



State of Ohio Environmental Protection Agency

Southeast District Office

2195 Front Street
Logan, Ohio 43138

TELE: (740) 385-8501 FAX: (740) 385-6490
www.epa.state.oh.us

Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Korleski, Director

June 1, 2010

**Re: Jefferson County
City of Toronto
NPDES OPD00017*ID
Compliance Inspection
Correspondence (PWW)**

Mayor and Council
City of Toronto
308 North Sixth Street
Toronto, Ohio 43964

Mayor and Council:

On April 8, 2010 and April 26, 2010, Ohio EPA conducted an inspection of the City of Toronto's wastewater treatment plant. Terry Coburn and Harry Crouch accompanied us through the plant. At that time, plant operations, laboratory equipment and procedures, collection system, and sludge management were evaluated based on the requirements of NPDES permit No. OPD00017*HD and ORC Chapter 6111. Following are violations noted during both dates:

1. **Operator of Record, Staffing Requirements, NPDES Permit OPD00017*ID, Part II, A.2:** Currently, Mr. Terry Coburn staffs the Toronto WWTP from 20 to 40 hours per week as a result of operating another plant in addition to Toronto's. Toronto's current NPDES permit and OAC rule 3745-7-04 (C)(1) requires that the operator in responsible charge (ORC) is physically present at the treatment works a minimum of five days and 40 hours per week. After discussing this violation with Mr. Coburn, it is understood that he will be at the Toronto WWTP as required.

The above cited rule does not allow for any reduction of staffing requirements. This includes times when the ORC is sick, on vacation, at off-site meetings or trainings, etc. The rule does allow for an operator of one classification lower than the plant (in Toronto's case, Class II) to staff the plant in the ORC's absence of up to 30 consecutive days. Toronto does not employ another Class II or Class III operator. In order to maintain compliance with the operator requirements, Toronto should hire another Class II or III operator to act as a back-up during times when Mr. Coburn is absent. Alternately, Mr. Crouch could obtain his Class II license to fulfill this requirement.

2. **Operator Log Book Requirements, NPDES Permit OPD00017*ID, Part II, A.3:** On April 8, 2010, the Toronto WWTP log book was reviewed. It was noted at that time that requirements for keeping a log book were not being followed. Mr. Coburn was informed of his obligations at that time. The log book was again reviewed on April 26.

Mr. Coburn still was not keeping the required records. He was reminded at that time that he must immediately begin keeping the required log book. OAC rule 3745-7-09(A)(3) specifies the following minimum information to be recorded in the log book:

- a. Identification of the public water system, sewerage system, or treatment works;
- b. Date and times of arrival and departure for the operator of record and any other operator required by this chapter;
- c. Specific operation and maintenance activities that affect or have the potential to affect the quality or quantity of sewage or water conveyed, effluent or water produced;
- d. Results of tests performed and samples taken, unless documented on a laboratory sheet;
- e. Performance of preventative maintenance and repairs or requests for repair of the equipment that affect or have the potential to affect the quality or quantity of sewage or water conveyed, effluent or water produced; and
- f. Identification of the persons making entries.

Being the ORC, Mr. Coburn is required to make the above required entries; a backup operator of Class II or higher is required to make entries on all days when Mr. Coburn is absent.

Please provide copies of 30 consecutive days of log book pages, beginning with the April 27 entry. Copies of log book entries must be received at this office within 30 days of the date of this letter.

3. **Outfall Signage Requirement, NPDES permit OPD00017*ID, Part II, Z:** The city of Toronto was to have posted a sign meeting the minimum requirements specified in Part II, Z NPDES permit OPD00017*ID within four months of the permit's effective date (no later than November 1, 2009). On April 8, no sign was posted at outfall 001. Based on Discussions with Mr. Coburn, it is assumed that none of Toronto's CSO outfalls are marked with required signs, either. This same violation was cited in an October 16, 2008 letter to the City of Toronto.

Please provide photographs of each outfall, including CSO outfalls, showing the required sign in place within 30 days of the date of this letter. Please ensure that wording is clear in each of these photographs.

