



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

August 13, 2013

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

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

Dear Commissioners:

On July 24, 2013, I conducted an inspection of the Tara Estates Subdivision wastewater collection and treatment facility, located in Addison Twp., Gallia County, Ohio. 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. The purpose was also to determine whether the NPDES discharge permit can be revoked as you requested, since the facility has been shut down.

The collection system manhole located at the northwest corner of Addison Pike and Carman Drive was inspected. There was no wastewater overflowing from it, and it appeared that the overflow had not been active in some time. The mushroom shaped manhole top had been removed and replaced with a conventional top. Some sewage related materials could be seen on the hillside below the manhole, but this seemed to be from past overflow events. Any such materials must be cleaned up. The unnamed tributary to the Ohio River which is adjacent, appeared clear and free of any pollutants.

The pump station located near the center of the subdivision was observed. The station was no longer running, and the electric meter had been removed from it.

The wastewater treatment plant was inspected. The plant was observed to be shut down. There was water in the tanks which did not appear to be wastewater, but was relatively clean. Some clean water was trickling into the influent chamber of the plant. This was apparently groundwater getting in from the influent pipe joints. Many weeds had grown up around the facility.

The wastewater from the Tara Estates collection system has been routed to the new Addison/Kanauga sanitary sewer system which is connected to the City of Gallipolis collection system. The NPDES discharge permit for the Tara Estates wastewater treatment facility will be revoked, since the facility is no longer operating.

The wastewater treatment plant tanks must be pumped out and cleaned out. The steel tanks must be entirely removed from the site. If you prefer to abandon the wastewater treatment plant steel tanks in place, it may be permissible but you must consult with our Division of Materials and Waste Management for details on this.

A review of the Discharge Monitoring Reports (DMR's) for the period January, 2012 through June, 2013, showed no permit limitation violations but did show the following permit frequency violations:

Reporting Period	Station	Reporting		Parameter	Sample		Violation Date
		Code	Frequency		Expected	Reported	
February 2013	001	00665	1/Month	Phosphorus, Total (P)	1	0	2/1/2013
February 2013	001	00940	1/2months	Chloride, Total	1	0	2/1/2013
February 2013	001	00515	1/2months	Residue, Total Dissolv	1	0	2/1/2013
February 2013	001	00945	1/2months	Sulfate, (SO4)	1	0	2/1/2013

During the period January, 2013 (when OPG00049\*HD became effective), through June, 2013, you have had overflows from the collection system manhole located at the northwest corner of Addison Pike and Carman Drive, but you have reported no overflow occurrences under reporting outfall OPG00049\*300. For instance, you reported via email to this office that there were overflows on 1-31-13 and 2-27-13, but did not report these events under outfall 300 of the permit. This is a violation of the NPDES permit.

It was noted that flow rate (50050) was reported as the same amount each day (0.050 MGD, which is the design flow of the facility). Flow reporting should have been based on a measurement. This is a violation of the NPDES permit.

Regarding outfall 586, disposal of sewage sludge in a solid waste landfill, it was reported for the above period that no biosolids were removed from the facility. This indicates improper operation of the facility, and a violation of the NPDES permit, Part II, Item U and Part III, Item 3A. Also, it appears that this district office did not receive a copy of the Ohio EPA Form 4229, the year-end biosolids disposal report for 2012. Please submit a copy of this report to this office, if you have not already done so, by September 1, 2013.

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.

Attached is a copy of the inspection report which indicates marginal and/or unsatisfactory evaluations of the following areas: Flow Measurement, Sludge

Storage/Disposal, Self-Monitoring. I gave these ratings because of the deficiencies mentioned in the above comments.

Because the treatment facility has been shut down, the most important task for the commissioners is to continue the efforts to remove clean water sources from the collection system. Please provide short 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.

If you have any questions, please contact me at 740-380-5218.

Sincerely,



Dan Messerly  
District Staff Engineer  
Division of Surface Water

DM/cs

Enclosure

c: Gary Myers, Superintendent, Gallia County  
c: Glenn K. Soles Jr.



State of Ohio Environmental Protection Agency  
Southeast District Office

Municipal NPDES Compliance Inspection Report

Section A: National Data System Coding					
Permit #	NPDES #	Month/Day/Year	Inspection Type	Inspector	Facility Type
OPG00049*HD	OH0050610	07/24/2013	C	S	1

Section B: Facility Data			
Name and Location of Facility Inspected		Entry Time	Permit Effective Date
Tara Estates Subdivision WWTP Carmen Drive Addison Township, Gallia County		~3:15pm	January 1, 2013
		Exit Time	Permit Expiration Date
			December 31, 2017
Name(s) and 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, and Title of Responsible Official		Phone Number	
Karen Sprague, Administrator Gallia County Board of Commissioners Courthouse, 18 Locust St. Gallipolis, Ohio 45631		(740) 446-4374	

