



**Environmental
Protection Agency**

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

Re: Seneca County
Fostoria WWTP
NPDES Permit

January 13, 2011

Mayor & Council
City of Fostoria
213 South Main Street
Fostoria, Ohio 44830

Dear Mayor & Council:

On October 6, 2010, Mary Beth Cohen conducted a compliance inspection of the Fostoria Wastewater Treatment Plant (WWTP). Mr. Lon (Mickey) Shank, Superintendent, was present and provided information regarding plant operations. All major treatment units were in service during the inspection. The following items were noted:

- The facility is now using the required flow proportioned composite sampling.
- It was indicated that during the 30 min. 'exercise' of the generator in August, the radiator hose went out, and has since been repaired.
- The digester liner has been pulled out, the tank power washed and new spray liner applied.
- Sludge continues to be collected in dump truck(s) as it is being pressed. Sludge is then transported to the landfill for disposal.
- Cleaning of the larger sewer lines (60" & 72") has been contracted and is ongoing. The cleaning of the entire sewer system will continue on a rotating basis.
- Not all Pretreatment Quarterly Inspections Reports have been received in this office.
- The WWTP staff now operates 2 shifts/day, 1 shift/weekend day and storm event coverage as needed.
- The City continues to accept limited amounts of septage at the WWTP.

As of the May 1, 2010, effective date of the Fostoria NPDES Permit, in accordance with Chapter 3745-7-04 of the Ohio Administrative Code (OAC), the Fostoria WWTP classification changed to a Class IV facility. Fostoria has up to 12 months from the effective date of the permit to meet the new classification. Additionally, OAC rule 3745-7-04, paragraph (C)(1), and 3745-7-09 include minimum staffing and recordkeeping requirements of the WWTP operator.

A review of your discharge monitoring reports has been conducted. A list of permit violations (02/01/2010 through 11/30/2010) follows.

Reporting Period	Reporting Code	Parameter	Limit Type	Limit	Reported Value	Violation Date
Feb. 2010	00530	Total Suspended Solids	30D Conc	12	21.6666	2/1/2010
Feb. 2010	00530	Total Suspended Solids	7D Conc	18	34.3333	2/1/2010
Feb. 2010	00610	Nitrogen, Ammonia (NH3)	30D Conc	4.0	4.47583	2/1/2010
Feb. 2010	00530	Total Suspended Solids	7D Conc	18	19.3333	2/15/2010
Feb. 2010	00610	Nitrogen, Ammonia (NH3)	7D Conc	6.0	6.13333	2/15/2010
March 2010	00530	Total Suspended Solids	30D Conc	12	14.8333	3/1/2010
March 2010	00610	Nitrogen, Ammonia (NH3)	30D Conc	2.8	4.32917	3/1/2010
March 2010	00610	Nitrogen, Ammonia (NH3)	7D Conc	4.2	4.68	3/1/2010
March 2010	00610	Nitrogen, Ammonia (NH3)	30D Qty	87.6	88.2742	3/1/2010
March 2010	00610	Nitrogen, Ammonia (NH3)	7D Conc	4.2	5.36667	3/15/2010
April 2010	00530	Total Suspended Solids	30D Conc	12	20.	4/1/2010
April 2010	00530	Total Suspended Solids	7D Conc	18	31.3333	4/1/2010
April 2010	01119	Copper, Total Recoverable	30D Conc	30	31.	4/1/2010
April 2010	00530	Total Suspended Solids	7D Conc	18	26.	4/8/2010
Aug. 2010	00610	Nitrogen, Ammonia (NH3)	7D Conc	2.3	2.47	8/8/2010
Nov. 2010	00610	Nitrogen, Ammonia (NH3)	7D Conc	4.2	4.82333	11/15/2010

*TSS reflects application of the interim limits

The City is to apply the conditions of the flow related interim limits to determine compliance with TSS and CBOD limits, and report as indicated in the Consent Decree.

Mayor & Council
January 13, 2011
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Our completed inspection report forms are enclosed for your review. If there are any questions, please call Mary Beth Cohen at 419-373-3014.