4. **WWTP maintenance and operation, NPDES permit OPD00017*ID, Part II, J:** Toronto is required to maintain and operate as efficiently as possible the WWTP. The following items are in need of immediate repair. Please provide a schedule, within 30 days of the date of this letter, for repair or replacement of the following items:
 - a. Headworks improvements, bar screen: The bar screen located in the headworks of the plant is inoperable. Plant staff currently rely on a coarse bar screen that needs to be frequently manually raked. Also, this bar screen does not do an adequate job of removing solid waste materials from the influent sewage. Therefore, much of the trash in the incoming sewage eventually ends up in the anaerobic digesters with the sewage sludge. Since the City of Toronto

land applies their sewage sludge, this trash ends up on the field where the sewage sludge is land applied. This may be considered open dumping of a solid waste. The City of Toronto should begin looking at alternative screening equipment to replace the defective screen.

- b. Trickling filter joints: Both trickling filter towers at the WWTP are leaking at various points along the joints. Toronto should begin work to immediately replace or repair leaking joints and damaged concrete in both towers. This same observation was made and cited in an October 16, 2008 letter.
- c. Trickling filter spray arm bearings: At least one of the two trickling filter spray arms are in need of bearing replacement. Bearing failure could potentially reduce plant effectiveness. The City of Toronto should immediately repair or replace all failing bearings in the trickling filters.

5. **Sampling and Analytical Method, NPDES permit 0PD00017*ID, Part III, 5:** It was noted during the April 26 inspection that the Toronto WWTP effluent composite sampler refrigerator was not working. The City of Toronto is required to take and preserve sample in accordance with 40 CFR 136.

Within 30 days of the date of this letter, please provide documentation that the effluent composite sampler refrigerator has been repaired or replaced.

The following items related to laboratory equipment and procedures must also be addressed and corrected:

- a. Drying oven:
 - i. Record the oven temperature with each use;
 - ii. Calibrate the thermometer against an NIST traceable thermometer or replace annually;
 - iii. Ensure that the thermometer is readable in 0.1°C increments.
- b. pH meter:
 - i. Calibrate the meter with each use (vs. weekly);
 - ii. Document the establishment of meter slope on the benchsheet.
- c. CBOD incubator:
 - i. Check and record the incubator temperature twice daily for each shelf in use;
 - ii. Calibrate thermometer(s) annually with an NIST traceable thermometer;
 - iii. Post any temperature correction information on the incubator.
- d. Laboratory refrigerator:
 - i. Calibrate the thermometer annually with an NIST traceable thermometer;
 - ii. Refrigerator thermometer should be held in a water bath.
- e. Chlorine meter:
 - i. Calibrate the chlorine meter as recommended in the equipment manual;

- ii. Maintain a log book of meter calibration readings and activities
 - f. Ammonia meter:
 - i. Maintain a log book of calibration activities, including calibration slope verification.
 - g. Sample collection and handling:
 - i. See above (#5) regarding effluent composite sample refrigerator;
 - ii. Ensure that composite sampler refrigerators are equipped with a water bath thermometer;
 - iii. Calibrate refrigerator thermometers with an NIST traceable thermometer or replace annually.
 - h. Dessicator:
 - i. Maintain a log book of dessicator-related maintenance activities.
 - i. Hot water bath (fecal coliform):
 - i. Maintain a temperature log of incubator temperatures;
 - ii. Calibrate with an NIST traceable thermometer or replace the thermometer annually;
 - j. Autoclave:
 - i. Ensure that sterilizing temperature is 121°C (currently held at 119°C);
 - ii. Verify the autoclave temperature on a weekly basis using a maximum registering thermometer at the autoclave exhaust;
 - iii. Keep records of the date, contents, sterilization time and temperature, total time in autoclave, and analyst's initials each time the autoclave is used;
 - iv. Calibrate autoclave thermometer annually with NIST traceable thermometer;
 - v. Test the autoclave monthly and record results for efficacy using biological such as commercially available *Geobacillus stearothermophilus* in spore strips, suspensions, of capsules.
 - k. Standard Operating Procedures (SOPs):
 - i. Written SOPs must be developed for all analysis performed on-site.
6. **Nine Minimum Control Requirements for reducing Combined Sewer Overflow (CSO) impacts, NPDES Permit OPD00017*ID, Part II, H.4:** As part of the Nine Minimum Controls, Toronto is required to operate its Wastewater Treatment Plant at the peak rates it can handle without negatively impacting the treatment process. During the inspection, it was conveyed that actual peak treatment capabilities of the treatment works has not been quantified. The City of Toronto should take immediate steps to determine the peak capacities of each treatment unit at the treatment facility. Hydraulic bottlenecks and operational modifications that could allow for treatment of additional flows should also be evaluated. Once peak capabilities have been quantified, Toronto should make every effort to operate the Wastewater Treatment Plant at these peak levels during high flow events.

