



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

June 17, 2013

Mr. Edward Drobina  
Service Manager  
Pickerington WWTP  
100 Lockville Road  
Pickerington, OH 43147

**Re: Pickerington WWTP  
NPDES Permit 4PB00017/ OH0031119  
Compliance Evaluation Inspection  
Fairfield County**

Dear Mr. Drobina:

On June 10, 2013, a Compliance Evaluation Inspection was conducted at the Pickerington WWTP. Present for the inspection were David Jackson, representing the City of Pickerington and Betsy VanWormer and myself representing the Ohio EPA, 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. Except for those minor problems noted in the attached inspection report, the plant was operated and maintained satisfactorily.

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.state.oh.us](mailto:paul.vandermeer@epa.state.oh.us).

Sincerely,

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

c: File Copy  
Mr. David Jackson, Chief Operator, Pickerington WWTP

ec: Paul L. Vandermeer

PLV/nsm Pickerington 2013

**NPDES Compliance Inspection Report**

**SECTION A: NATIONAL DATA SYSTEM CODING**

Permit #	NPDES #	Inspection Type	Inspector	Facility Type
4PB00017	OH0031119	CEI	S	1
Inspection Date	Entry Time	Exit Time	Notice of Violation	Significant Non-Compliance
6/10/2013	8:50 am	11:45 am	No	No

**SECTION B: FACILITY DATA**

Name and Location of Facility Inspected	Permit Effective Date
Pickerington WWTP 525 Hill Road, South Pickerington, OH 43147	1/1/2008
	Permit Expiration Date
	12/31/2012
Name(s) and Title(s) of On-Site Representatives	Phone Numbers
David Jackson, Chief Operator	(614) 837-6470
Name and Title of Responsible Official	Phone Number
Edward Drobina, Service Manager	(614) 833-2292

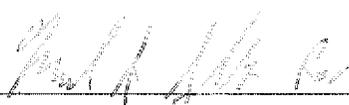
**SECTION C: AREAS EVALUATED DURING INSPECTION**

Key: S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated

M*	NPDES Compliance	
S	Operations & Maintenance	
S	Facility Site Review	<i>Covered sludge storage needed in the future.</i>
S	Collection System	<i>Pump stations well maintained.</i>
S	Flow Measurement	
S	Receiving Waters	
S	Laboratory	<i>See lab criteria sheet attached.</i>

Comments: *\*Some issues with reporting and minor effluent ammonia limit violations. These have been properly addressed. Violation for fecal coliform in sludge (Station 581) was incorrectly reported in eDMR. The revised number falls under the 200,000 permit limit and has been updated in eDMR.*

Signatures

	6/11/13		6/11/13
Paul L. Vandermeer, Inspector Compliance & Enforcement Division of Surface Water Central District Office	Date	Erin Sherer, Reviewer Compliance & Enforcement Supervisor Division of Surface Water Central District Office	Date

## Compliance Data for Pickerington WWTP between 4/1/2012 to 4/1/2013

### Summary

Permit Effluent Limit Violations: 4  
 Permit Effluent Code Violations: 0  
 Permit Effluent Frequency Violations: 47

Limit Violations						
Reporting Period	Station	Parameter	Sample Frequency	Expected	Reported	Violation Date
October 2012	001	Nitrogen, Ammonia (NH3)	5D Conc	0.90	1.29	10/1/2012
October 2012	001	Nitrogen, Ammonia (NH3)	7D Conc	1.4	1.7	10/8/2012
October 2012	001	Nitrogen, Ammonia (NH3)	7D Conc	1.4	2.01	10/15/2012
December 2012	581	-Fecal Coliform in Slud	1D Conc	200000	5341172	12/11/2012
December 2012	001	Nitrogen, Ammonia (NH3)	7D Conc	4.4	5.04	12/22/2012