Yours truly,



Elizabeth A. Wick, P.E.
District Engineer/Unit Supervisor
Division of Surface Water

/llr

Enclosures

pc: Lon M. Shank, Superintendent (with enclosures)
Stephen M. Jann, USEPA, Region V
{ DSW-NWDO File }



State of Ohio Environmental Protection Agency
Southwest District Office

NPDES Compliance Inspection Report

Section A: National Data System Coding					
Permit #	NPDES#	Month/Day/Year	Inspection Type	Inspector	Facility Type
2PD00031	OH0052744	2010/10/06	C	S	2

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
Fostoria Wastewater Treatment Plant 1301 Perrysburg Road Fostoria, Ohio 44830-1007	9:30 a.m.	May 1, 2010
	Exit Time	Permit Expiration Date
	2:00 p.m.	April 30, 2015
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
Lon M. Shank, Superintendent	419-435-3263	
Name, Address and Title of Responsible Official	Phone Number	
Mayor & Council 213 S. Main Street Fostoria, Ohio 44830	419-435-4132	

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	S	Laboratory	N	Compliance Schedule
S	Operations & Maintenance	S	Effluent/Receiving Waters	S	Self-Monitoring Program
S	Facility Site Review	S	Sludge Storage/Disposal	N	Other
N	Collection System				

Section D: Summary of Findings (Attach additional sheets if necessary)			
<ul style="list-style-type: none"> The facility now has the permit required flow proportioned composite sampling. The digester liner has been pulled out, the tank power washed and new spray liner applied. Sludge continues to be collected in dump truck(s) as it's being pressed. Sludge is then transported to the landfill for disposal. Cleaning of the sewer system larger lines (60" & 72") was contracted out and is ongoing. The cleaning of the entire sewer system it to continue on a rotating basis. Not all Pretreatment Quarterly Inspections Reports have been submitted. 			
Inspector		Reviewer	
 Date 11/10/11		 Date 11/10/11	
Mary Beth Cohen Division of Surface Water Northwest District Office		Elizabeth A. Wick, P.E. Water Quality Engineer Division of Surface Water Northwest District Office	

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)..... | Y |
| (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..... | N |
| (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:

WWTP design flow @ 8.25 MGD, treats flows up to 12 MGD during rain events.

Section F: Compliance

- | | |
|---|--|
| (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 | <input type="text" value="NPDES Permit & Consent Decree"/> |
| (e) Permittee is meeting compliance schedule..... | N |

Comments/Status:

Both the NPDES Permit and Consent Decree include compliance Schedules.

Not all Pretreatment Quarterly Inspections Reports have been submitted.

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)..... I
- (e) Operator of Record holds unexpired license of class required by permit - *Required Class: IV*..... Y
- (f) Copy of certificate of Operator of Record displayed on-site..... N/E
- (g) Minimum operator staffing requirements fulfilled (OAC 3745-7)... Y
- (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..... N
- (l) Regulatory agency notified of bypasses..... N/A
 On MORs and/or Spill Hotline (1-800-282-9378)
- (m) Any hydraulic and/or organic overloads since last inspection..... N

Record Keeping:

- (a) Log book provided..... N/E
- (b) Format of log book (i.e. computer log, hard bound book)
- (c) Log book(s) kept onsite (in an area protected from weather)..... N/E
- (d) Log book contains the following:
 - I. Identification of treatment works..... N/E
 - II. Date/times of arrival/departure for Operator of Record and any other operator required by OAC 3745-7..... N/E
 - III. Daily record of operation and maintenance activities (including preventative maintenance, repairs and request for repairs)..... N/E
 - IV. Laboratory results (unless documented on bench sheets)... N/A
 - V. Identification of person making log entries..... N/E
- (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: ~ 65 %
- (b) Any collection system overflows since last inspection..... Y
(CSO and/or SSO)
- (c) Regulatory agency notified of overflows (SSOs)..... N/A
- (d) CSO O&M plan provided and implemented..... Y
- (e) CSOs monitored and reported in accordance with permit..... Y
- (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 Y
- (k) Are any portions of the sewer system at or near capacity..... Y

Comments/Status:

It was indicated that during the 30 min. exercise of the generator in August, the radiator hose went out, and has since been repaired.

Cleaning of the large sewer lines (60" & 72") was contracted out, and should be completed soon.

The digester liner has been pulled out, the tank power washed and new spray liner applied.

The WWTP staff now operates 2 shifts/day, 1 shift/weekend day and storm event coverage as needed.

One of the three trickling filter pumps is down / out for repair.

Section H: Sludge Management

- (a) Sludge management plan (SMP)
Approved: Yes Not submitted N/A
- (b) Sludge management plan current..... Y
- (c) Sludge adequately disposed..... Y
(Method: Landfill)
- (d) If sludge is incinerated, where is ash disposed of
- (e) Is sludge disposal contracted..... N
- (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..... N/A
- (i) Records kept in accordance with State and Federal law..... Y
- (j) Any complaints received in last year regarding sludge..... N
- (k) Is sludge adequately processed (digestion, pathogen control)..... Y

Comments/Status:

Filter press sludge is collected in dump truck(s), and when full hauled to the landfill for disposal.

