



**Environmental  
Protection Agency**

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

Re: Mercer County  
Celina WWTP  
NPDES Permit

May 16, 2012

Mr. Thomas Hitchcock  
Safety Service Director  
City of Celina  
426 West Market Street  
Celina, Ohio 45822

Dear Mr. Hitchcock:

On May 2, 2012, an NPDES permit compliance inspection was conducted at the City of Celina Waste Water Treatment Plant (WWTP). The inspection included a tour of the facility, completion of a checklist designed to evaluate major areas of the treatment plant, and completion of a checklist to evaluate major areas of the lab. Mr. Kerry Duncan, Superintendent, and Mr. Jason Andrews, Assistant Superintendent, provided information to Ohio EPA representatives Ms. Michelle Sharp and Mr. Andy Gall. Our inspection findings and recommendations are summarized below.

At the time of inspection, all major treatment components were in service and the plant was discharging a clear final effluent. The treatment plant laboratory, which also contains an energy control area, is small for all of the sampling that is required. A larger area designated only for laboratory use is recommended. All deficiencies noted in our June 13, 2011, inspection letter have been corrected.

We are in receipt of your discharge monitoring reports covering the months of June 2011 through March 2012. Our review indicates violations of the conditions of your NPDES permit as listed below:

Violation Date	Station	Reporting Code	Parameter	Limit Type	Limit	Reported Value
6/1/2011	001	00610	Nitrogen, Ammonia (NH3)	30D Conc	0.5	.74682
12/1/2011	001	00530	Total Suspended Solids	7D Qty	170	172.090
12/1/2011	001	80082	CBOD 5 day	7D Qty	213	403.971

Our completed inspection report forms are enclosed. If you have any questions, please call Michelle Sharp at 419-373-3019.

Sincerely,

Elizabeth A. Wick, P.E.  
Environmental Engineer/Section Manager  
Division of Surface Water

MS/jlm

Enclosures

pc: Mr. Kerry Duncan, Superintendent Celina WWTP

ec: Inspection Tracking



State of Ohio Environmental Protection Agency  
Northwest District Office

NPDES Compliance Inspection Report

Section A: National Data System Coding					
Permit #	NPDES#	Month/Day/Year	Inspection Type	Inspector	Facility Type
OH0020320	2PD00033	5/2/2012	C	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
City of Celina 1125 South Elm Street Celina, Ohio 45822	10:00 AM	3/1/2007
	Exit Time	Permit Expiration Date
	12:30 PM	1/31/2012
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
Kerry Duncan, Superintendent	419-586-2451	
Name, Address and Title of Responsible Official	Phone Number	
Mr. Thomas Hitchcock, Safety-Service Director City of Celina 426 West Market Street Celina, Ohio 45822	419-586-6464	

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

Section D: Summary of Findings (Attach additional sheets if necessary)	
Inspector	Reviewer
<i>Michelle Sharp</i> 5-21-12 Michelle Sharp Date Division of Surface Water Northwest District Office	<i>Thomas Poffenberger</i> 5/21/12 Thomas Poffenberger, P.E. Date Water Quality Engineer Division of Surface Water Northwest District Office

Permit # : OH0020320  
NPDES #: 2PD00033

Sections E thru K: Complete on all inspections as appropriate  
Y – Yes, N – No, N/A – Not Applicable, N/E – Not Evaluated

**Section E: Permit Verification**

Inspection observations verify the permit

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

Comments/Status:

(f) Construction of phosphorous treatment facilities has been completed and is now in operation.

**Section E: Compliance Schedules/Violations**

- (a) Any significant violations since the last inspection..... N
- (b) Permittee is taking actions to resolve violations..... N/A
- (c) Permittee has a compliance schedule..... Y
- (d) Compliance schedule contained in
- (e) Permittee is meeting compliance schedule..... Y

Comments/Status:

(e) Completed ahead of schedule.