Frequency Violation						
Reporting Period	Station	Parameter	Sample Frequency	Expected	Reported	Violation Date
November 2012	001	pH, Minimum	1/Day	1	0	11/21/2012
November 2012	001	Water Temperature	1/Day	1	0	11/22/2012
November 2012	001	Flow Rate	1/Day	1	0	11/22/2012
November 2012	001	Dissolved Oxygen	1/Day	1	0	11/22/2012
November 2012	001	Residue, Total Dissolv	3/Week	3	2	11/22/2012
November 2012	001	pH, Maximum	1/Day	1	0	11/22/2012
November 2012	001	pH, Minimum	1/Day	1	0	11/22/2012
November 2012	001	Water Temperature	1/Day	1	0	11/23/2012
November 2012	001	Flow Rate	1/Day	1	0	11/23/2012
November 2012	001	Dissolved Oxygen	1/Day	1	0	11/23/2012
November 2012	001	pH, Maximum	1/Day	1	0	11/23/2012
November 2012	001	pH, Minimum	1/Day	1	0	11/23/2012
November 2012	001	Water Temperature	1/Day	1	0	11/24/2012
November 2012	001	Flow Rate	1/Day	1	0	11/24/2012
November 2012	001	Dissolved Oxygen	1/Day	1	0	11/24/2012
November 2012	001	pH, Maximum	1/Day	1	0	11/24/2012
November 2012	001	pH, Minimum	1/Day	1	0	11/24/2012
November 2012	001	Water Temperature	1/Day	1	0	11/25/2012
November 2012	001	Flow Rate	1/Day	1	0	11/25/2012
November 2012	001	Dissolved Oxygen	1/Day	1	0	11/25/2012
November 2012	001	pH, Maximum	1/Day	1	0	11/25/2012

November 2012	001	pH, Minimum	1/Day	1	0	11/25/2012
November 2012	001	Water Temperature	1/Day	1	0	11/26/2012
November 2012	001	Flow Rate	1/Day	1	0	11/26/2012
November 2012	001	Dissolved Oxygen	1/Day	1	0	11/26/2012
November 2012	001	pH, Maximum	1/Day	1	0	11/26/2012
November 2012	001	pH, Minimum	1/Day	1	0	11/26/2012
November 2012	001	Water Temperature	1/Day	1	0	11/27/2012
November 2012	001	Flow Rate	1/Day	1	0	11/27/2012
November 2012	001	Dissolved Oxygen	1/Day	1	0	11/27/2012
November 2012	001	pH, Maximum	1/Day	1	0	11/27/2012
November 2012	001	pH, Minimum	1/Day	1	0	11/27/2012
November 2012	001	Water Temperature	1/Day	1	0	11/28/2012
November 2012	001	Flow Rate	1/Day	1	0	11/28/2012
November 2012	001	Dissolved Oxygen	1/Day	1	0	11/28/2012
November 2012	001	pH, Maximum	1/Day	1	0	11/28/2012
November 2012	001	pH, Minimum	1/Day	1	0	11/28/2012
November 2012	001	Water Temperature	1/Day	1	0	11/29/2012
November 2012	001	Flow Rate	1/Day	1	0	11/29/2012
November 2012	001	Dissolved Oxygen	1/Day	1	0	11/29/2012
November 2012	001	pH, Maximum	1/Day	1	0	11/29/2012
November 2012	001	pH, Minimum	1/Day	1	0	11/29/2012
November 2012	001	Water Temperature	1/Day	1	0	11/30/2012
November 2012	001	Flow Rate	1/Day	1	0	11/30/2012
November 2012	001	Dissolved Oxygen	1/Day	1	0	11/30/2012
November 2012	001	pH, Maximum	1/Day	1	0	11/30/2012
November 2012	001	pH, Minimum	1/Day	1	0	11/30/2012

**Flow Data for Pickerington WWTP between 4/1/2012 and 4/1/2013**

	Date	Flows (MGD)
<b>Ten Highest Flows</b>	3/19/2013	2.960
	3/18/2013	2.725
	5/3/2012	2.588
	3/20/2013	2.581
	3/12/2013	2.577
	1/31/2013	2.535
	3/7/2013	2.518
	2/28/2013	2.504
	1/14/2013	2.438
	3/8/2013	2.418
<b>Average Flow Rate</b>		1.938