Sludge volume is reported to have decreased with loss of industries in town.

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:)
- (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:

The required flow proportioned composite sampling is not in use.

Section I: Self-Monitoring Program (con't)

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
- (see GLC page 5 and 8)
- (d) 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

Laboratory:

General

- (a) Do you have written Standard Operating Procedures (SOP's) for all analysis performed onsite? N/E
- (b) Do SOP's include the following if applicable:
 - Title
 - Scope and Application
 - Summary
 - Sample Handling and Preservation
 - Interferences
 - Apparatus and Materials
 - Reagents
 - Procedure
 - Calculations
 - Quality Control
 - Maintenance
 - Corrective Action
 - Reference (Parent Method)

Note: SOP's are required per Standard Methods 1020A and states "Standard operating procedures are to be used in the laboratory in sufficient detail that a competent analyst unfamiliar with the method can conduct a reliable review and/or obtain acceptable results."

- (c) EPA approved analytical testing procedures used for all analysis (40 CFR 136.3, see GLC page 8). Y
- (d) If alternate analytical procedures are used, proper approval has been obtained..... N/E
- (e) Analyses being performed more frequently than required by permit. N/E
- (f) If (e) is yes, are results in permittee's self-monitoring report..... N/E

Quality Control/Quality Assurance

- (g) Quality assurance manual provided and maintained..... Y
- (h) Satisfactory calibration and maintenance of instruments/equipment. N/E (see score from GLC page 7)
- (i) Results of latest USEPA quality assurance performance sampling program: Satisfactory Marginal Unsatisfactory
Date:

(j) Commercial laboratory used..... Y
Parameters analyzed by commercial lab:

Lab name:

Comments/Status:

Section J: Effluent/Receiving Water Observations

Outfall Number	Outfall sign in place?	Oil sheen	Grease	Turbidity	Foam	Solids	Color	Other
001		None	None	None	None	None	None	

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?

Comments/Status:

F. GUIDE - VISUAL OBSERVATION - UNIT PROCESS

Form Approved

OMB No. 158-R0035

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	S	
	Safety Features	S	
	Bypasses	-	
	Storm water Overflows	Out	
	Alternate Power Source	S	Generator
Preliminary	Maintenance of Collection Systems	S	Class II Collection / sewerage system (OAC 3745-7-04)
	Pump Station	In	
	Ventilation	S	
	Bar Screen	In	Automatic bar screen with manual back up
	Disposal of Screenings	S	Landfill
	Comminutor	-	
	Grit Chamber	In	Manual or automatic (run manually while accepting POTW sludge)
	Degritter	In	
	Disposal of Grit	S	Landfill
	Equalization Lagoon	Out	Lined E.Q. basin - empty at time of inspection
Primary	Settling Tanks	In	Three operating - each taken down and cleaned yearly
	Scum Removal	In	
	Sludge Removal	In	
	Effluent	S	
	Screw Pumps	In	One of two operating (rotated weekly)
Sludge Disposal	Digesters	In	Digester liner removed and replaced fall of 2010
	Temperature and pH	-	
	Gas Production	-	
	Heating Equipment	-	
	Sludge Pumps	In	Two sludge pumps / one operating
	Sludge Storage	In	No liquid storage available. Building provided for storage after belt press.
	Disposal of Sludge	S	Landfill (contractor is Midwest Compost)
	Belt press with Polymer addition	Out	Not in use at time of inspection - Typically run 2 days per week Sludge is now being collected directly in the dump truck used to haul to landfill
Other	Flow Meter and Recorder	In	New flow meter (permit requires flow proportioned samples)
	Records	S	
	Lab Controls	S	
	Chemical Treatment	In	Alum added to return sludge wet well for phosphorus control Alum pump recently replaced
Secondary Tertiary	Trickling Filters (arms removed)	In	Two - both in use as roughing filters (not able to bypass units)
	Aeration Tanks	In	Four tanks - all in use
	Final Settling Tanks	In	Six shallow tanks - all in use. Spray on liner (pink) added 4/08 for the control of algae. Still having problems w/ algae growth on weirs.
Disinfection	Effluent	S	Appeared clear at discharge. (Slight foam- quickly dissipated)
	Disinfection System	In	Ultraviolet disinfection
	Effective Dosage	-	
	Contact Time	-	
	Contact Tank	-	

General Lab Criteria – Fostoria WWTP 10/6/10

Criteria	Standard Methods Requirement	Acceptable?		Rating
Balance				M
• Standard Weights	• Either NIST Class S or ASTM/ANSI Class 1 weights ^{1,2}	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
• Calibration Frequency / Documentation	• Calibration verification required at least once each day the balance is used. ³	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Cleanliness, air movement, vibration	• Cleanliness of balance is a must and air movement and vibration needs to be kept to a minimum ¹	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Service and recalibrate annually (manufacturer representative or comparable) ¹	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
	• Must be able to measure to 0.1 grams ⁴	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book maintained ⁶	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

Standard weights were not available. Loose pages should be maintained in a log book.