**Section G: Operation & Maintenance**

**Treatment Works:**

Treatment facility properly operated and maintained

- (a) Standby power available.....generator  or dual feed ..... Y
- (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 (OAC 3745-7)..... III
- (e) Operator of Record holds unexpired license of class required by permit..... Y  
 Class: IV
- (f) Copy of certificate of Operator of Record displayed on-site..... Y
- (g) Minimum operator staffing requirements fulfilled (OAC 3745-7)... N/A
- (h) Routine and preventative maintenance scheduled/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..... Y
- (l) Regulatory agency notified of bypasses..... Y  
 On MORs  and/or Spill Hotline (1-800-282-9378)
- (m) Any hydraulic and/or organic overloads since last inspection..... Y

**Record Keeping:**

- (a) Log book provided..... Y
- (b) Format of log book (i.e. computer log, hard bound book)  

Mostly on computer but lab, time, and calibrations are kept in books.
- (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)... Y
  - V. Identification of person making log entries..... Y
- (d) Has the operator of record submitted written notification to the permittee, Ohio EPA and (if applicable) any local environmental agencies when a collection system overflow, treatment plant bypass or effluent limit violation has occurred..... Y

**Section G: Operation & Maintenance (con't)**

**Collection System:**

- (a) Percent combined system: 0%
- (b) Any collection system overflows since last inspection..... N  
(CSO  and/or SSO )
- (c) Regulatory agency notified of overflows (SSOs)..... N/A
- (d) CSO O&M plan provided and implemented..... N/A
- (e) CSOs monitored and reported in accordance with permit..... N/A
- (f) Portable pumps used to relieve system..... N
- (g) Lift station alarms provided and maintained..... Y
- (h) Are 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 N
- (k) Are any portions of the sewer system at or near capacity..... Y

Comments/Status:

(h) 2 have generators.

(i) No major repairs.

(k) During wet weather.

**Section H: Sludge Management**

- (a) Sludge management plan (SMP)  
Submitted date:                      Approval #:                      Not submitted     N/A
- (b) Sludge management plan current..... Y  
(c) Sludge adequately disposed..... Y  
(Method:Land Apply)  
(d) If sludge is incinerated, where is ash disposed of  
(e) Is sludge disposal contracted..... Y  
(Name:Zumburge Farms)  
(f) Has amount of sludge generated changed significantly since  
last inspection..... N  
(g) Adequate sludge storage provided at plant..... Y  
(h) Land application sites monitored and inspected per SMP..... Y  
(i) Records kept in accordance with State and Federal law..... Y  
(j) Any complaints received in last year regarding sludge..... Y  
(k) Is sludge adequately processed (digestion, pathogen control)..... Y

**Comments/Status:**

(e) Landfill has approved the acceptance of sludge if needed. Facility will be bidding a sludge bunker cover in mid-May and hope to start construction by mid-July

**Section I: Self-Monitoring Program**

**Flow Measurement:**

- (a) Primary flow measuring device operated and maintained..... Y  
Type of device: Ultrasonic & Parshall flume  Ultrasonic & Weir  Weir   
Calculated from influent  Other  (Specify:                      )
- (b) Calibration frequency adequate ..... Y  
(Date of last calibration: 8/1/2011)  
(c) Secondary instruments operated and maintained..... Y  
(d) Flow measurement equipment adequate to handle full range  
of flows..... Y  
(e) Actual flow discharged is measured..... Y  
(f) Flow measuring equipment inspection frequency  
 Daily  Weekly  monthly  other

**Comments/Status:**

**Section I: Self-Monitoring Program (cont)**

**Sampling:**

- (a) Sampling location(s) are as specified by permit..... Y
- (b) Parameters and sampling frequency agree with permit..... Y
- (c) Permittee uses required sampling method..... Y
- (d) Sample collection procedures are adequate..... Y
  - (i) Samples refrigerated during compositing..... Y
  - (ii) Proper preservation techniques used..... Y
  - (iii) Containers and sample holding times prior to analysis conform with 40 CFR 136.3..... Y
- (e) 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
- (f) Adequate records maintained of sampling date, time, location, etc.. Y

**Laboratory:**

*General*

- (a) EPA approved analytical testing procedures used (40 CFR 136.3).. Y
  - (b) If alternate analytical procedures are used, proper approval has been obtained..... N/A
  - (c) Analyses being performed more frequently than required by permit. Y
  - (d) If (c) is yes, are results in permittee's self-monitoring report..... Y
  - (e) Commercial laboratory used..... Y
- Parameters analyzed by commercial lab: Metals, downstream hardness, all sludge parameters, toxicity, phosphorous, Nitrate/Nitrite, cyanide, Oil and Grease, hexchrome, TDS, and CBOD.