7. **Nine Minimum Control Requirements for reducing Combined Sewer Overflow impacts, NPDES Permit OPD00017*ID, Part II, H.9:** As part of the Nine Minimum Controls, Toronto is required to implement public notification measures to inform the public of CSO locations, reasons for concern, the City's efforts to address these overflows, etc. As noted above, each CSO requires signage to be posted next to the outfall such that they will be obvious to those who approach it from any direction (i.e., double-sided signs are often necessary).

Additionally, the City should periodically (e.g., during recreational season, when new projects are being constructed, etc.) include CSO-related information (such as outfall location, health concerns, construction project details and contact information where additional information can be obtained) with sewer bills and in the local newsletter. This added effort should increase public awareness regarding CSO issues and acceptance of the various projects initiated by the City.

8. **OAC 3745-40-04(E) states that "A permittee who generates bulk sewage sludge shall provide a label or information sheet to...the owner or lease holder of the land upon which the bulk sewage sludge is land applied. Such label or information sheet shall provide all notices and information necessary to comply with the requirements of this chapter including the following:**

- 1) **The name, address, telephone number, and NPDES permit number of the permittee;**
- 2) **A statement that the material is or contains a byproduct of wastewater treatment;**
- 3) **A statement that the Ohio EPA, division of surface water, may be contacted at 1-877-644-2001;**
- 4) **The concentration of total Kjeldahl nitrogen, ammonia nitrogen, total phosphorous, and total potassium of the sewage sludge in milligrams per kilogram (dry weight basis);...**

At the time of our inspection, there were no records to indicate that this information had been provided to the landowner of the sites where sewage sludge land application occurs.

9. **OAC 3745-40-05(K) states the following: "One of the class A pathogen requirements in paragraphs (N)(1) to (N)(6) of this rule or one of the class B pathogen requirements in paragraphs (O)(1) to (O)(3) of this rule and, when applicable, the site restrictions in paragraph (P) of this rule, shall be met when sewage sludge is applied to the land."** Mr. Coburn stated that pathogen reduction is met through anaerobic digestion of the sewage sludge. To show that anaerobic digestion has been met, there would need to be daily temperature records as well as mean cell residence time calculations for each digester. At the time of our inspection, there were no calculations for mean cell residence time available for review.

10. **OAC 3745-40-05(M) states that "One of the vector attraction reduction requirements in paragraphs (Q)(1) through (Q)(10) of this rule shall be met when sewage sludge is applied to the land."** Mr. Coburn stated that vector attraction reduction is met through a 38% reduction in volatile solids in the sewage sludge. To show that volatile solids reduction has been met, there would need to be records of the amount of volatile solids in the sewage sludge fed to the digester, the amount of volatile solids left in the sewage sludge after digestion, and calculations to show that a 38% reduction had been achieved through the digestion process. At the time of our inspection, there were no calculations for volatile solids reduction available for review.

11. **OAC 3745-40-06(l) requires that the permittee who provides treatment to bulk sewage sludge develop and sign the following certification statements:**

"I certify, under penalty of law, that the information that will be used to determine compliance with class (insert A or B) pathogen reduction alternative (insert one of the class A alternatives in paragraphs (N)(1) to (N)(6) of rule 3745-40-05 of the Administrative Code or one of the class B alternatives in paragraphs (O)(1) to (O)(3) of rule 3745-40-05 of the Administrative Code) was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

and

"I certify, under penalty of law, that the information that will be used to determine compliance with vector attraction reduction requirement (insert one of the vector attraction reduction requirements in paragraphs (Q)(1) to (Q)(8) of rule 3745-40-05 of the Administrative Code) was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

At the time of our inspection, there were no copies of these certification statements available for review.