**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 ..... N\*
- (b) Permittee is taking actions to resolve violations ..... Y
- (c) Permittee has a compliance schedule ..... N
- (d) Permittee is meeting compliance schedule ..... NA

Comments: *\*Ammonia limit violations were not serious.*

**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 ..... N^
- (d) Wastewater Treatment Works classification ..... III
- (e) Operator of Record holds unexpired license of class required by Permit.. Y  
Class held: III
- (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..... Y#
- (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: *\*SCADA system, currently being upgraded. ^Newest clarifier off line due to broken scum-return line. The other 2 clarifiers are able to adequately settle the wastewater in the interim. #Screw conveyor on belt filter press went down. This was repaired and restored to service in a timely fashion.*

**SECTION G: RECORD KEEPING**

- a) Log book provided ..... Y
- b) Format of log book ..... PC
- 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) ..... Bench
  - 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: \*Timecard system. ^Computerized work order and routine maintenance system tracks needed operation and maintenance activities.

**SECTION H: COLLECTION SYSTEM**

- a) Percent combined system: ..... 0%
- b) Any collection system overflows since last inspection ..... N  
CSO  SSO
- c) Regulatory agency notified of overflows ..... NA
- d) CSO O&M plan provided and implemented ..... NA
- e) CSOs monitored and reported in accordance with permit ..... NA
- 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. .... N
- j) Any complaints received since last inspection of basement flooding ..... N
- k) Are any portions of the sewer system at or near capacity ..... N
- l) Are operations changed during high-flow events? ..... N

Comments: \*Portable backup generators used.

**SECTION I: SLUDGE MANAGEMENT**

- a) Sludge adequately disposed..... Y  
Method: *Land application, landfilling*
- b) If sludge is incinerated, where is ash disposed of..... NA
- c) Is sludge disposal contracted..... Y  
Name: *Synagro*
- 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 ..... NE<sup>A</sup>
- g) Any complaints received last year regarding sludge..... N
- h) Is sludge adequately processed (digestion, pathogen control) ..... Y

Comments: \**Sludge storage beds should be covered to prevent rehydration of pressed sludge via precipitation.* <sup>A</sup>*See the report from Betsy VanWormer.*

**SECTION J: SELF-MONITORING PROGRAM**

- a) Primary flow measuring device operated and maintained..... Y  
Type of device: *Area velocity sensor* Device location: *Effluent channel*
- b) Calibration frequency adequate ..... Y  
Date of last calibration: *June 7, 2013*
- c) Secondary instruments operated and maintained..... NA
- 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: \**Problems with frequency violations in November were addressed.*

**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? ..... Y
- d) Commercial laboratory used:  
Name: *Belmont Labs*  
Parameters analyzed: *Metals, Oil & Grease, Total-P*
- e) Quality assurance manual provided and maintained ..... Y
- f) Calibration and maintenance of instruments is satisfactory? ..... Y

Comments: See attached General Laboratory Criteria evaluation.

SECTION 4: EFFLUENT/RECEIVING WATER OBSERVATIONS

Outfall Number	Outfall sign in place	Oil Sheen	Grease	Turbidity	Foam	Solids	Color	Other
001	Yes*	No	No	No	No	No	Clear	NA

Comments: \*Outfall sign obscured by brush. This must be cleared to allow the sign to be read from the stream.