Lab name: Alloway

*Quality Control/Quality Assurance*

- (f) Quality assurance manual provided and maintained..... Y
- (g) Satisfactory calibration and maintenance of instruments/equipment. Y
- (h) Adequate records maintained..... Y
- (i) Results of latest USEPA quality assurance performance sampling program:  Satisfactory  Marginal  Unsatisfactory

Date: 7/1/2011

**Comments/Status:**

Permit # : OH0020320  
 NPDES # : 2PD00033

(e) The plant tests TSS, pH, ammonia, effluent fecal, temperature, and DO. Celina water plant will run E.Coli when new permit is received.

**Section J: Effluent/Receiving Water Observations**

Outfall Number	Oil sheen	Grease	Turbidity	Visible Foam	Visible Floating Solids	Color	Other
001	None	None	None	None	None	5	

**Comments/Status:**

**Section K: 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?

Permit # : OH0020320  
NPDES # : 2PD00033

**Comments/Status:**

--

Permit # : OH0020320  
NPDES #: 2PD00033

Shelby WWTP 5-5-11

Form Approved  
OMB No. 158-R0035

F. GUIDE - VISUAL OBSERVATION - UNIT PROCESS

RATING CODES: S = Satisfactory; U = Unsatisfactory; M = Marginal; IN = In Operation; OUT = Out of Operation

CONDITION OR APPEARANCE		RATING	COMMENTS
General	Grounds	S	
	Buildings	S	
	Potable Water Supply Protection	-	
	Safety Features	S	
	Plant Bypass	OUT	
	Alternate Power Source	OUT	Generator
Preliminary	Maintenance of Collection Systems	S	
	Screw Pumps	IN	1 of 3 in service. Second goes online at 7.5 MGD
	Coarse Bar Screen	IN	Manual Clean
	Bar Screen	IN	1 of 2 screens in service. Second goes online at 7.5 MGD
	Disposal of Screenings	S	Landfill
	Grit Chamber	IN	Aerated
Primary			
Sludge Disposal	Digesters	IN	Aerobic units - 4 Units
	Dewatering Tank	IN	Dewaters sludge before aeration tanks
	Sludge Holding Tank	IN	Stores digested sludge until it can be centrifuged
	Extra Sludge Holding	OUT	
	Centrifuge	IN	
	Disposal of Sludge	S	Land application
Other	Flow Meter and Recorder	IN	
	Records	S	
	Lab Controls	S	
Secondary-Tertiary	Oxidation Ditches	IN	2 Ditches, Good color
	Secondary Clarifiers	IN	2 units, clear effluent
	Sodium Aluminate	IN	17 gallon/day for phosphorous control
Disinfection	Effluent	S	
	Disinfection System	IN	UV
	Post Aeration	IN	
	Chlorine	IN	Chlorinate RAS for filamentous bacteria control

# General Lab Criteria

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

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Drying Oven (Suspended Solids)</b>				
• Temperature Recordkeeping	• Temperature recorded with each use <sup>4</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<b>A</b>
		• Log book maintained <sup>6</sup>	<input checked="" type="checkbox"/> Yes	
• Calibration Frequency / Documentation	• Thermometer calibrated annually with NIST traceable thermometer <sup>1,2</sup> . Correction factor posted on thermometer / equipment <sup>1</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Thermometer temperature in 0.1° C increments <sup>5</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Acceptable temperature range is 103° – 105° F <sup>4</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>pH 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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<b>A</b>
		• Logbook maintained <sup>9</sup>	<input checked="" type="checkbox"/> Yes	
• Minimum of 2 point calibration	• Calibration per manufacturer specification and calibration buffers must bracket anticipated result <sup>7</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Slope Documentation / Acceptability	• Slope acceptable range indicated on benchsheet <sup>2</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Buffer Expiration Date	• Buffers must not be expired	<input checked="" 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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