12. **OAC 3745-40-06(l) requires that the permittee who provides treatment to bulk sewage sludge develop and retain a description of how the pathogen reduction requirements of rule 3745-40-05 of the Administrative Code are met and a description of how the vector attraction reduction requirements of rule 3745-40-05 of the Administrative Code are met.**

At the time of our inspection, these descriptions were not available for review.

13. OAC 3745-40-06(J) states the following:

"The person who land applies bulk sewage sludge shall develop the following information, shall retain the information for five years, and shall make the information available to the division upon request:

- (1) A description of how the land application agronomic management requirements of rule 3745-40-04 of the Administrative Code are met for each site on which bulk sewage sludge is applied;**
- (2) For class B sewage sludge, a description of how the site restrictions of rule 3745- 40-05 of the Administrative Code are met for each site on which bulk sewage sludge is applied;**
- (3) When applicable, a description of how the vector attraction reduction requirements in paragraphs (Q)(9) to (Q)(10) of rule 3745-40-05 of the Administrative Code are met for each site on which bulk sewage sludge is applied;**
- (4) The agronomic rate calculations used to determine the bulk sewage sludge loading rate in dry tons per acre for each site on which bulk sewage sludge is applied;**
- (5) The following certification statement signed by the person who land applies bulk sewage sludge:**

"I certify, under penalty of law, that the information that will be used to determine compliance with the land application agronomic management requirements of rule 3745-40-04 of the Administrative Code was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.";

- (6) When applicable, the following certification statement signed by the person who land applies bulk sewage sludge:**

"I certify, under penalty of law, that the information that will be used to determine compliance with the site restrictions in rule 3745-40-05 of the Administrative Code was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment..."

- (7) When applicable, the following certification statement signed by the person who land applies bulk sewage sludge:**

"I certify, under penalty of law, that the information that will be used to determine compliance with vector attraction reduction requirement (insert one of the vector attraction reduction requirements in paragraphs (Q)(9) to (Q)(10) of rule 3745-40-05 of the Administrative Code) was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

At the time of our inspection, none of these records were available for review.

Before land application continues at the City of Toronto WWTP, the above noted sewage sludge rule violations in #8 through #13 must be addressed. Please send a letter to the attention of Jacob Howdyshell at the following address within 30 days of receipt of this letter that details how these violations will be addressed:

Ohio EPA Division of Surface Water
Attn: Jacob Howdyshell
P.O. Box 1049
Columbus, OH 43216-1049

Copies of the WWTP inspection checklist, laboratory inspection checklist, and sewage sludge inspection checklist have been included with this letter, as well as a copy of Policy 0100.028 for Mr. Coburn. If you have any questions, feel free to contact me at (740) 380-5447.

Sincerely,



Michael Yandrich, P.E.
District Representative
Division of Surface Water

MY/dh

Enclosures

NPDES Compliance Inspection Report

A. NATIONAL DATA SYSTEM CODING

Permit No.	NPDES No.	Date	Inspection Type	Inspector	Facility Type
OPD00017*ID	OH0020214	4/8/10, 4/26/10	C	S	1

B. FACILITY DATA

Name & Location of Facility Inspected	Entry Time	Permit Effective Date
Toronto Wastewater Treatment Plant 1400 South River Avenue Toronto, Ohio 43964	10:40 a.m.	July 1, 2009
	10:00 a.m.	
	Exit Time	Permit Expiration Date
	1:30 p.m.	June 30, 2014
	1:30 p.m.	

Name(s) & Title(s) of On-Site Representative(s)	Phone Number(s)
Terry Coburn, Regional Manager, United Water Harry Crouch, Lab Technician, United Water	(740) 537-2792
Name, Address, & Title of Responsible Official	Phone Number
Mayor and Council City of Toronto 308 North Sixth Street Toronto, Ohio 43964	(740) 537-3743

C. AREAS EVALUATED DURING INSPECTION

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

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

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

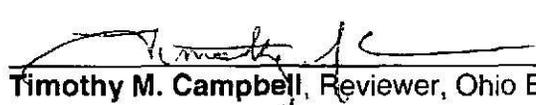
See attached inspection letter, including additional laboratory report. Combined collection system.