Section C: Areas Evaluated During Inspection					
(S = Satisfactory; M = Marginal; U = Unsatisfactory; N = Not Evaluated; N/A = Not Applicable)					
S	Permit	U	Flow Measurement	N/A	Pretreatment
N	Records/Reports	S	Laboratory	N/A	Compliance Schedules
N/A	Operations & Maintenance	N/A	Effluent/Receiving Waters	M	Self-Monitoring Program
S	Facility Site Review	U	Sludge Storage/Disposal		Other
S	Collection System				

Section D: Summary of Findings (attach additional sheets if necessary)			
<p>Wastewater treatment facility has been shut down; wastewater routed to Addison/Kanauga sewer system which is routed to Gallipolis sanitary sewers; pump station located in middle of Tara Estates has been shut down. Overflow at manhole at NW corner of Addison Pike and Carman Drive has been eliminated. See attached cover letter and General Lab Criteria Report</p> <p>* Operator performs pH, D.O., Temp.; all other parameters performed by Analytical Associates, Inc./Titan Labs, Proctorville, Ohio. Analytical Associates pulls those samples and transports to lab.</p>			
Inspector		Reviewer	
<i>Dan Messerly</i> 8-12-13		<i>Jennifer M. Witte</i>	
Dan Messerly Division of Surface Water Southeast District Office	Date <i>f</i>	Jennifer M. Witte Compliance & Enforcement Supervisor Division of Surface Water Southeast District Office	Date



## General Lab Criteria

Facility: Tara Estates wwtp (0PG00049\*HD), Jul 24, 2013 cei

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Balance</b>		<b>Acceptable?</b>		<b>N/A</b>
• Standard Weights	• Either NIST Class s or ASTM/ANSI Class 1 weights <sup>1,2</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Calibration Frequency/ Documentation	• Calibration verification required at least once each day the balance is used <sup>3</sup>	<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 <sup>1</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Service and recalibrate annually (manufacturer representative or comparable) <sup>1</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Must be able to measure to 0.1 grams <sup>4</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book maintained <sup>6</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments:				

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Drying Oven (Suspended Solids)</b>		<b>Acceptable?</b>		<b>N/A</b>
• Temperature Recordkeeping	• Temperature recorded with each use <sup>4</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book maintained <sup>6</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Calibration Frequency/ Documentation	• Thermometer calibrated annually with NIST traceable thermometer <sup>1,2</sup> . Correction factor posted on thermometer/equipment <sup>1</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Thermometer temperature in 0.1°C increments <sup>5</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Acceptable temperature range is 103° – 105°F <sup>4</sup>	<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
<b>pH Meter</b>		<b>Acceptable?</b>		<b>M</b>
• 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) <sup>3</sup>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
	• Log book maintained <sup>9</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Minimum of 2 point calibration	• Calibration per manufacturer specification and calibration buffers must bracket anticipated result <sup>7</sup>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
• Slope Documentation/ Acceptability	• Slope acceptable range indicated on benchsheet <sup>2</sup>	<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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Teflon covered magnetic stirrer or equivalent for mixing <sup>8</sup>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Comments: meter calibrated 1/month typically, should be calibrated prior to each day of use; only calibrated with one buffer, instead of two. County has a mailbox containing notebook for each facility, to document calibration, maintenance, etc.				

## General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?	Rating
<b>Dissolved Oxygen Meter</b>			<b>M</b>
• Calibration Method	• Air or known DO calibration method <sup>10</sup>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	• Calibration per manufacturer specification <sup>10</sup>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
• Calibration Frequency/ Documentation	• Logbook maintained <sup>9</sup>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	• Calibration verification required at least once each day the meter is used. <sup>3</sup>	<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) <sup>11</sup>	<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.			

Criteria	Standard Methods Requirement	Acceptable?	Rating
<b>Incubator (CBOD/E-Coli)</b>			<b>N/A</b>
• Temperature Recordkeeping	• Temperature checked/recorded twice daily for each shelf in use <sup>1</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Temperature checked/recorded daily <sup>2</sup> (CBOD)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Acceptable temperature range (CBOD) is 20°C ±1.0° <sup>12</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Acceptable temperature range (E-Coli) is 35°C ±0.5° <sup>22</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Logbook maintained <sup>9</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Temperature Calibration/ Documentation	• Thermometer calibrated annually with NIST traceable thermometer <sup>1,2</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Temperature correction information posted on incubator <sup>1</sup>	<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) <sup>23</sup>	<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) <sup>5</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Comments:			

Criteria	Standard Methods Requirement	Acceptable?	Rating
<b>Refrigerator</b>			<b>N/A</b>
• Temperature Recordkeeping	• Temperature Log (thermometer reads to 0.1 Celsius) <sup>5</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Temperature Calibration/ Documentation	• Thermometer calibrated annually with NIST traceable thermometer <sup>1,2</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Other	• Thermometer held in water bath <sup>1</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Refrigerator temperature ≤6° Celsius <sup>13</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Do not store volatile solvents, food, or beverages <sup>14</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Comments:			

Criteria	Standard Methods Requirement	Acceptable?	Rating
<b>Chlorine Meter</b>			<b>N/A</b>
• Calibration Frequency/ Documentation	• pH/millivolt meter read to 0.1 mV <sup>15</sup>	<input checked="" 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) <sup>3</sup>	<input type="checkbox"/> Yes <input 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 <sup>16</sup>			
	• 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 <sup>9</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments: chlorine sampling/analysis has been turned over to Analytical Associates, Inc./Titan Labs, Proctorville, Ohio. Analytical Associates pulls those samples and transports to lab. Samples are placed in cooler.				

