/> No	N/A
	<ul style="list-style-type: none"> • Analyst initials² 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Blue or black ink pen² 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Calibration information² 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Equations, calculations, units for all measurements, notations, and results present² 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Corrections, single line through, initialed and dated² 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Comments:			

Criteria	Standard Methods Requirement	Acceptable?	Rating
Hot Water Bath (Fecal Coliform/E. Coli)			
<ul style="list-style-type: none"> • Temperature Recordkeeping 	<ul style="list-style-type: none"> • Temperature Log (thermometer reads 0.2° C)²¹ 	<input type="checkbox"/> Yes <input type="checkbox"/> No	N/A
	<ul style="list-style-type: none"> • Incubator temperature 44.5° C ±0.2°^{21/24} 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<ul style="list-style-type: none"> • Temperature Calibration/ Documentation 	<ul style="list-style-type: none"> • Thermometer calibrated annually with NIST traceable thermometer^{1,2} 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Log book being maintained⁹ 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<ul style="list-style-type: none"> • Water Level 	<ul style="list-style-type: none"> • 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			
<ul style="list-style-type: none"> • All apparatus utilized is adequately sterilized before use 	<ul style="list-style-type: none"> • Sterilizing temperature 121° C²⁵ 	<input type="checkbox"/> Yes <input type="checkbox"/> No	N/A
	<ul style="list-style-type: none"> • 10 to 30 minutes time based on material being sterilized²⁶ 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<ul style="list-style-type: none"> • Documentation 	<ul style="list-style-type: none"> • Verify the autoclave temperature weekly by using a maximum registering thermometer (MRT) to confirm that 121°C has been reached as measured in the exhaust¹ 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Date, contents, sterilization time and temperature, total time in autoclave, and analyst's initials should be recorded each time the autoclave is used¹ 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<ul style="list-style-type: none"> • Temperature Calibration/ Documentation 	<ul style="list-style-type: none"> • Thermometer calibrated annually with NIST traceable thermometer^{1,2} 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Log book being maintained⁹ 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<ul style="list-style-type: none"> • Performance Checks 	<ul style="list-style-type: none"> • Test monthly for efficacy using a biological such as commercially available <i>Geobacillus stearothermophilus</i> in spore strips, suspensions, or capsules¹ 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Comments:			

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?	Rating
Final Effluent Temperature Monitoring			
<ul style="list-style-type: none"> • General Criteria 	<ul style="list-style-type: none"> • Thermometer calibrated annually with NIST traceable thermometer^{1,2} 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	M
	<ul style="list-style-type: none"> • Thermometer reads in increments of at least 0.1°C⁵ 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Log book being maintained² 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Comments: YSI Portable meter used. Must calibrate annually as above, maintain instrument log book.			

Number of Criteria Rated:	Acceptable	1
	Marginal	4
	Unacceptable	0
Total Number of Areas Rated		5

<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:	<ul style="list-style-type: none"> >60% of ratings are Marginal >45% of ratings are a combination of Marginal or Unacceptable >30% of ratings are Unacceptable

General Lab Criteria

Notation of Referenced Method

1 Method 9020-B, Item 4	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-B, 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.

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	G, C	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

General Lab Criteria

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 Methods 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