Mike Yandrich, Inspector, Ohio EPA, Southeast District Office

6-1-10

Date



Timothy M. Campbell, Reviewer, Ohio EPA, Southeast District Office

6/1/10

Date

E. PERMIT VERIFICATION

Inspection Observations Verify the Permit	YES	NO	N/A	N/E
a. Correct name & mailing address of permittee	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Correct name & location of receiving waters	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Product(s) & production rates conform with permit application (industries)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Flows & loadings conform with NPDES permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Treatment processes are as described in permit application/briefing memo	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. New treatment process(es) added since last inspection	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Notification given to state of new, different, or increased discharges	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. All discharges are permitted	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Number & location of discharge points are as described in permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

F. COMPLIANCE SCHEDULES/VIOLATIONS

	YES	NO	N/A	N/E
a. Any significant violations since the last inspection	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Permittee is taking actions to resolve violations	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Permittee has compliance schedule	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Compliance schedule contained in: Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Permittee is meeting compliance schedule	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

G. OPERATION AND MAINTENANCE

Treatment Facility Properly Operated & Maintained	YES	NO	N/A	N/E
a. Standby power available: Generator: <input checked="" type="checkbox"/> Dual Feed: <input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Adequate alarm system available for power or equipment failures	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. All treatment units in service other than backup units	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Sufficient operating staff provided: # of shifts: 1 Days/Week: 7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Operator holds unexpired license of class required by permit. Class: III	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Copy of certificate of Operator of Record displayed on-site	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Minimum operator staffing requirements fulfilled (OAC 3745-7)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Routine & preventive maintenance schedule/performed on time	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Any major equipment breakdown since last inspection	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Operation & maintenance manual provided & maintained	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Any plant bypasses since last inspection	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Regulatory agency notified of bypasses: On MORS: <input type="checkbox"/> 800 No.: <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
m. Any hydraulic and/or organic overloads experienced since last inspection	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Mechanical bar screen out of service.

Record Keeping	YES	NO	N/A	NE
a. Log book provided	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Log book kept on-site	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Log book contains the following:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. Identification of treatment works	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Date/time of arrival/departure of ORC	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Daily record of operation and maintenance activities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Laboratory results (unless documented on bench sheets)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Identification of person making log entries	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Is the ORC submitting written notification to Ohio EPA and permittee when a collection system overflow, treatment plant bypass or effluent limit violation has occurred.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

At the time of inspection, operator was not keeping the required log book.

Collection System	YES	NO	N/A	NE
a. Percent combined system. Percent: 75	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Any collection system overflows since last inspection: CSO: <input checked="" type="checkbox"/> SSO: <input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Regulatory agency notified of overflow (SSOs)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. CSO O&M plan provided and implemented	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. CSOs monitored and reported in accordance with permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Portable pumps used to relieve system	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Lift station alarm systems provided and maintained	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Are lift stations equipped with permanent standby power or equivalent	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Is there an inflow/infiltration problem (separate sewer system), or were there any major repairs to collection system since last inspection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Any complaints received since last inspection of basement flooding	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Are any portions of the sewer system at or near capacity	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Visible alarms, CSO LTCP implementation in progress.

SLUDGE MANAGEMENT

	YES	NO	N/A	NE
a. Sludge adequately disposed. Method: Land app. - SAPP property	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. If sludge is incinerated, where is ash disposed of?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Is sludge disposal contracted? Name:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Has amount of sludge generated changed significantly since last inspection	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Adequate sludge storage provided at facility	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Land application sites monitored and inspected per state rules	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Records kept in accordance with state rules	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Any complaints received in last year regarding sludge	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Is sludge adequately processed (digestion, dewatering, pathogen control) in accordance with Ohio EPA rules	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

See supplemental sludge inspection checklist.