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

Comments:

*Loose sheets of paper – should be maintained in a log book or binder.
NIST thermometer(s) need to be obtained.*

Criteria	Standard Methods Requirement	Acceptable?		Rating
pH Meter				A
• Calibration Frequency / Documentation	• Calibration verification required for testing over long period of time (e.g. 12 hrs.), or after a large number of samples (every 10 samples) ³	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Logbook maintained ⁹	<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 ⁷	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Slope Documentation / Acceptability	• Slope acceptable range indicated on benchsheet ²	<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 ⁸	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

General Lab Criteria – Fostoria WWTP 10/6/10

Criteria	Standard Methods Requirement		Rating	
Dissolved Oxygen Meter	Acceptable?			
• Calibration Method	• Air or known DO calibration method ¹⁰	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	A
	• Calibration per manufacturer specification ¹⁰	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Calibration Frequency / Documentation	• Logbook maintained ⁹	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Calibration verification required at least once each day the meter is used. ³	<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) ¹¹	<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		Rating	
Incubator (CBOD/ E-Coli)	Acceptable?			
• Temperature Recordkeeping	• Temperature checked / recorded twice daily for each shelf in use ¹	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	A
	• Acceptable temperature range (CBOD) is 20° C ±1.0 ^{o12}	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Acceptable temperature range (E-Coli) is 35° C ±0.5 ^{o22}	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Logbook maintained ⁹	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
	• Temperature correction information posted on incubator ¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• E-Coli can use multiple tubes (five 20 ml or ten 10 ml), or mfg's multi-well tray	• E-coli Ultraviolet lamp (365 nm wave length, 6 W bulb) ²³	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Instrument manual available	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Temperature Log (thermometer reads to 0.1 Celsius). ⁵	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments: <i>Need to maintain log book.</i>				

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

General Lab Criteria – Fostoria WWTP 10/6/10

Criteria	Standard Methods Requirement	Acceptable?		Rating
Chlorine Meter				
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Calibration Frequency / Documentation	• pH / millivolt meter read to 0.1 mV ¹⁵ • Calibration verification required for testing over long period of time (e.g. 12 hrs.), or after a large number of samples (every 10 samples) ³	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Calibration Method	• Calibration using three iodate solutions 0.2, 1.0, 5.0 milliliters or calibration per manufacturer specification ¹⁶ • 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. ⁹	<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
Ammonia Meter				
		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Calibration Frequency / Documentation	• Calibration verification required for testing over long period of time (e.g. 12 hrs.), or after a large number of samples (every 10 samples) ³ • Log book being maintained ⁹	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	A
• Slope acceptability	• Verify calibration slope is acceptable (per mfg. spec.).	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Calibration Method	• Standards used for calibration (3 ammonia solutions of 10 mg/l, 1 mg/l, and 0.1 mg/l) or per mfg. spec. ¹⁷ (1, 10, 100 used)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Standards used for calibration not expired	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Electrode free of deposits and foreign material	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Teflon covered magnetic stirrer or equivalent for mixing ¹⁸	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments:				

Criteria	Standard Methods Requirement	Acceptable?		Rating
Sample Collection/Handling				
		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Sample Labeling	• Samples container labeled (description, date, time, preservative added, initialed). ¹⁹	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	M
• Chain of Custody	• Chain of custody (description, date, time, signature). ¹⁹	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Composite samples refrigerated during sample collection ¹⁴	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Equipment blanks utilized ¹⁴	<input 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 ⁹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments:				

General Lab Criteria – Fostoria WWTP 10/6/10

Criteria	Standard Methods Requirement	Acceptable?		Rating
Desiccator				
• General criteria	• Properly working seals.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Desiccant fresh (blue color)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Documentation	• Log book being maintained ⁹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments: <i>An indicating desiccant should be used and replaced or regenerated as needed.</i>				

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

Criteria	Standard Methods Requirement	Acceptable?		Rating
Hot Water Bath (Fecal Coliform/E. Coli)				
• Temperature Recordkeeping	• Temperature Log (thermometer reads 0.2° C) ²¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Incubator temperature 44.5° C ± 0.2° ^{21/24}			
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book being maintained ⁹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Water Level	• Thermometer total immersion or partial (line on thermometer to ID immersion depth) ^{1,5}	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments:				