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Ammonia Meter</b>				
• 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) <sup>3</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<b>N/A</b>
	• Log book being maintained <sup>9</sup>	<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. <sup>17</sup>	<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 <sup>18</sup>	<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
<b>Sample Collection/Handling</b>				
• Sample Labeling	• Samples container labeled (description, date, time, preservative added, initialed) <sup>19</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<b>A</b>
• Chain of Custody	• Chain of custody (description, date, time, signature) <sup>19</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Composite samples refrigerated during sample collection <sup>14</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Equipment blanks utilized <sup>14</sup>	<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 <sup>9</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments: Analytical Associates/Titan Labs- Proctorville, Oh, does collection/analysis for tss, cbod, ammonia, f.c.; placed in cooler.				

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

## General Lab Criteria

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

Criteria	Standard Methods Requirement		Rating
<b>Hot Water Bath (Fecal Coliform/E. Coli)</b>		<b>Acceptable?</b>	<b>N/A</b>
<ul style="list-style-type: none"> <li>• Temperature Recordkeeping</li> </ul>	<ul style="list-style-type: none"> <li>• Temperature Log (thermometer reads 0.2° C)<sup>21</sup></li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<ul style="list-style-type: none"> <li>• Incubator temperature 44.5° C ±0.2°<sup>21/24</sup></li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<ul style="list-style-type: none"> <li>• Temperature Calibration/ Documentation</li> </ul>	<ul style="list-style-type: none"> <li>• Thermometer calibrated annually with NIST traceable thermometer<sup>1,2</sup></li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<ul style="list-style-type: none"> <li>• Log book being maintained<sup>9</sup></li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<ul style="list-style-type: none"> <li>• Water Level</li> </ul>	<ul style="list-style-type: none"> <li>• Thermometer total immersion or partial (line on thermometer to ID immersion depth)<sup>1,5</sup></li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Comments:			

Criteria	Standard Methods Requirement		Rating
<b>Autoclaves/Steam Sterilizers</b>		<b>Acceptable?</b>	<b>N/A</b>
<ul style="list-style-type: none"> <li>• All apparatus utilized is adequately sterilized before use</li> </ul>	<ul style="list-style-type: none"> <li>• Sterilizing temperature 121° C<sup>25</sup></li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<ul style="list-style-type: none"> <li>• 10 to 30 minutes time based on material being sterilized<sup>26</sup></li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<ul style="list-style-type: none"> <li>• Documentation</li> </ul>	<ul style="list-style-type: none"> <li>• 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<sup>1</sup></li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<ul style="list-style-type: none"> <li>• Date, contents, sterilization time and temperature, total time in autoclave, and analyst's initials should be recorded each time the autoclave is used<sup>1</sup></li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<ul style="list-style-type: none"> <li>• Temperature Calibration/ Documentation</li> </ul>	<ul style="list-style-type: none"> <li>• Thermometer calibrated annually with NIST traceable thermometer<sup>1,2</sup></li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<ul style="list-style-type: none"> <li>• Log book being maintained<sup>9</sup></li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<ul style="list-style-type: none"> <li>• Performance Checks</li> </ul>	<ul style="list-style-type: none"> <li>• Test monthly for efficacy using a biological such as commercially available <i>Geobacillus stearothermophilus</i> in spore strips, suspensions, or capsules<sup>1</sup></li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Comments:			

## General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?	Rating
<b>Final Effluent Temperature Monitoring</b>			
<ul style="list-style-type: none"> <li>• General Criteria</li> </ul>	<ul style="list-style-type: none"> <li>• Thermometer calibrated annually with NIST traceable thermometer<sup>1,2</sup></li> </ul>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>M</b>
	<ul style="list-style-type: none"> <li>• Thermometer reads in increments of at least 0.1°C<sup>5</sup></li> </ul>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	<ul style="list-style-type: none"> <li>• Log book being maintained<sup>2</sup></li> </ul>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Comments: DO/temp. meter is used; has not been calibrated annually with NIST.			

<b>Number of Criteria Rated:</b>	<b>Acceptable</b>	1
	<b>Marginal</b>	3
	<b>Unacceptable</b>	0
	<b>Total Number of Areas Rated</b>	4

**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).

**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).

**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).

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

# 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 $\text{H}_2\text{SO}_4$ 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 $\text{HNO}_3$ 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 $\text{H}_2\text{SO}_4$ 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