I. SELF-MONITORING PROGRAM

Part 1 – Flow Measurement	YES	NO	N/A	N/E
a. Primary flow measuring device properly operated & maintained. Type of device: <input type="checkbox"/> Ultrasonic & parshall flume <input type="checkbox"/> Calculated from influent <input type="checkbox"/> Weir <input type="checkbox"/> Other <input checked="" type="checkbox"/> Ultrasonic & weir specify:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Calibration frequency adequate. Date of last calibration: 3/10/10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Secondary instruments (totalizers, recorders, etc.) properly operated and maintained	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Flow measurement equipment adequate to handle expected ranges of flows	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Actual flow discharged is measured	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Flow measuring equipment inspection frequency: <input checked="" type="checkbox"/> Daily <input type="checkbox"/> Monthly <input type="checkbox"/> Weekly <input type="checkbox"/> Other				

Comments:

Part 2 – Sampling	YES	NO	N/A	N/E
a. Sampling locations(s) are as specified by permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Parameters and sampling frequency agree with permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Permittee uses required sampling method	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Sample collection procedures are adequate	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Samples refrigerated during compositing	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Proper preservation techniques used	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conform with 40 CFR 136.3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Monitoring records (e.g., flow, pH, D.O., etc.) maintained for a minimum of three years including all original strip chart recordings (e.g., continuous monitoring instrumentation, calibration, & maintenance records)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Adequate records maintained of sampling date, time, exact location, etc.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Effluent refrigerator not working.

Part 3 – Laboratory, General	YES	NO	N/A	N/E
a. Written Standard Operating Procedures (SOPs) for all analysis performed on-site	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. EPA approved analytical testing procedures used (40 CFR 136.3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. If alternate analytical procedures are used, proper approval has been obtained	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Analyses being performed more frequently than required by permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. If (c) is yes, are results reported in permittee's self-monitoring report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Commercial laboratory used: 1. Parameters analyzed by commercial lab: O&G, NH3, TKN, NFN, P, Ortho, Metals 2. Lab name: MASI				

Comments:

Part 3 – Laboratory, Quality Control/Quality Assurance		YES	NO	N/A	N/E
a.	Quality assurance manual provided and maintained	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	Satisfactory calibration and maintenance of instruments and equipment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	Adequate records maintained	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Results of latest U.S. EPA quality assurance performance sampling program:					
Date:		<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Marginal	<input type="checkbox"/> Unsatisfactory	

Comments:

See attached lab inspection checklist.

J. EFFLUENT/RECEIVING WATER OBSERVATIONS

Outfall #	Oil Sheen	Grease	Turbidity	Visible Foam	Visible Float Solids	Color	Other
001	None	None	Slight	None	None	Gray	

Comments:

K. MULTIMEDIA OBSERVATIONS

Collection System	YES	NO	N/A	N/E
a. Are there indications of sloppy housekeeping or poor maintenance in work and storage areas or laboratories	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Do you notice staining or discoloration of soils, pavement, or floors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Do you notice distressed (unhealthy, discolored, dead) vegetation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Do you see unidentified dark smoke or dustclouds coming from sources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Do you notice any unusual odors or strong chemical smells	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Do you see any open or unmarked drums, unsecured liquids, or damaged containment facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If any of the above are observed, ask the following questions:

1. What is the cause of the conditions?
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:

General Lab Criteria

Facility: Toronto WWTP, April 26, 2010

Criteria	Standard Methods Requirement	Acceptable?	Rating
Balance			A
• Standard Weights	• Either NIST Class s or ASTM/ANSI Class 1 weights ^{1,2}	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
• Calibration Frequency /Documentation	• Calibration verification required at least once each day the balance is used. ³	<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 ¹	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
• Other	• Service and recalibrate annually (manufacturer representative or comparable) ¹	<input checked="" type="checkbox"/> Yes <input 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:

Criteria	Standard Methods Requirement	Acceptable?	Rating
Drying Oven (Suspended Solids)			M
• Temperature Recordkeeping	• Temperature recorded with each use ⁴	<input type="checkbox"/> Yes <input checked="" 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 type="checkbox"/> Yes <input checked="" 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: Glass thermometer not calibrated; measures in 1 degree increments.