# 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	
• 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> (6-7-13)	<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>2</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>1</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book maintained <sup>2</sup>	<input checked="" 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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Thermometer temperature accurate to 0.5° Celsius <sup>5</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Acceptable temperature range is 103° – 105° C <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 :

# General Lab Criteria

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	
	• Logbook maintained <sup>2</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 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 type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Teflon covered magnetic stirrer or equivalent for mixing <sup>8</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

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	
	• Calibration per manufacturer specification <sup>10</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Calibration Frequency / Documentation	• Logbook maintained <sup>2</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 type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

INA

Comments:

# General Lab Criteria

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

Criteria	Standard Methods Requirement	Acceptable?		Rating
<i>Refrigerator</i>				
• Temperature Recordkeeping	• Temperature Log (thermometer accurate to 0.5 Celsius). <sup>5</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer <sup>1,2</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Thermometer held in water bath. <sup>1</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• 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	
Comments:				

# General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
<i>Chlorine Meter</i>				
• Calibration Frequency / Documentation	• pH / millivolt meter read to 0.1 mV <sup>15</sup>	<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) <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 or calibration per manufacturer specification <sup>16</sup>	<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. <sup>2</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments: : <i>SECTION NOT APPLICABLE</i>				

Criteria	Standard Methods Requirement	Acceptable?		Rating
<i>Ammonia Meter</i>				
• 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	
	• Log book being maintained <sup>2</sup>	<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. <sup>17</sup>	<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 <sup>18</sup>	<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
<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	
• 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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Equipment blanks utilized <sup>14</sup>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No <sup>*</sup>	
	• SOP for cleaning of sampling equipment	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No <sup>^</sup>	
	• Logbook being maintained <sup>2</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

\* COMPOSITE SAMPLES USE DEDICATED EQUIPMENT.  
 A SOP NEEDED FOR CLEANING & SERVICING COMPOSITE. ALL S. SOP WILL BE SUBMITTED TO PAUL VANDERMEER BY JULY 31, 2013.

Criteria	Standard Methods Requirement		Acceptable?	Rating
<b>Desiccator</b>				
• 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 <sup>2</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	
	• 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:

# General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
<i>Hot Water Bath (Fecal Coliform/E. Coli)</i>				
• Temperature Recordkeeping	• Temperature Log (thermometer accurate to 0.2° C) <sup>21</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• 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 type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book being maintained <sup>2</sup>	<input 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: SECTION NOT APPROPRIATE.

Criteria	Standard Methods Requirement	Acceptable?		Rating
<i>Autoclaves/Steam Sterilizers</i>				
• All apparatus utilized is adequately sterilized before use	• Sterilizing temperature 121° C <sup>25</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• 10 to 30 minutes time based on material being sterilized <sup>26</sup>	<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. <sup>1</sup>	<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 <sup>1</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• 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>2</sup>	<input checked="" 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 <sup>1</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:  
\* JUST NEWLY INSTITUTED.

# General Lab Criteria

Criteria	Standard Methods Requirement	Rating
<i>Acceptable</i>		
• General Criteria  Comments: * PART OF COMPUTERIZED SCADA SYSTEM MEASUREMENT.	• Thermometer calibrated annually with NIST traceable thermometer <sup>1,2</sup>	<input checked="" type="checkbox"/> Yes <sup>+</sup> <input type="checkbox"/> No
	• Thermometer scaled to 0.1° Celsius and accurate to 0.5° C <sup>5</sup>	<input checked="" type="checkbox"/> Yes <sup>+</sup> <input type="checkbox"/> No
	• Log book being maintained <sup>2</sup>	<input checked="" type="checkbox"/> Yes <sup>+</sup> <input type="checkbox"/> No
<b>Number of Criteria Rated:</b>		<input type="checkbox"/> Acceptable <input type="checkbox"/> Marginal <input type="checkbox"/> Unacceptable
		Total Number of Areas Rated
<b>Acceptable Ratings</b> – 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).		
<b>Marginal Ratings</b> – 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).		
<b>Unsatisfactory Rating</b> - 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	

## 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 <sub>3</sub> -N	P, G	500	G, C	Analyze as soon as possible or add H <sub>2</sub> SO <sub>4</sub> 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 <sub>3</sub> 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 <sub>2</sub> SO <sub>4</sub> 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 <sub>3</sub> 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