# General Lab Criteria

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Dissolved Oxygen Meter</b>				
• Calibration Method	• Air or known DO calibration method <sup>10</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<b>A</b>
	• 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 checked="" 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) <sup>11</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Incubator (CBOD/E-Coli)</b>				
• Temperature Recordkeeping	• Temperature checked / recorded twice daily for each shelf in use <sup>1</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<b>NR</b>
	• 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 ml), 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>				
• Temperature Recordkeeping	• Temperature Log (thermometer reads to 0.1 Celsius). <sup>5</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<b>A</b>
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer <sup>1,2</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Thermometer held in water bath. <sup>1</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Refrigerator temperature ≤6° Celsius. <sup>13</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Do not store volatile solvents, food, or beverages. <sup>14</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

# General Lab Criteria

Comments:				
Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Chlorine Meter</b>		Acceptable?		<b>NR</b>
• Calibration Frequency / Documentation	<ul style="list-style-type: none"> <li>• pH / millivolt meter read to 0.1 mV<sup>15</sup></li> <li>• 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></li> </ul>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Calibration Method	<ul style="list-style-type: none"> <li>• Calibration using three iodate solutions 0.2, 1.0, 5.0 milliliters or calibration per manufacturer specification<sup>16</sup></li> <li>• Standards used for calibration not expired</li> </ul>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Slope Documentation / Acceptability	<ul style="list-style-type: none"> <li>• Calibration curve (acceptable slope)</li> </ul>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	<ul style="list-style-type: none"> <li>• Electrode free of deposits and foreign material</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>• Instrument manual available</li> </ul>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments:				

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Ammonia Meter</b>		Acceptable?		<b>A</b>
• Calibration Frequency / Documentation	<ul style="list-style-type: none"> <li>• 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></li> <li>• Log book being maintained<sup>9</sup></li> </ul>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Slope acceptability	<ul style="list-style-type: none"> <li>• Verify calibration slope is acceptable (per mfg. spec.).</li> </ul>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Calibration Method	<ul style="list-style-type: none"> <li>• 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></li> </ul>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> <li>• Standards used for calibration not expired</li> </ul>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	<ul style="list-style-type: none"> <li>• Electrode free of deposits and foreign material</li> </ul>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> <li>• Teflon covered magnetic stirrer or equivalent for mixing<sup>18</sup></li> </ul>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> <li>• Instrument manual available</li> </ul>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments:				

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Sample Collection/Handling</b>		Acceptable?		<b>A</b>
• Sample Labeling	<ul style="list-style-type: none"> <li>• Samples container labeled (description, date, time, preservative added, initialed).<sup>19</sup></li> </ul>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Chain of Custody	<ul style="list-style-type: none"> <li>• Chain of custody (description, date, time, signature).<sup>19</sup></li> </ul>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

# General Lab Criteria

• Other	• Composite samples refrigerated during sample collection <sup>14</sup>	<input checked="" 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	
	• Logbook being maintained <sup>9</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

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

Comments:

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

Comments:

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

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Autoclaves/Steam Sterilizers</b>				
• All apparatus utilized is adequately sterilized before use	• Sterilizing temperature 121° C <sup>25</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<b>NR</b>
	• 10 to 30 minutes time based on material being sterilized <sup>26</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

# General Lab Criteria

<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:

<b>Number of Criteria Rated:</b>	Acceptable	10
	Marginal	0
	Unacceptable	0
Total Number of Areas Rated		10

**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: *	<ul style="list-style-type: none"> <li>&gt;60% of ratings are Marginal</li> <li>&gt;45% of ratings are a combination of Marginal or Unacceptable</li> <li>&gt;30% of ratings are Unacceptable</li> </ul>
--	--

# 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	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 $\text{H}_2\text{SO}_4$ to pH <2, Refrigerate $\leq 6^{\circ}\text{C}$	28 d	28 d

# General Lab Criteria

<b>Approved Standard Methods</b>	
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