Criteria	Standard Methods Requirement	Acceptable?	Rating
pH Meter			M
• Calibration Frequency / Documentation	• Calibration verification required for testing over long period of time (e.g. 12 hrs.), or after a large number of samples (every 10 samples) ³	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
	• 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 type="checkbox"/> Yes <input checked="" 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: Calibrated 1/week vs. 1/day

Criteria	Standard Methods Requirement	Acceptable?	Rating
Dissolved Oxygen Meter			A
• Calibration Method	• Air or known DO calibration method ¹⁰	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	• Calibration per manufacturer specification ¹⁰	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
• Calibration Frequency	• Logbook maintained ⁹	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

General Lab Criteria

/ Documentation	<ul style="list-style-type: none"> • Calibration verification required at least once each day the meter is used.³ 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	<ul style="list-style-type: none"> • 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	
	<ul style="list-style-type: none"> • Instrument manual available 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
Incubator (CBOD/ E-Coli)				
<ul style="list-style-type: none"> • Temperature Recordkeeping 	<ul style="list-style-type: none"> • Temperature checked / recorded twice daily for each shelf in use¹ 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	M
	<ul style="list-style-type: none"> • Acceptable temperature range (CBOD) is 20° C ±1.0^o12 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Acceptable temperature range (E-Coli) is 35° C ±0.5^o22 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Logbook maintained⁹ 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> • Temperature Calibration / Documentation 	<ul style="list-style-type: none"> • Thermometer calibrated annually with NIST traceable thermometer^{1,2} 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
	<ul style="list-style-type: none"> • Temperature correction information posted on incubator¹ 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
<ul style="list-style-type: none"> • E-Coli can use multiple tubes (five 20 ml or ten 10 ml), or mfg's multi-well tray 	<ul style="list-style-type: none"> • E-coli Ultraviolet lamp (365 nm wave length, 6 W bulb)²³ 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	<ul style="list-style-type: none"> • Instrument manual available 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Temperature Log (thermometer reads to 0.5 Celsius).⁵ 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
Refrigerator				
<ul style="list-style-type: none"> • Temperature Recordkeeping 	<ul style="list-style-type: none"> • Temperature Log (thermometer reads to 0.1 Celsius).⁵ 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	M
<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	
• Other	<ul style="list-style-type: none"> • Thermometer held in water bath.¹ 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
	<ul style="list-style-type: none"> • Refrigerator temperature ≤6° Celsius.¹³ 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Do not store volatile solvents, food, or beverages.¹⁴ 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
Chlorine Meter				
<ul style="list-style-type: none"> • Calibration Frequency / Documentation 	<ul style="list-style-type: none"> • pH / millivolt meter read to 0.1 mV¹⁵ 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	U
		<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • Calibration Method 	<ul style="list-style-type: none"> • Calibration using three iodate solutions 0.2, 1.0, 5.0 milliliters or calibration per manufacturer specification¹⁶ 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
		<ul style="list-style-type: none"> • Standards used for calibration not expired 	<input checked="" type="checkbox"/> Yes	
<ul style="list-style-type: none"> • Slope Documentation / Acceptability 	<ul style="list-style-type: none"> • Calibration curve (acceptable slope) 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	<ul style="list-style-type: none"> • Electrode free of deposits and foreign material 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Log book being maintained.⁹ 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	