Criteria	Standard Methods Requirement	Acceptable?		Rating
Autoclaves/Steam Sterilizers				
• All apparatus utilized is adequately sterilized before use	• Sterilizing temperature 121° C ²⁵	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	M
	• 10 to 30 minutes time based on material being sterilized ²⁶	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Documentation	• Verify the autoclave temperature weekly by using a maximum registering thermometer (MRT) to confirm that 121°C has been reached as measured in the exhaust. ¹	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
	• Date, contents, sterilization time and temperature, total time in autoclave, and analyst's initials should be recorded each time the autoclave is used ¹	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	

General Lab Criteria – Fostoria WWTP 10/6/10

<ul style="list-style-type: none"> • Temperature Calibration / Documentation 	<ul style="list-style-type: none"> • Thermometer calibrated annually with NIST traceable thermometer ^{1,2} 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
	<ul style="list-style-type: none"> • Log book being maintained ⁹ 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> • Performance Checks 	<ul style="list-style-type: none"> • Test monthly for efficacy using a biological such as commercially available <i>Geobacillus stearothermophilus</i> in spore strips, suspensions, or capsules ¹ 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:
Need to obtain MRT thermometer.

Number of Criteria Rated:	Acceptable	7
	Marginal	3
	Unacceptable	
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"> >60% of ratings are Marginal >45% of ratings are a combination of Marginal or Unacceptable >30% of ratings are Unacceptable
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Notation of Referenced Method

- | | |
|----------------------------|------------------------------|
| 1 Method 9020-B, Item 4 | 14 Method 1060A, Item 1 |
| 2 Method 1020-A, Item 1 | 15 Method 4500-CI I, Item 2 |
| 3 Method 1020-B, Item 10 | 16 Method 4500-CI I, Item 4 |
| 4 Method 2540-B, Item 2 | 17 Method 4500-NH3 D, Item 4 |
| 5 Method 2550-B, Item 1 | 18 Method 4500-NH3 D, Item 2 |
| 6 Method 1020-B, Item 1 | 19 Method 1060-B, Item 2 |
| 7 Method 4500-H B, Item 4 | 20 Method 1060-B, Item 1 |
| 8 Method 4500-H B, Item 2 | 21 Method 9222D, Item 1 |
| 9 Method 1020-B, Item 2 | 22 Method 9223 B, Item 2 |
| 10 Method 4500-O B, Item 3 | 23 Method 9223 B, Item 3 |
| 11 Method 4500-O G, Item 3 | 24 Method 1603, Item 2 |
| 12 Method 5210-B, Item 5 | 25 Method 9030-B, Item 3 |
| 13 CFR 136.3, Table II | 26 Method 9020 B, Table IV |

Equipment Logbook Content - all maintenance performed on a piece of equipment should be documented in the logbook. This should include parts replacement and routine maintenance activities. Entries should include date, maintenance performed and initials of person making entry.

Preservation and Holding Times

Parameter	Container	Min. Sample Size (mL)	Sample Type	Preservation	Maximum Storage Time	
					Recommended	Regulatory
BOD / CBOD	P, G	1000	G, C	Refrigerate $\leq 6^{\circ}\text{C}$	6h	48h
TSS	P, G	200	G, C	Refrigerate $\leq 6^{\circ}\text{C}$	7 d	7 d
pH	P, G	50	G	Analyze immediately	0.25h	0.25 h
NH3-N	P, G	500	G, C	Analyze as soon as possible or add H_2SO_4 to pH <2, Refrigerate $\leq 6^{\circ}\text{C}$	7 d	28 d
TRC	P, G	500	G	Analyze immediately	0.25h	0.25 h
DO (electrode)	G, BOD Bottle	300	G	Analyze immediately	0.25h	0.25 h
Temperature	P, G	--	G	Analyze immediately	0.25h	0.25 h
Metals, general	P, G	1000	G, C	For dissolved filter immediately and add HNO_3 to pH <2	6 months	6 months
Purgeables by purge and trap	G (PTFE lined lid)	40 (X2)	G	HCl to pH<2, Refrigerate $\leq 6^{\circ}\text{C}$	7 d	14 d
Base/Neutrals and acids	G (solvent rinsed or baked)	1000	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_2SO_4 to pH <2, Refrigerate $\leq 6^{\circ}\text{C}$	28 d	28 d

Approved Standard Methods	
CBOD / BOD 5 Day	Std Methods 5210-B
Ammonia, Selective Electrode Method	Std Methods 4500-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