General Lab Criteria

	<ul style="list-style-type: none"> Instrument manual available 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Comments:				
Criteria	Standard Methods Requirement	Acceptable?		Rating
Ammonia Meter		Acceptable?		A
<ul style="list-style-type: none"> Calibration Frequency / Documentation 	<ul style="list-style-type: none"> 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	
	<ul style="list-style-type: none"> Log book being maintained⁹ 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
<ul style="list-style-type: none"> Slope acceptability 	<ul style="list-style-type: none"> Verify calibration slope is acceptable (per mfg. spec.). 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> Calibration Method 	<ul style="list-style-type: none"> Standards used for calibration (3 ammonia solutions of 10 mg/l, 1 mg/l, and 0.1 mg/l) or per mfg. spec.¹⁷ 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> Standards used for calibration not expired 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> Other 	<ul style="list-style-type: none"> Electrode free of deposits and foreign material 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> Teflon covered magnetic stirrer or equivalent for mixing¹⁸ 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> Instrument manual available 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments:				
Criteria	Standard Methods Requirement	Acceptable?		Rating
Sample Collection/Handling		Acceptable?		U
<ul style="list-style-type: none"> Sample Labeling 	<ul style="list-style-type: none"> Samples container labeled (description, date, time, preservative added, initialed).¹⁹ 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> Chain of Custody 	<ul style="list-style-type: none"> Chain of custody (description, date, time, signature).¹⁹ 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> Other 	<ul style="list-style-type: none"> Composite samples refrigerated during sample collection¹⁴ 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
	<ul style="list-style-type: none"> Equipment blanks utilized¹⁴ 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> SOP for cleaning of sampling equipment 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> Logbook being maintained⁹ 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Comments: Effluent sampler refrigerator not working.				
Criteria	Standard Methods Requirement	Acceptable?		Rating
Desiccator		Acceptable?		M
<ul style="list-style-type: none"> General criteria 	<ul style="list-style-type: none"> Properly working seals. 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> Desiccant fresh (blue color) 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> Documentation 	<ul style="list-style-type: none"> Log book being maintained⁹ 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Comments:				
Criteria	Standard Methods Requirement	Acceptable?		Rating
Bench sheets		Acceptable?		A
<ul style="list-style-type: none"> General criteria 	<ul style="list-style-type: none"> Date(s)² 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> Analyst initials² 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> Blue or black ink pen² 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> Calibration information² 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> Equations, calculations, units for all measurements, notations, and results present² 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> Corrections, single line through, initialed and dated² 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments:				

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
Hot Water Bath (Fecal Coliform/E. Coli)				
<ul style="list-style-type: none"> Temperature Recordkeeping 	<ul style="list-style-type: none"> Temperature Log (thermometer reads 0.2° C)²¹ 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	M
	<ul style="list-style-type: none"> Incubator temperature 44.5° C ± 0.2°^{21/24} 			
<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 maintained⁹ 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> Water Level 	<ul style="list-style-type: none"> Thermometer total immersion or partial (line on thermometer to ID immersion depth)^{1,5} 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

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

Comments: Sterilizing temperature is 119° C

	Acceptable	4
	Marginal	7
	Unacceptable	2
	Total Number of Areas Rated	13

Acceptable Ratings – No action required (recommend SOP's written or updated, perform DMRQA's for all onsite analysis, recommend voluntary lab analyst certification, written response not required).

Marginal Ratings – Improvements required, written response required (recommend SOP's be written or updated, recommend they perform DMRQA's for all onsite analysis, recommend voluntary lab analyst certification, require deficiencies to be addressed in written response).

Unsatisfactory Rating - Improvements required, written response required, NOV issued (recommend SOP's be written or updated, recommend they perform DMRQA's for all onsite analysis, recommend voluntary lab analyst certification, require deficiencies to be addressed in written response to NOV).

Consider recommending PAI Audit from DES when:

- >60% of ratings are Marginal
- >45% of ratings are a combination of Marginal or Unacceptable
- >30% of ratings are Unacceptable

General Lab Criteria

Notation of Referenced Method

1	Method 9020-B, Item 4	14	Method 1060A, Item 1
2	Method 1020-A, Item 1	15	Method 4500-Cl I, Item 2
3	Method 1020-B, Item 10	16	Method 4500-Cl I, Item 4
4	Method 2540-B, Item 2	17	Method 4500-NH ₃ D, Item 4
5	Method 2550-B, Item 1	18	Method 4500-NH ₃ 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
NH ₃ -N	P, G	500	G, C	Analyze as soon as possible or add H ₂ 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 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 ₂ SO ₄ to pH <2, Refrigerate $\leq 6^{\circ}\text{C}$	28 d	28 d

General Lab Criteria

Approved Standard Methods	
CBOD / BOD 5 Day	Std Methods 5210-B
Ammonia, Selective Electrode Method	Std Methods 4500-NH3 D
Total Residual Chlorine, DPD Colorimetric Method	Std Methods 4500-Cl G
Total Suspended Solids, Dried at 103-105 °C	Std Methods 2540-D
Dissolved Oxygen, Membrane Electrode Method	Std 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